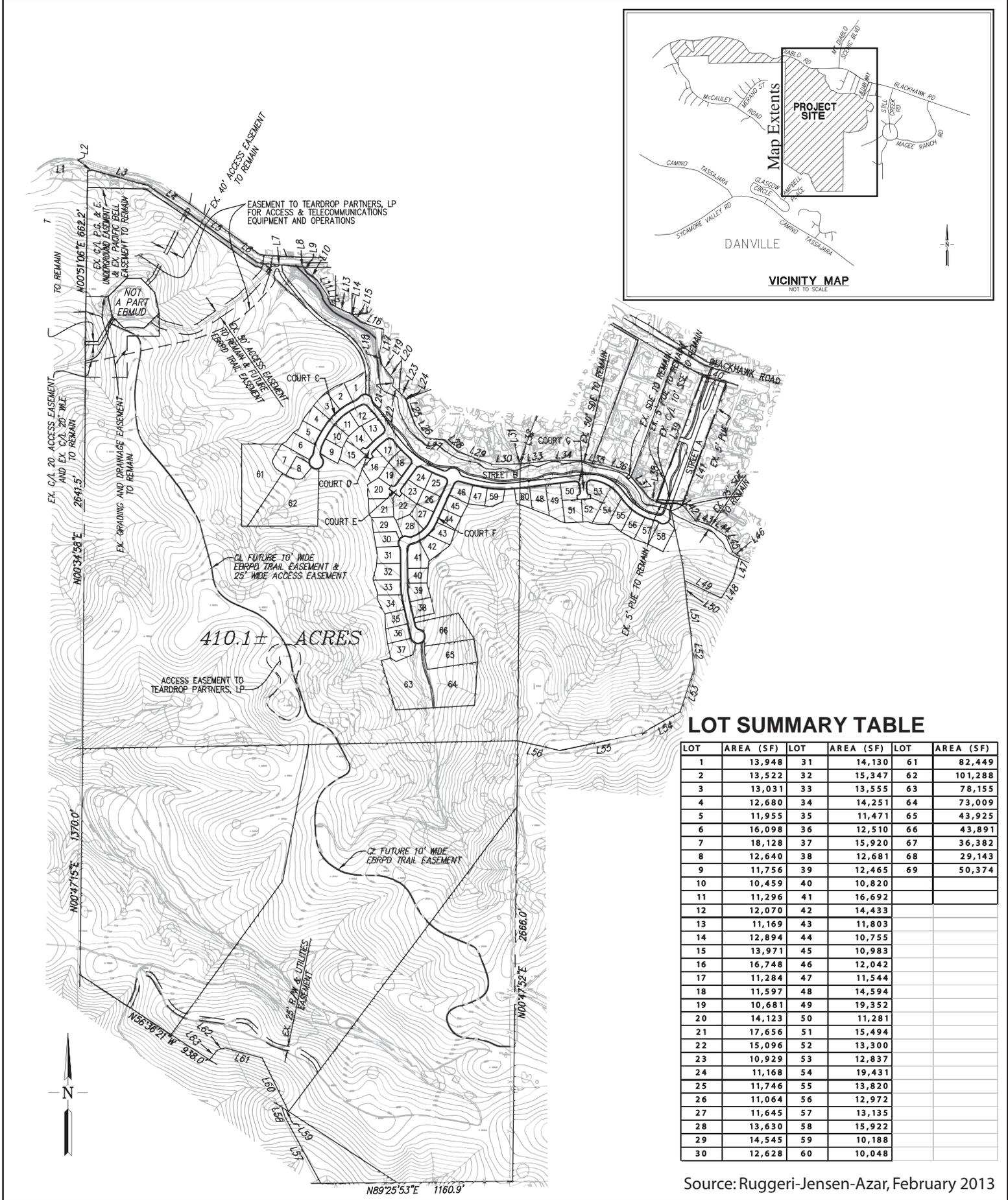
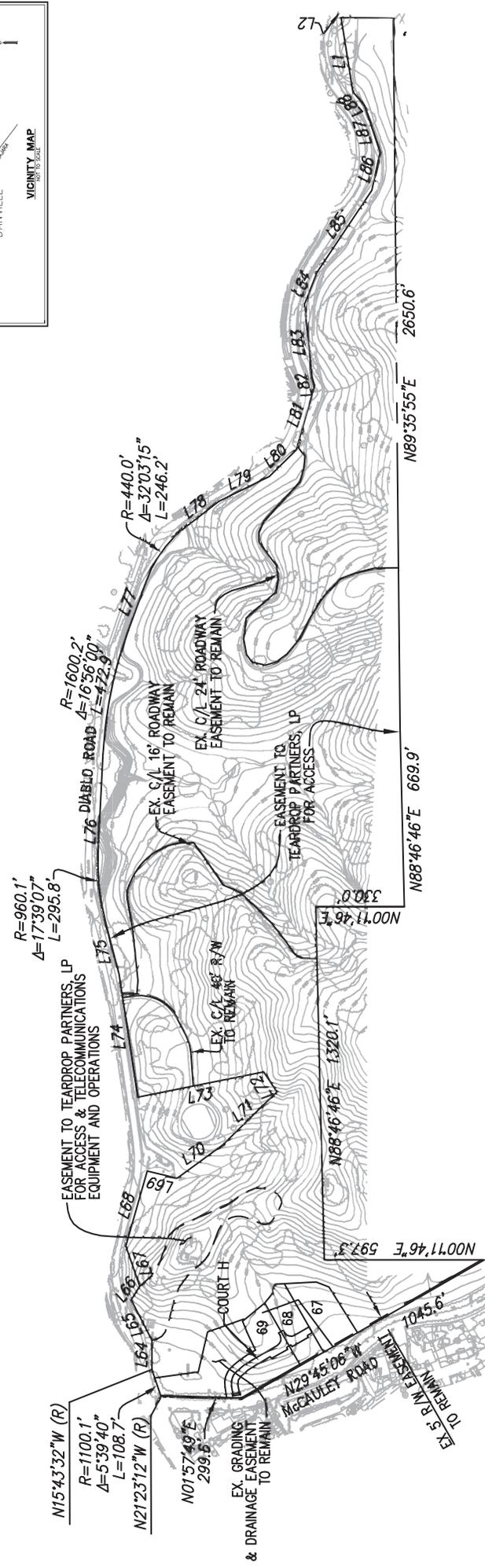
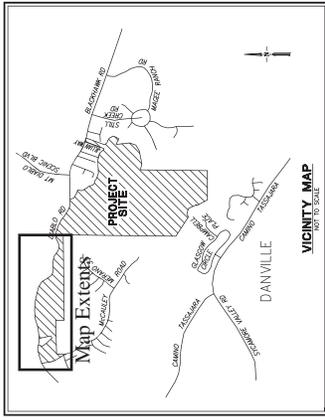


ATTACHMENT A

REVISED MAGEE RANCHES SITE PLANS (FEBRUARY 8, 2013)





LOT SUMMARY TABLE

LOT	AREA (SF)														
1	13,948	10	10,459	19	10,681	28	13,630	37	15,920	46	12,042	55	13,820	64	73,009
2	13,522	11	11,296	20	14,123	29	14,545	38	12,681	47	11,544	56	12,972	65	43,925
3	13,031	12	12,070	21	17,656	30	12,628	39	12,465	48	14,594	57	13,135	66	43,891
4	12,680	13	11,169	22	15,096	31	14,130	40	10,820	49	19,352	58	15,922	67	36,382
5	11,955	14	12,894	23	10,929	32	15,347	41	16,692	50	11,281	59	10,188	68	29,143
6	16,098	15	13,971	24	11,168	33	13,555	42	14,433	51	15,494	60	10,048	69	50,374
7	18,128	16	16,748	25	11,746	34	14,251	43	11,803	52	13,300	61	82,449		
8	12,640	17	11,284	26	11,064	35	11,471	44	10,755	53	12,837	62	101,288		
9	11,756	18	11,597	27	11,645	36	12,510	45	10,983	54	19,431	63	78,155		

Source: Ruggeri-Jensen-Azar, February 2013



Monterey | San Jose
Denise Duffy and Associates, Inc.
 Environmental Consultants Resource Planners
 947 Cass Street, Suite 5
 Monterey, CA 93940
 (831) 373-4341

Magee West Revised Site Plan

Figure

2

ATTACHMENT B

REVISED VISUAL SIMULATION – VIEWPOINT 3



Proposed View Angle Without Landscaping

VIEW 3

Magee Ranch Danville, CA

SummerHill Homes

digital imaging studio at dahlin group 



Proposed View Angle With Landscaping

VIEW 3

Magee Ranch Danville, CA

SummerHill Homes

digital imaging studio at dahlin group 

ATTACHMENT C

**WATERS OF THE U.S. AND RIPARIAN MITIGATION MONITORING PLAN
& CONSERVATION MANAGEMENT PLAN (MARCH 8, 2013)**

**MAGEE RANCHES MITIGATION AREA – WATER BALANCE ANALYSIS FOR
PROPOSED WATER PONDS (FEBRUARY 28, 2013)**



LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

**MAGEE RANCH
WATERS OF THE U.S. AND RIPARIAN MITIGATION AND
MONITORING PLAN
AND
CONSERVATION MANAGEMENT PLAN
TOWN OF DANVILLE, CALIFORNIA**

Prepared by

LIVE OAK ASSOCIATES, INC.

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Prepared for

SummerHill Homes
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San Ramon, CA 94583

March 8, 2013

PN 1385-07

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1.0 INTRODUCTION

Live Oak Associates, Inc. (LOA), has prepared this mitigation and monitoring plan and conservation management plan for the Magee Ranch project site (hereafter referred to as the “project site” or “site”) located in the Town of Danville, Contra Costa County, California.

1.1 PURPOSE OF ESTABLISHMENT

This mitigation and monitoring plan and conservation management plan (“MMP/CMP”) has been established to:

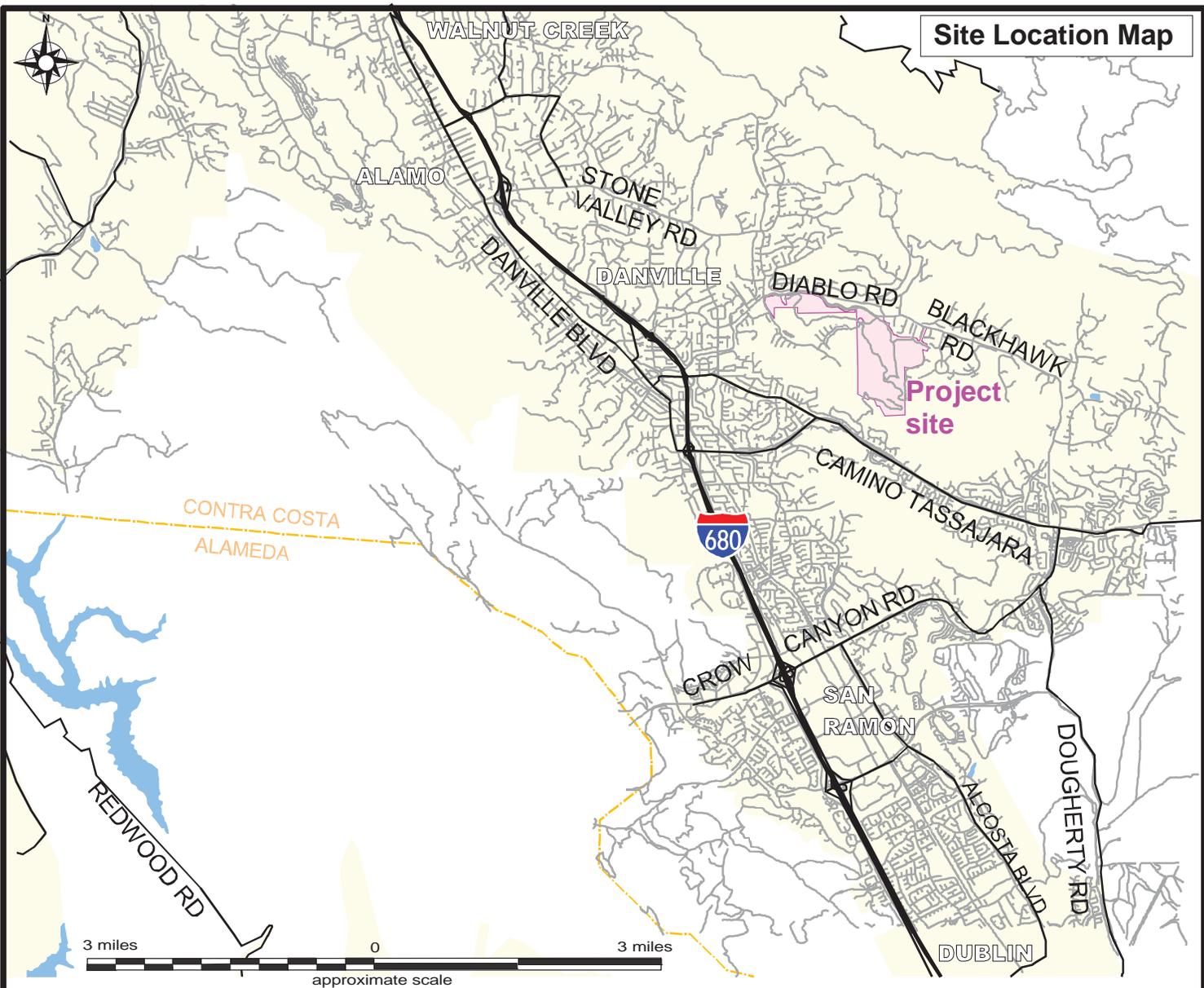
- Compensate for approximately 0.5 acres of permanent impacts to waters of the United States;
- Compensate for approximately 0.3 acres of temporary and permanent impacts to riparian habitat; and
- Preserve approximately 308 acres of open space and conservation lands for the California red-legged frog (*Rana draytonii*; CRLF) and other regionally sensitive wildlife species.

The purpose of this document is to mitigate impacts to biological resources as identified in the EIR (i.e., impacts to aquatic features, riparian habitat, and CRLF). While other special status species, such as the California tiger salamander (*Ambystoma californiense*), western pond turtle (*Actinemys marmorata*), and burrowing owl (*Athene cunicularia*) have not been detected on the site to date, the habitat management strategies discussed in this document will benefit these species as well.¹

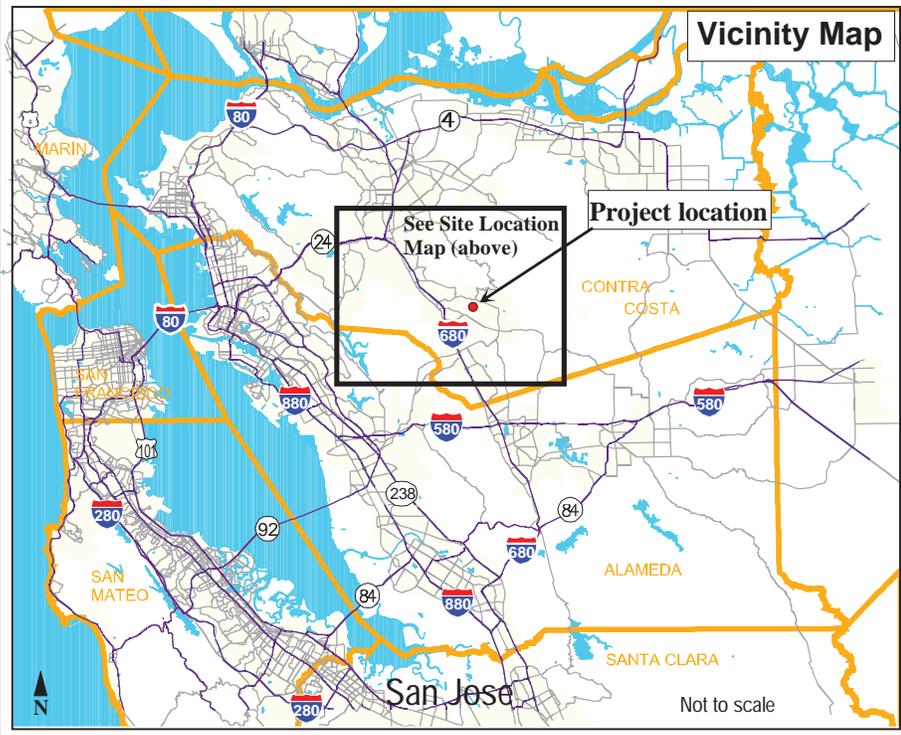
1.2 PROJECT LOCATION

The project site is located off of Diablo Road and Blackhawk Road in the Town of Danville, Contra Costa County, California (Figure 1). The project site is located in the Diablo 7.5” U.S. Geological Survey (USGS) quadrangle in sections 21, 22, 23, 26, and 27 of township 1 south,

¹ This MMP/CMP has been submitted to the Town of Danville for inclusion in the Final Environmental Impact Report (FEIR) and project entitlements for the project. The project applicant will also be seeking necessary permits from several state and federal natural resources agencies. While the applicant intends that this MMP/CMP will satisfy the permitting and mitigation requirements of those other agencies, to the extent those agencies impose different and/or additional requirements, this MMP/CMP may later be amended to incorporate them. Any later amended version of this MMP/CMP, however, must provide at least the same amount of mitigation and conservation benefit as the version submitted to the Town and incorporated into the FEIR.



Site Location Map



Vicinity Map



Regional Map

	Live Oak Associates, Inc.		
	Magee Ranch Site / Vicinity Map		
Date	Project #	Figure #	
1/23/2013	1385-07		1

range 1 west on the Mt. Diablo Meridian. The site ranges in elevation from approximately 430 ft. (131 m) National Geodetic Vertical Datum (NGVD) in the northwestern corner to approximately 955 ft. (290 m) NGVD in the southern half of the site.

1.3 PROJECT DESCRIPTION

Magee Ranch comprises the approximately 335-acre Magee East site and approximately 75-acre Magee West site. The project proposes approximately 63 single-family, residential lots with a minimum 10,000 sq. ft. lot and seven custom lots from 5 to 61.2 acres in area (Figure 2). The project proposes to locate the subdivision on approximately 128.4 acres on the flatter portions of the northern part of the site, avoiding steeper slopes and ridgelines. The 63 single-family production lots and associated infrastructure (e.g., access roads) would be clustered on approximately 33.2 acres; the seven custom home sites would be located on 95.2 acres, approximately 26.4 acres of which will be placed under a deed restriction. In total, up to approximately 102 acres of the site will be developed.

Approximately 60 production lots and 4 custom lots would be developed on Magee East, primarily along East Branch Green Valley Creek. These homes would be accessed via a new road off of Blackhawk Road. Three production lots off of McCauley Road and three custom lots are proposed for Magee West. A minimum of 25% of the lots would be required to incorporate second dwelling units in order to comply with the Town's inclusionary housing requirements.

Associated infrastructure would include an access road from Blackhawk Road in the panhandle east of Jillian Way. This access road would cross East Branch Green Valley Creek and would follow the general path of the existing ranch road. The existing access to Magee East via San Andreas Drive would be discontinued.

Four storm drain system outfalls are proposed to feed water from Magee East into East Branch Green Valley Creek. These outfalls are part of a public dual storm drain system that collects and conveys storm water runoff from hillsides and open space areas to the creek and also collects and conveys storm water runoff from impervious surfaces to onsite bioretention basins.



1,000' 0 1,000 feet
approximate scale



LEGEND

- Project Boundary
- Estate lot conserved lands
- Other conserved lands



Live Oak Associates, Inc.

Magee Ranch
Conserved Lands

Date 1/23/2013

Project # 1385-07

Figure #

2

Approximately five geotechnical subdrain outfalls across both properties will also convey water into the creek. The locations of the subdrain outfalls had not been finalized at the time this report was prepared.

A recreational trail is proposed to begin at the Blackhawk Road entrance and generally parallel the proposed access road from this location to the point that the proposed emergency vehicle access (EVA) intersects Diablo Road.

A future public trail network is also being considered on lands to be preserved as open space on Magee East. The trail network is conceptually proposed for alignment along existing fire and private service roads. The applicant would dedicate one or more easements for another agency to construct and maintain the public trail network. This network would connect to the existing Sycamore Valley Open Space trail on lands immediately east of the site.

Improvements to existing culverts along the creek are proposed as part of mitigating for project impacts. These include removal and replacement of a cattle gate and the clearing of sediment debris at the Clydesdale Drive culvert, and removal and replacement of the cattle gate at the Avenida Nueva culvert.

As further mitigation, the applicant will permanently preserve approximately 308 acres of the site as open space for habitat purposes (Table 1). This includes placement of approximately 28% of the total area of the custom lots, or approximately 26.4 acres, under a deed restriction. Approximately 281.6 acres on Magee East will be retained as open space (Figure 2). Figure 2 shows the approximate size of the conserved lands relative to the overall size of the custom lots; the location of these lands is conceptual in nature only, as the precise location of conserved lands on the custom lots has not yet been determined.

Table 1. Magee Ranch impact and preserved land acreages.			
	Magee East (acres)	Magee West (acres)	Total (acres)
Total area	335	75	410
Permanent impacts (excluding custom lots)	31.4	1.8	33.2
Custom lots	22.0	73.2	95.2
Preserved lands (custom lots under deed restriction)	6.1	20.3	26.4
Preserved lands (total)	287.8	20.2	308

1.4 PREVIOUSLY COMPLETED ENVIRONMENTAL STUDIES

Environmental studies completed for the project site include the Magee Ranch Biological Evaluation (Live Oak Associates 2012), an investigation of potential waters of the United States for Magee Ranch (Live Oak Associates 2011a, 2011b), and a comprehensive set of rare plant surveys for Magee Ranch (Live Oak Associates 2011c). Two years of protocol surveys for CRLF and one year of larval surveys for California tiger salamanders have also been completed, the results of which are included in the biological evaluation report.

1.5 RESPONSIBLE PARTIES

SummerHill Homes will be responsible for implementation of the waters of the U.S. and riparian habitat mitigation and monitoring plan. Their contact information is:

SummerHill Homes
 5000 Executive Parkway, Suite 150
 San Ramon, CA 94583
 Phone: (925) 244-7534
 Contact: Wendi Baker

The project site will be annexed into an existing Geologic Hazard Abatement District (GHAD). The long-term management of the conservation lands will be funded via the GHAD and managed by a third-party land management entity. The GHAD will be financed through real property assessments levied on each parcel within the project. The project will remain in the GHAD in perpetuity. All permanently preserved open space will be protected by a conservation easement, deed restriction, or other suitable vehicle.

2.0 HABITAT AND SPECIES DESCRIPTIONS

2.1 BIOTIC HABITATS

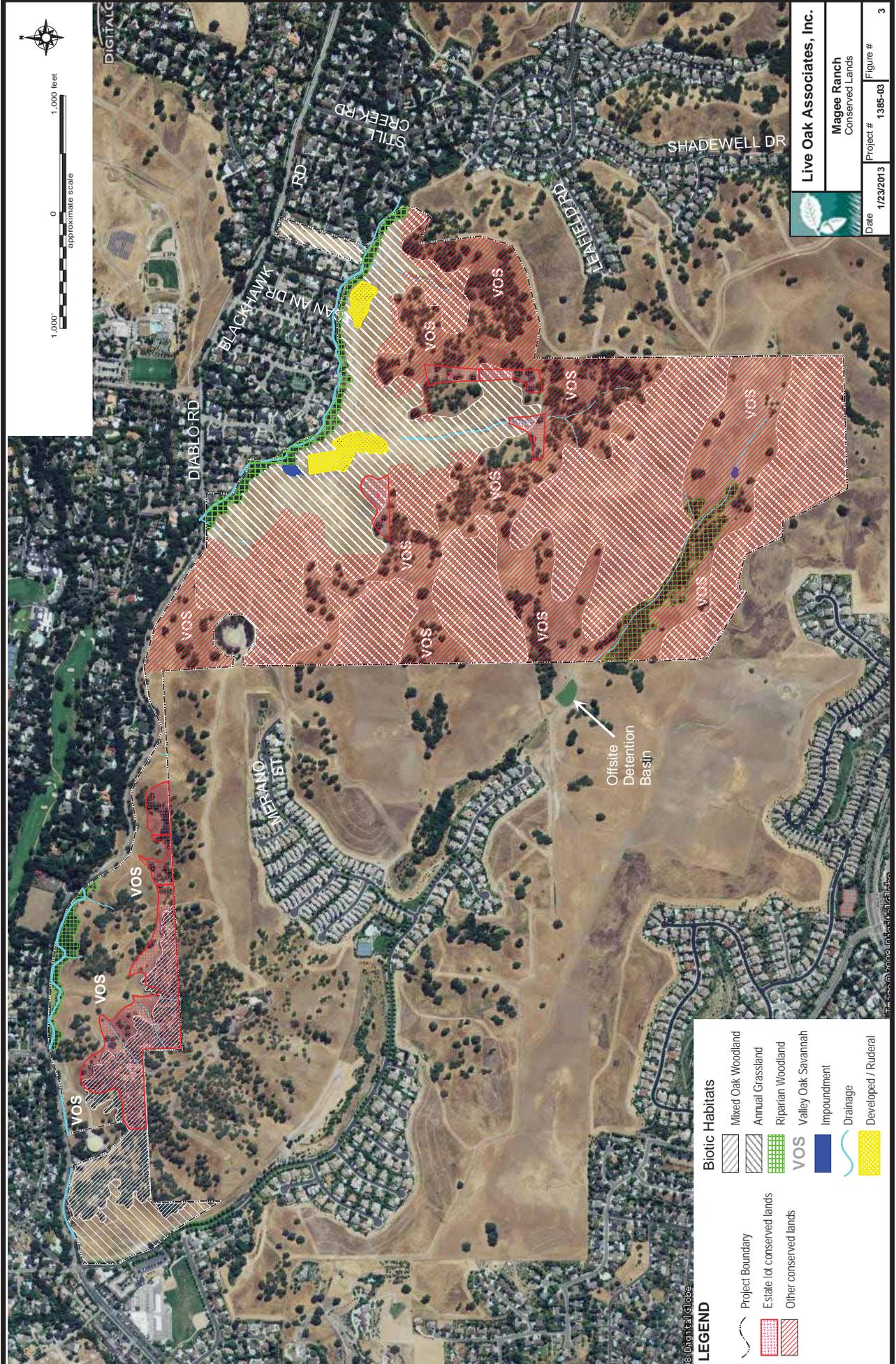
The biological evaluation prepared for the site (LOA 2012) identified five biotic habitats and one land use (Figure 3). The habitats were classified as “valley oak savannah,” “annual grassland,” “mixed oak woodland,” “riparian woodland/seasonal drainage,” and “wetland/stock pond.” The land use was classified as “developed/ruderal.”

2.1.1 Valley Oak Savannah

The site primarily consists of valley oak savannah and annual grassland (section 2.1.2). Some small, moderately dense stands of trees occur near the seasonal drainage channels, while individual trees are scattered through the remainder of this habitat. Valley oaks (*Quercus lobata*) are the dominant trees in this habitat with some coast live oaks interspersed throughout. Grasslands constitute the oak savannah understory and are dominated by annual grasses and forbs of European origin. Non-native annual grasses common to this habitat include soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), slender wild oat (*Avena barbata*), Italian ryegrass (*Festuca perennis*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*) and annual bluegrass (*Poa annua*). Common non-native forbs include redstem filaree (*Erodium cicutarium*), burclover (*Medicago polymorpha*), curly dock, yellow star thistle (*Centaurea solstitialis*), and rose clover (*Trifolium hirtum*).

This habitat and the site’s grasslands provide important habitat to many terrestrial vertebrates. The presence of oaks scattered within the grassland habitat supports a high diversity of wildlife. A number of these species are expected to utilize grasslands occurring in the valley oak savannah habitat occurring on the site throughout all or part of the year as breeding and foraging habitat.

Rotting tree debris, thatch, leaf litter, and small mammal burrows provide cover for several reptile species that forage in grasslands for small mammals and birds. These include the western fence lizard (*Sceloporus occidentalis*) and southern alligator lizard (*Elgaria multicarinata*), both of which were observed during field surveys, and gophersnake (*Pituophis catenifer*). They may also provide suitable cover and aestivation habitat for amphibians.



LEGEND

	Project Boundary		Mixed Oak Woodland
	Estate lot conserved lands		Annual Grassland
	Other conserved lands		Riparian Woodland
			Valley Oak Savannah
			Impoundment
			Drainage
			Developed / Ruderal

Live Oak Associates, Inc.

Magee Ranch
Conserved Lands

Date 1/23/2013 Project # 1385-03 Figure # 3

Numerous resident and migratory birds breed and forage in oak savannah habitats. Raptors observed in these areas of the site include the turkey vulture (*Cathartes aura*), white-tailed kite (*Elanus leucurus*), and red-tailed hawk (*Buteo jamaicensis*). Other birds observed in this habitat include the northern flicker (*Colaptes auratus*), Say's phoebe (*Sayornis saya*), western scrub-jay (*Aphelocoma californica*), violet green swallow (*Tachycineta thalassina*), cliff swallow (*Petrochelidon pyrrhonota*), European starling (*Sturnus vulgaris*), dark-eyed junco (*Junco hyemalis*), and Brewer's blackbird (*Euphagus cyanocephalus*).

Mammals are common to this habitat. California ground squirrels (*Spermophilus beecheyi*) and their burrows were observed throughout the site, and Botta's pocket gopher (*Thomomys bottae*) burrows were also present on the site. Other small mammals likely to occur in this habitat include the western harvest mouse (*Reithrodontomys megalotis*) and California meadow vole (*Microtus californicus*). Small mammals often attract predators, including reptiles and birds previously discussed. The abundance of small mammals also attracts larger mammalian predators known to occur in the region, including coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), and bobcats (*Lynx rufus*). Black-tailed deer (*Odocoileus hemionus columbianus*) were also present on the site. Bat species such as the Mexican free-tailed bat (*Tadarida brasiliensis*) may forage over this habitat for insects.

2.1.2 Annual Grassland

Annual grassland habitat is also prevalent throughout the site and is dominated by the same constituent grass and forb species making up the grassland matrix within the valley oak savannah habitat (section 2.1.1). As with floral species, amphibians, reptiles, birds, and mammals found utilizing the grassland understory of the valley oak savannah habitat would also be expected to occur in this habitat. Particularly dense areas of ground squirrel burrow complexes were present on the hillsides near the borrow pit along East Branch Green Valley Creek and near the stock pond at the southern end of the site.

2.1.3 Mixed Oak Woodland

Vegetation in the western portion of the site is dominated by a fairly dense, naturally occurring stand of mature oak trees consisting of coast live oak (*Quercus agrifolia*), blue oak (*Quercus douglasii*), and valley oak, along with some California buckeye (*Aesculus californicus*) trees. Within this habitat type, the understory vegetation is a mix of shade-tolerant woodland shrubs and forbs and annual grasses and forbs typical of annual grasslands. Some of the woodland understory sub-shrub and forb species observed include yarrow (*Achilla millefolium*), shepherd's purse (*Capsella bursa-pastoris*), valley tassels (*Castilleja attenuata*), redstem filaree, wild geranium (*Geranium dissectum*), shining peppergrass (*Lepidium nitidum*), miniature lupine (*Lupinus bicolor*), purple sanicle (*Sanicula bipinnatifida*), poison oak (*Toxicodendron diversilobum*), and purple vetch (*Vicia sativa* ssp. *sativa*). Non-native annual grasses occurring in the valley oak savannah and annual grassland habitats were also present.

Logs, fallen branches, leaf litter, tree cavities, and small burrows provide cover for several reptile and amphibian species that forage in the woodland habitats of the site, including the California slender salamander (*Batrachoseps attenuatus*), western fence lizard, southern alligator lizard, gophersnake, and common gartersnake (*Thamnophis sirtalis*).

Numerous resident and migratory birds breed, roost, and forage in woodland habitats. Raptors observed in these areas of the site include the northern harrier (*Circus cyaneus*), red-shouldered hawk (*Buteo lineatus*), and red-tailed hawk. Other birds observed in this habitat include the wild turkey (*Meleagris gallopavo*), Anna's hummingbird (*Calypte anna*), acorn woodpecker (*Melanerpes formicivorus*), black phoebe (*Sayornis nigricans*), American crow (*Corvus branchyrhynchus*), western scrub-jay, Steller's jay (*Cyanocitta stelleri*), dark-eyed junco, white-breasted nuthatch (*Sitta carolinensis*), and western bluebird (*Sialia mexicana*).

Mammal species occurring in the adjacent valley oak savannah and annual grasslands would also be expected to occur within this habitat.

2.1.4 Riparian Woodland and Seasonal Drainage

East Branch Green Valley Creek generally flows in a northwesterly direction along portions of the northern perimeter of the site and conveys water perennially. A number of lesser order seasonal tributary channels and channel fragments are also present on the site but were dry at the time of the field surveys (Figure 3).

Riparian habitat having a relatively dense, closed canopy is associated with East Branch Green Valley Creek and a well-defined, unnamed channel in the south half of the site. The overstory vegetation is dominated by valley oaks, coast live oaks, California buckeye, northern California black walnut (*Juglans hindsii*), and willows (*Salix* spp.). A shrub layer was largely absent, while the herbaceous understory consisted of such species as mugwort (*Artemisia douglasiana*), poison hemlock (*Conium maculatum*), curly dock (*Rumex crispus*), milk thistle (*Silybum marianum*), bristly ox-tongue (*Helminthotheca echioides*), and Baltic rush (*Juncus balticus*). Along East Branch Green Valley Creek, cattails (*Typha* sp.) and watercress (*Nasturtium officinale*) were present in the channel itself, although the channel was mostly devoid of vegetation. The seasonal drainage channels lacking associated riparian habitat supported upland herbaceous species similar to that of the surrounding upland habitat (section 2.1.2).

Native California roach (*Lavinia symmetricus*) and introduced western mosquitofish (*Gambusia affinis*) were observed in East Branch Green Valley Creek. The creek and the various other drainages provide a seasonal source of drinking water for species occurring in the surrounding habitats and, when wet, also provide breeding habitat for pacific treefrogs (*Hyla regilla*).

Riparian systems serve as dispersal corridors and islands of habitat for an estimated 83% of amphibians and 40% of reptiles in California (Brode and Bury 1984). Leaf litter and decaying logs provide a moist microclimate suitable for amphibians such as the pacific treefrog. Reptiles that may utilize riparian systems include the western fence lizard, western skink (*Eumeces skiltonianus*), southern alligator lizard, gophersnake, and common kingsnake (*Lampropeltis getula*).

Many resident and migratory bird species depend on riparian and aquatic habitats. Birds observed in the riparian woodland include the house wren (*Troglodytes aedon*) and dark-eyed junco. Resident species that may be found in this habitat include the red-shouldered hawk, great horned owl (*Bubo virginianus*), Hutton's vireo (*Vireo huttoni*), western scrub-jay, Steller's jay (*Cyanocitta stelleri*), bushtit (*Psaltriparus minimus*), and downy woodpecker (*Picoides pubescens*). Winter migrants may include the sharp-shinned hawk (*Accipiter striatus*) and ruby-crowned kinglet (*Regulus calendula*). Summer migrants may include the ash-throated flycatcher (*Myiarchus cinerascens*) and yellow warbler (*Dendroica petechia*).

The structural and faunal diversity of riparian zones provide an abundant food source for and attract a variety of mammalian species. For example, the deer mouse (*Peromyscus maniculatus*) feeds on soil-dwelling larvae as well as a variety of seeds and leaves. A muskrat (*Ondatra zibethicus*) was observed along East Branch Green Valley Creek. Other constituent mammals of riparian woodlands include the brush rabbit (*Sylvilagus bachmani*), eastern fox squirrel (*Sciurus niger*), which were present in this habitat, and raccoon (*Procyon lotor*), whose tracks were observed along the creek.

2.1.5 Impoundments

A borrow pit for an adjacent horse corral is located along East Branch Green Valley Creek. Vegetation occurring in this feature includes soft chess, burclover, dwarf peppergrass (*Lepidium latipes* var. *latipes*), and adobe popcornflower (*Plagiobothrys acanthocarpus*). Cattle have been observed in the borrow pit, and wildlife species expected to occur in the surrounding habitats could occasionally pass through this feature as well.

A stock pond is located along the unnamed drainage in the southern portion of the site and remains inundated for much of the year. Vegetation was largely absent from this feature. Pacific treefrogs were observed in the stock pond. Wildlife from the surrounding habitats could use this feature as a seasonal drinking source.

2.1.6 Developed/Ruderal

A handful of small structures, including horse corrals and a small equipment storage building, are present in the northern part of the site near East Branch Green Valley Creek and support associated ruderal vegetation. The term “ruderal” refers to habitats that have been heavily disturbed by human factors and that support vegetation that is adapted to such disturbed conditions. Vegetation observed in ruderal areas of the site includes such non-native forbs as common groundsel (*Senecio vulgaris*), wild radish (*Raphanus sativus*), redstem filaree, wild geranium (*Geranium dissectum*), and cheeseweed mallow (*Malva parviflora*).

Wildlife species expected to occur in the surrounding habitats could occasionally pass through these areas as well.

2.2 COVERED SPECIES

The long-term conservation management plan is designed to conserve and protect lands in perpetuity for the CRLF. Field surveys have been completed to identify areas for enhancement of CRLF breeding habitat. All other areas of the preserved lands are considered foraging and/or dispersal habitat for the CRLF.

While other special status species, such as the California tiger salamander, western pond turtle, and burrowing owl have not been detected on the site to date, the habitat management strategies discussed in this document will benefit these species as well should they occur on the site in the future.

2.2.1 California Red-Legged Frog

Legal status. The CRLF was listed as threatened by the U.S. Fish and Wildlife Service under the authority of the Federal Endangered Species Act on May 23, 1996. It is designated as a species of special concern in California. The species had been extirpated from 70 percent of its historic range, and remaining populations are currently threatened by a wide variety of human impacts (66 FR 14626).

Status on the project site. Historically, CRLF larvae were reported in East Branch Green Valley Creek across from the site in 2004 (CNDDDB). Two additional CNDDDB occurrence records have been reported from spring 2011. The 2011 records reported a finding of egg masses and frogs at three residences in an adjacent neighborhood koi pond and swimming pool. Frogs were apparently removed from these residences and released into the creek nearby.

From February through June 2011, the applicant conducted protocol-level CRLF surveys along the East Branch of Green Valley Creek (along the northern border of the ranch), the offsite detention reservoir at the end of McCauley Road, the onsite small stock pond, and the unnamed creek upstream of the detention reservoir on Magee East. No CRLF eggs, larvae, juveniles, or adults were found along the East Branch of Green Valley Creek, the unnamed creek in the southern half of the site, or in the small stock pond. However, two CRLF egg masses and one juvenile and four adult CRLF were observed in the offsite detention reservoir. In an effort to supplement the record beyond existing data, including the 2011 reported sightings in CNDDDB (2012) and to provide a more complete understanding of use of the creek and site by CRLF, the applicant conducted additional protocol-level CRLF surveys from March through July 2012. Again, frogs were detected breeding in the offsite detention basin. In addition, four adult and six juvenile CRLF were detected in the East Branch of Green Valley Creek west of the existing entrance to Magee East. These observations confirm that CRLF are present in the area and are successfully breeding in the offsite detention basin.

2.2.2 Other Species

The EIR presumed impacts to be less than significant for other regionally occurring special status species such as the California tiger salamander, western pond turtle, and burrowing owl, as surveys have not detected these species even though potential habitats exists onsite. The management strategies provided herein would benefit these species if they were to occur on the site in the future.

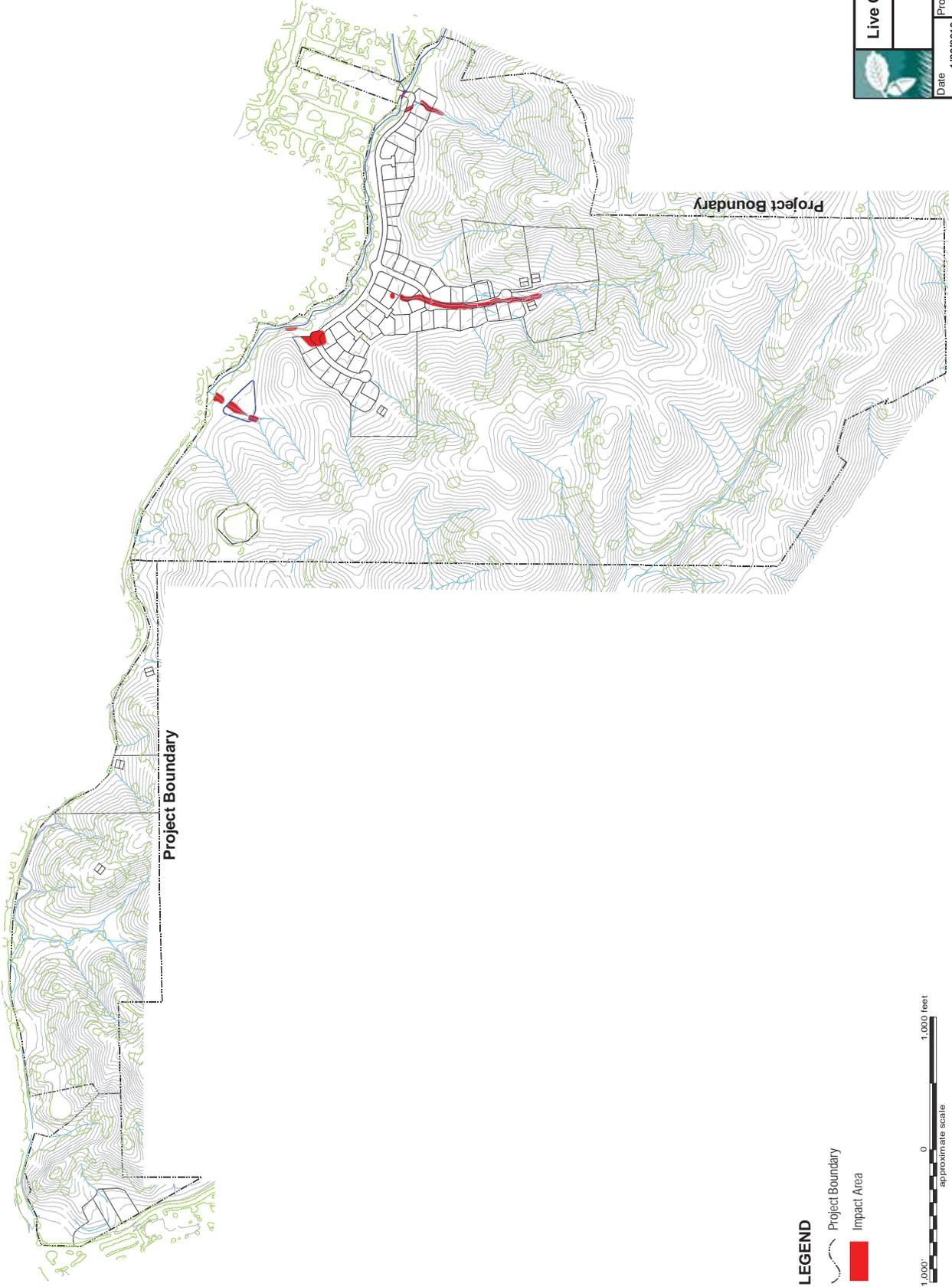
2.3 SUMMARY OF IMPACTS TO WATERS OF THE UNITED STATES AND RIPARIAN HABITATS

The magnitude of the impacts to jurisdictional waters and riparian habitat described below are not expected to change appreciably once the design plans have been finalized, but the precision of the actual square footage is expected to change. The final mitigation amounts will be based on actual impacts to be determined during the design phase and will be based on the mitigation standards described herein.

Impacts to jurisdictional waters. The proposed project will result in permanent impacts to approximately 0.5 acres of waters that are under the jurisdiction of the U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and/or Regional Water Quality Control Board (RWQCB) [Figure 4].

At the time this MMP/CMP was prepared, detailed design plans for those project elements that will affect the East Branch of Green Valley Creek had not been developed. Those project elements, and their anticipated impacts to jurisdictional waters, are as follows:

1. The project includes construction of a new bridge across the East Branch of Green Valley Creek as part of a new access road from Blackhawk Road in the panhandle east of Jillian Way. This will result in permanent impacts to approximately 1,500 sq. ft. (0.034 ac) of area under the jurisdiction of the USACE and RWQCB as a result of reengineering the channel bed and to approximately 3,500 sq. ft. (0.08 ac) of area under the jurisdiction of the CDFW.
2. An ephemeral drainage and an erosional pit will be filled to accommodate lot 62 and the cul-de-sac serving lots 25 through 46. This will result in permanent impacts to approximately 7,000 sq. ft. (0.16 ac) of area under the jurisdiction of the USACE and RWQCB and to approximately 9,000 sq. ft. (0.21 ac) of area under the jurisdiction of the CDFW.



LEGEND

- Project Boundary
- Impact Area



Live Oak Associates, Inc.

Magee Ranch
Impact Areas

Date 1/23/2013

Project # 1385-07

Figure # 4

3. A borrow pit next to an existing horse corral will be filled to accommodate the main road to the proposed subdivision, lots 1 and 12, and a cul-de-sac. This will result in permanent impacts to approximately 12,077 sq. ft. (0.277 ac) of area under the jurisdiction of the USACE and RWQCB. The CDFW does not have jurisdiction over this feature; therefore, fill of this feature will not impact any areas under CDFW jurisdiction.
4. A remnant ephemeral tributary to the East Branch of Green Valley Creek will be filled to accommodate recontouring of a hillside and a detention basin. This will result in permanent impacts to approximately 549 sq. ft. (0.013 ac) of area under the jurisdiction of the USACE, RWQCB, and CDFW.
5. A remnant ephemeral tributary to the East Branch of Green Valley Creek will be filled to accommodate lots 57 and 58 and the main road. This will result in permanent impacts to approximately 600 sq. ft. (0.014 ac) of area under the jurisdiction of the USACE, RWQCB, and CDFW.

Impacts to riparian habitat. Four storm drain outfalls and approximately five geotechnical subdrain outfalls are proposed to outlet water from the proposed subdivision to the East Branch of Green Valley Creek. No design plans have been prepared for the outfalls at the time this MMP/CMP was prepared. However, these outfalls will be located above the ordinary high water mark. Additionally, along with the new creek crossing, these project elements are anticipated to result in approximately 0.3 acres of temporary and permanent impacts to riparian habitat, including the removal of approximately seventeen riparian trees, along the creek.

3.0 MITIGATION AND MONITORING PLAN FOR WATERS OF THE UNITED STATES AND RIPARIAN HABITATS

This mitigation and monitoring plan has been developed to mitigate onsite for permanent impacts to approximately 0.5 acres of waters of the United States and for permanent and temporary impacts to approximately 0.3 acres of riparian habitat along East Branch Green Valley Creek. This includes removal of approximately seventeen riparian trees.

The mitigation goal is to create and enhance riparian or aquatic habitats with habitat functions and values greater than or equal to those existing in the impact zone. As described in the DEIR, the mitigation measures shall include:

1. Creation and/or enhancement of jurisdictional waters at a minimum of a 1:1 replacement-to-loss ratio (i.e., one acre created or enhanced for each acre impacted). This would result in the creation and/or enhancement of approximately 0.5 acres of jurisdictional waters.
2. Creation and/or enhancement of riparian habitat at a minimum of a 1:1 replacement-to-loss ratio (i.e., one acre created or enhanced for each acre impacted). This would result in the creation and/or enhancement of approximately 0.3 acres of riparian habitat.
3. Replacement of all removed riparian trees (i.e., trees occurring within riparian woodland habitat) at a 5:1 replacement-to-removal ratio. To the maximum extent practicable, removed trees should be replaced with like species or, if such trees are non-native, with species that are known to occur naturally within riparian habitats in the region.
4. Reseeding or replanting of riparian or wetland vegetation (i.e., a combination of trees, shrubs, and herbaceous vegetation) in temporarily impacted areas and designated habitat restoration areas.

Because the design plans have not been finalized and the precise acreage of impact is not yet known, this plan establishes mitigation standards that will then be applied to the final design and impact quantification when it becomes available.

This plan identifies the location of potential mitigation areas and the species composition and density to be utilized within the enhancement areas. It also discusses requirements for irrigation,

wildlife browsing protection, weed suppression, and ongoing maintenance activities. This enhancement plan is expected to increase habitat quality over the existing condition by attracting and supporting a greater diversity of wildlife species than what currently exists.

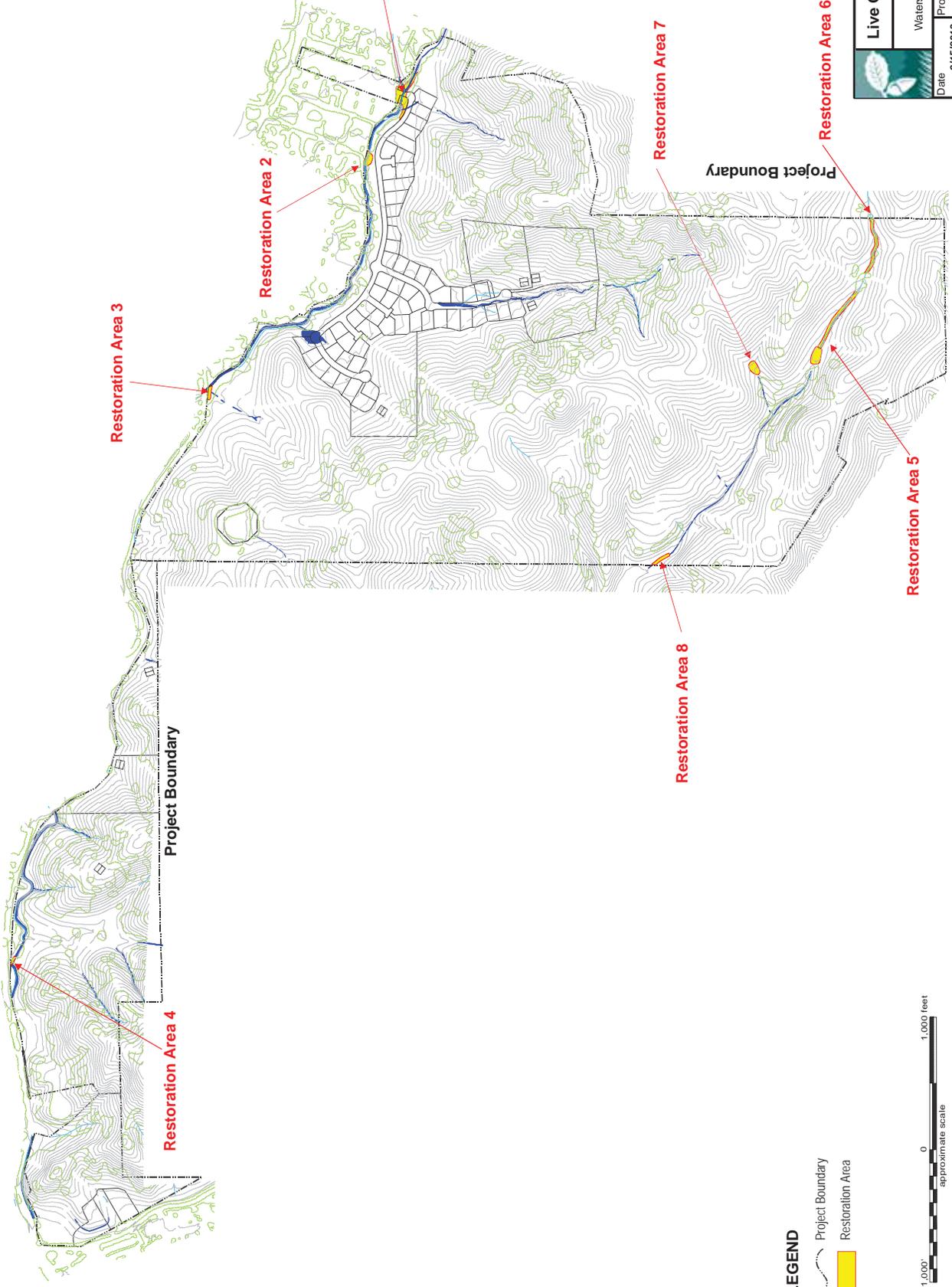
The mitigation measures specified for the aquatic and riparian habitats will benefit CRLF, which are known to occur onsite in the East Branch of Green Valley Creek. While other sensitive species such as the California tiger salamander and western pond turtle have not been detected on Magee Ranch, the proposed management schemes for aquatic and riparian habitats will benefit these species as well, if they were ever to occur on the site in the future.

3.1 PROPOSED MITIGATION

3.1.1 Mitigation for Impacts to Waters of the U.S.

Eight areas were identified along East Branch Green Valley Creek and in the preserved lands for creation or enhancement of waters of the U.S. (Figure 5). These locations were selected because they were at or near the impact areas, because they have become degraded due to cattle grazing, or because a water balance analysis determined that water was available for impoundment at those locations to create potential breeding ponds for CRLF (Engeo 2013). The following measures will compensate for impacts to approximately 0.5 acres of waters of the U.S.:

1. The existing wet crossing and in-stream asphalt within the channel of the East Branch of Green Valley Creek near the panhandle (i.e., where the new bridge is to be constructed) will be removed (restoration area 1 on Figure 5). The silt and sediment buildup that has occurred behind and adjacent to the wet crossing and asphalt will also be removed, and the creek bed will be lowered to restore the natural flow of this portion of the creek. As part of the lowering of the creek bed, a stairstep series of plunge pools along the length of the proposed creek work (i.e., at both the upstream and downstream ends of the creek work) will be created to enhance this portion of the creek as CRLF habitat. This will enhance approximately 1,500 sq. ft. (0.03 ac) of waters of the U.S.



LEGEND

- Project Boundary
- Restoration Area



Live Oak Associates, Inc.
Magee Ranch
Waters of the U.S. Mitigation Areas

Date 2/15/2013
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Figure # 5

2. The existing crossing from San Andreas Drive will be removed (restoration area 2 on Figure 5). Silt and sediment that has built up will be removed, and invasive species will be cleared from this reach of the creek. This will enhance approximately 300 sq. ft. (0.01 ac) of waters of the U.S.
3. The two existing cattle grates along the East Branch of Green Valley Creek (i.e., at the Clydesdale Drive and Avenida Nueva culverts) will be removed (restoration areas 3 and 4 on Figure 5). The sediment buildup at the grates will be removed so that the creek can flow unimpeded through the culverts. This will enhance approximately 400 sq. ft. (0.01 ac.) of waters of the U.S.
4. The stock pond along the unnamed drainage in the southern portion is currently devoid of vegetation. The pond will be widened, deepened, and planted with wetland vegetation (restoration area 5 on Figure 5). This will enhance approximately 3,754 sq. ft. (0.086 ac) of waters of the U.S. and create approximately 2,600 sq. ft. (0.06 ac.) of waters of the U.S. Enlargement of the pond and enhancement with vegetation will also enhance the pond's suitability as habitat for CRLF.
5. Invasive vegetation in the non-wetland channel segment upstream of the stock pond will be cleared, and the channel will be planted with suitable native vegetation (restoration area 5 on Figure 5). This will enhance approximately 1,000 sq. ft. (0.02 ac) of waters of the U.S.
6. The channel remnant immediately upstream of the unnamed drainage in the southern portion of the site will be contoured and widened, and a series of pools will be created within the channel (restoration area 6 on Figure 5). Invasive vegetation will be removed, and the channel will be enhanced with suitable plantings of wetland and riparian vegetation. This will create approximately 9,000 sq. ft. (0.21 ac.) of waters of the U.S. The creation of pools along this area will also enhance this area as CRLF habitat.
7. A pond will be created at the upstream end of a tributary to the drainage in the southern portion of the site. The pond will be planted with wetland and riparian vegetation (restoration area 7 on Figure 5). This will create approximately 4,000 sq. ft. (0.09 ac.) of waters of the U.S. Enhancement of the pond with vegetation will

also enhance the pond's suitability as habitat for CRLF.

8. The downstream end of the unnamed drainage in the southern portion of the site is currently devoid of vegetation (restoration area 8 on Figure 5). Invasive vegetation will be removed, and this reach of the channel will be enhanced with suitable planting and placement of wetland and riparian vegetation. This will enhance approximately 800 sq. ft. (0.18 ac.) of waters of the U.S.

3.1.2 Mitigation for Impacts to Riparian Habitat

Impacts to riparian habitat (anticipated to total approximately 0.3 acres) will be mitigated at a 1:1 ratio by restoring and enhancing riparian vegetation along the East Branch of Green Valley Creek. Approximately 2 acres along the East Branch between the creek and the recreational trail is available to accommodate the minimum 0.3 acres of riparian enhancement plantings (Figure 6). The 0.3 acres of plantings will occur within the 2 acres available. The enhancement area will be planted with native species appropriate for the corridor.

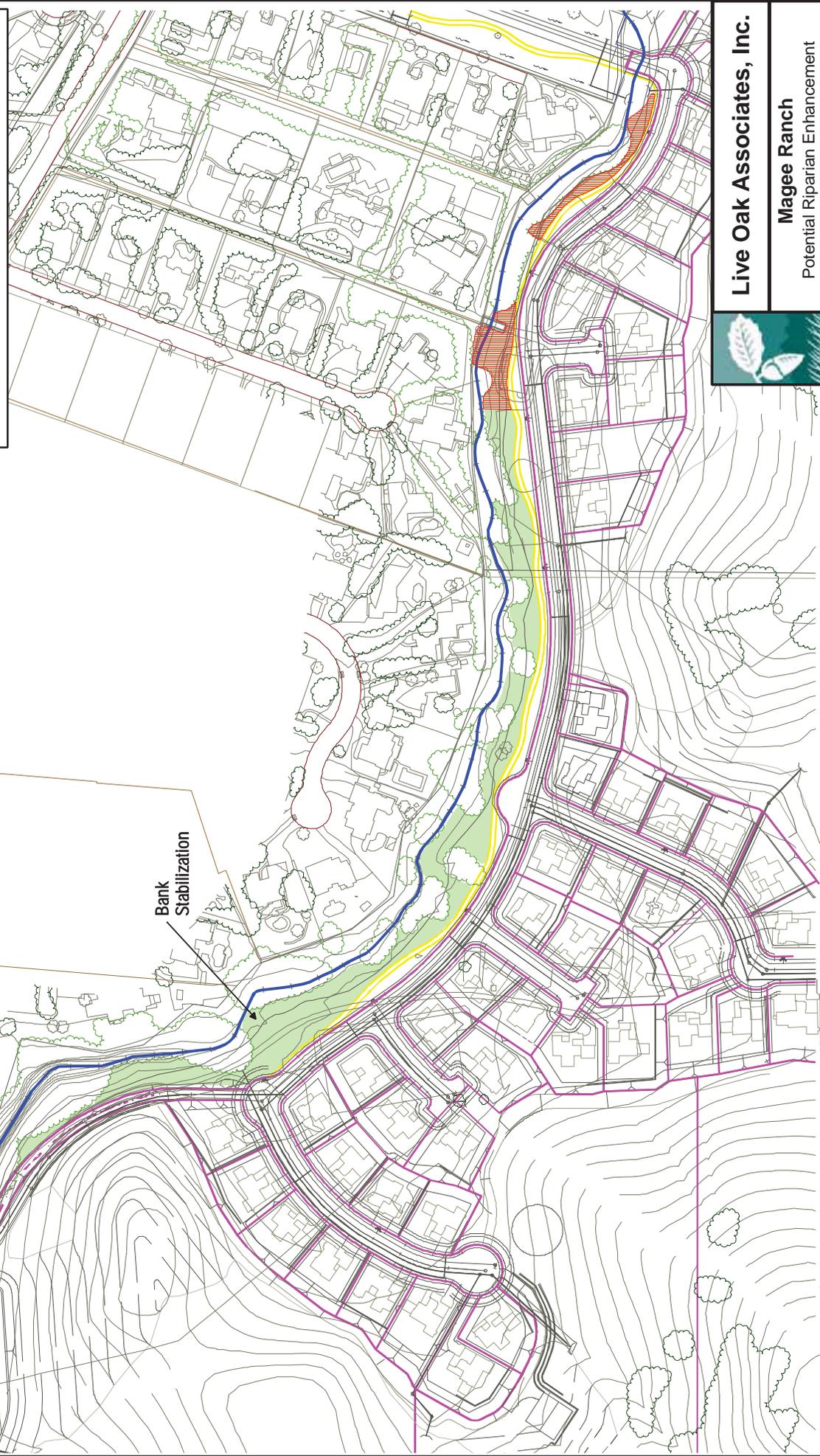
It is estimated that approximately seventeen riparian trees will be removed as a result of the proposed project elements as described in this plan. This impact will be mitigated by planting trees along the East Branch Green Valley Creek riparian corridor, as described herein, at a 5:1 replacement-to-removal ratio.

To offset impacts to non-riparian habitat under the CDFW's jurisdiction (i.e., upland areas below top of bank), the following measures will be taken:

1. Riparian plantings will be incorporated at other impact locations along the East Branch of Green Valley Creek (e.g., near proposed storm drain and geotechnical subdrain outfalls).
2. The creek banks at a pool along the East Branch of Green Valley Creek near the existing horse corral are severely eroded and are currently subject to headwater cutting. CRLF have been observed at this location. The banks will be stabilized at this location via revegetation.

LEGEND

- Creek Centerline
- Parcel Boundaries
- Creek Trail
- Area Available for Riparian Enhancement
- Area Proposed for Enhancement Plantings (0.3 ac.)



Diablo Road

Bank
Stabilization



Live Oak Associates, Inc.

Magee Ranch
Potential Riparian Enhancement

Date	2/15/2013	Project #	1385-07	Figure #	6
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Base Map Courtesy of
RUGGERI-JENSEN-AZAR
ENGINEERS - PLANNERS - SURVEYORS

3. Riparian plantings will be incorporated in areas along the southern drainage to be identified for creation or enhancement of waters of the U.S (restoration areas 5 through 8 on Figure 5).

3.1.3 Mitigation for Impacts to California Red-Legged Frog Habitat

CRLF persist in aquatic and riparian habitats that have a perennial, or nearly perennial, presence of water. They frequently occur in deep-water pools (i.e., pools more than 3 ft. deep) with an overhanging canopy. Emergent vegetation provides cover and a brace to which CRLF can attach their egg masses. During wet periods, especially in the winter and early spring, CRLF can move long distances (e.g., 1 mile) between aquatic habitats, often over areas that are considered to be unsuitable for frogs (e.g., roads, open fields, croplands, etc.). Such activities can result in frogs ending up in isolated aquatic habitats well away from the nearest known frog populations.

The mitigation measures for impacts to waters of the U.S. and riparian habitats described above will sufficiently mitigate for impacts to CRLF breeding habitat. (For mitigation to impacts to dispersal/upland habitats, see section 4.0.) In particular, the following elements described in sections 3.1.1 and 3.1.2 above will benefit CRLF and other sensitive species (e.g., California tiger salamander and western pond turtle), should they occur on the site in the future:

1. Creation of a stairstep series of pools along East Branch Green Valley Creek at the new crossing.
2. Stabilization of the bank along East Branch Green Valley Creek where CRLF have been observed. This will help preserve the current pool feature as CRLF habitat.
3. Enhancement of the stock pond along the southern drainage, which is currently devoid of vegetation and compacted by cattle. This feature will be enlarged, deepened, and planted with native vegetation to enhance its potential as CRLF breeding and rearing habitat.
4. Creation of new pools along the southern drainage.

Any existing or created ponds or pools will have a minimum depth of 4 ft., the objective being that these features hold water for a sufficient period (i.e., from December/January through

August during seasons of normal or above rainfall) to allow CRLF to successfully reproduce. A water balance analysis for the mitigation area has determined that in an average rainfall year, enough water is available from precipitation and from surface runoff from within the watershed to be continually impounded in these features at the depth and for the time period needed for CRLF reproduction (Engeo 2013).

Avoidance and Minimization Measures During Construction

Impacts to individual CRLF could occur during the construction phase of the project and/or during aquatic and riparian restoration efforts. Best management practices will be followed during any construction or restoration work occurring in or along the East Branch of Green Valley Creek to avoid and minimize harm to individual CRLF. These measures are partially summarized below and described more fully in Appendix A:

- Prior to the start of construction, a qualified biologist will train all construction personnel regarding habitat sensitivity, identification of special status species, and required practices.
- Pre-construction surveys will be conducted to ensure that CRLF are absent from the construction area. If CRLF are present, a qualified biologist possessing all necessary permits will relocate them, or they will be allowed to move out of the construction area on their own.
- Immediately following the pre-construction surveys and a determination that CRLF are not present in the construction zone, the construction zone will be cleared, and silt fencing will be erected and maintained around construction zones to prevent CRLF from moving into these areas.
- A biological monitor will be present onsite during times of construction within the riparian habitat of the East Branch of Green Valley Creek to ensure no CRLF are harmed, injured, or killed during construction work. If CRLF are present within or near construction zones, a qualified biologist possessing all necessary permits will relocate them, or they will be allowed to move out of the construction area on their own.

Any CRLF found within the construction area will be rescued and released into the East Branch of Green Valley Creek. Such individual CRLF will be captured by hand or dip net, photographed, and then placed in a clean pillowcase wetted with bottled water (or a large Ziploc bag with bottled water added) for transport. The date, location, and time where the individual was found will be recorded. The individual's age class (i.e., juvenile, subadult, or adult) and sex (if secondary sex characteristics are present), will also be recorded. As soon as possible, the frog

shall be carried to the East Branch of Green Valley Creek and released into a plunge pool at or near the eastern boundary of the project site (i.e., upstream of the current bridge crossing to Magee Ranch). This site was chosen for relocation because it is adjacent to where the frog would have been captured (i.e., within the same drainage), contains suitable habitat for CRLF, and presumably is the aquatic habitat from which the frog originally dispersed. The date, location, and time of the release will be recorded. The USFWS and CDFW will be notified by telephone message within 24 hours of such action, and a written e-mail describing the above will be submitted to the USFWS and CDFW within 48 hours of such action.

3.2 REVEGETATION

3.2.1 Species Composition and Density

The species composition to be used in the restoration of the stock pond and channel remnants of the southern drainage is based on observations of other constituent plants occurring along the drainage, along the East Branch of Green Valley Creek, and associated with other stock ponds in the watershed and within the greater Danville area. Native species occurring at these locations were identified, and vegetation density was visually estimated to determine the appropriate density of planting for the revegetation effort.

To determine the species composition and density of plants to be utilized in the revegetation of portions of the East Branch of Green Valley Creek, other onsite reaches of the creek both upstream and downstream of the identified restoration locations were used as reference sites.

Because some plant mortality is to be expected, the planting densities for woody vegetation specified below anticipate a mortality of 40% over the course of the 10-year riparian monitoring period. Some species included in the plan (e.g., blackberry, rose, snowberry, and mugwort) will also experience natural recruitment over the same period. Native grass species called for in the plan will be reseeded rather than planted with container stock.

Stock Pond and Created Pond

The stock pond will be enlarged and deepened to enhance its potential as CRLF breeding and rearing habitat (restoration area 5 on Figure 5). The pond will be lengthened by approximately 10 ft., widened by approximately 5 ft., and deepened to a minimum depth of 4 ft. The created pond (restoration area 7 on Figure 5) will be approximately 40 ft. by 100 ft. (shaped to the existing contours at that location) and will have a minimum depth of 4 ft. Half of each pond will be fenced (e.g., with wire fencing) to maintain habitat for CRLF while allowing continued access by cattle.

The ponds will be planted with emergent wetland vegetation as mitigation for waters impacts. The presence of emergent vegetation will also enhance the pond's suitability as CRLF breeding habitat, as it will provide cover for the species and vegetation braces for egg mass placement. Native wetland species, along with their USFWS wetland indicator, recommended for planting in the pond include Mexican rush (*Juncus mexicanus*; FACW), iris-leaved rush (*Juncus xiphioides*; OBL), baltic rush (*Juncus balticus*; OBL), tall flatsedge (*Cyperus eragrostis*; FACW), spike rush (*Eleocharis macrostachya*; OBL), and fringed willowherb (*Epilobium ciliatum*; FACW). These species shall be bought from a nursery in a planting tube size or larger. Individuals will be planted at a minimum density of two planting tubes per square meter. Individuals will be planted at or below the ordinary high water level of the pond.

The perimeter of the ponds will also be planted with red willows (*Salix laevigata*) and/or arroyo willows (*Salix lasiolepis*) to provide shade and help moderate the water temperature (see section 3.2.2 for willow planting treatment). These plants are also documented to provide foraging habitat and cover for CRLF.

Channel Remnants (Southern Drainage)

The channel remnant immediately upstream of the southern drainage will be contoured and widened to convey water from an offsite seep located approximately 50 ft. beyond the property boundary (restoration area 6 on Figure 5). A series of pools will be created within the channel, making it suitable for CRLF during a significant portion of the year. Cattle will be excluded from this area via wire fencing so that the soil does not get compacted. The channel bed,

including the pools, will be planted with native wetland vegetation using the same palette as recommended for the stock pond.

The downstream channel remnants largely consist of non-native upland vegetation (restoration areas 5 and 8 on Figure 5). These areas are not expected to support hydrophytic vegetation should a replanting effort be undertaken. Therefore, rather than plant the channel bed with hydrophytes, invasive species present in the channel (e.g., purple star thistle (*Centaurea calcitrapa*) and Italian ryegrass (*Festuca perennis*)) will be removed (see section 3.3.2 for weed control treatment). Areas left barren following eradication will be reseeded to prevent a new influx of invasive species (see section 3.2.2 for hydroseed treatment).

The species composition to be used along the banks and upland slopes of the restoration areas will be the same as the native vegetation matrix (i.e., native trees and shrubs) actually observed within the riparian habitat along the seasonal drainage channel (Table 2). Species recommended for planting along the lower banks include woody riparian trees and shrubs adapted to occasional flood events (i.e., 1% to 50% events). Species recommended for planting along the upper banks and above the top of bank consist of woody riparian shrub and tree species that would typically occur in a mixed riparian woodland community in the transitional zone between wetter areas of the channel and upland areas beyond the riparian corridor. These areas would typically only be inundated during very heavy winter storm events (i.e., 1% events).

While the species palette laid out in table 2 is recommended, the actual species and numbers of each species used will depend upon the availability of onsite and local nursery stock. Any changes to the planting palette shall be made in consultation with a qualified plant ecologist.

Barren areas between the installed plantings and areas left barren following eradication of invasives should be reseeded with native grasses and forbs to prevent a post-planting influx of invasive species (see section 3.2.2 for reseeded treatment).

Table 2. Recommended species palette for woody vegetation for proposed enhancement areas along the southern seasonal drainage.

Species	Planting Stock Size (gallons)	Planting Density (plants per 100m ²)	Slope Placement
<i>Shrubs</i>			
Mugwort (<i>Artemisia douglasiana</i>)	1	3	Low, mid
California rose (<i>Rosa californica</i>)	1	4	Low, mid
California blackberry (<i>Rubus ursinus</i>)	1	3	Low, mid
Common snowberry (<i>Symphoricarpos albus</i> var. <i>laevigatus</i>)	1	2	Mid, high
<i>Trees</i>			
Coast live oak (<i>Quercus agrifolia</i>)	5	1	Mid, high
Valley oak (<i>Quercus lobata</i>)	5	1	Low, mid, high
California buckeye (<i>Aesculus californica</i>)	5	1	Mid, high
Red willow (<i>Salix laevigata</i>)	Pole cutting	1	Low, mid
Arroyo willow (<i>Salix lasiolepis</i>)	Pole cutting	1	Low

East Branch Green Valley Creek

The objective of restoration and enhancement efforts along the East Branch of Green Valley Creek will be to control invasive plant species and successfully establish native trees and shrubs. Areas targeted for removal of invasive species will follow procedures as outlined in the channel remnants above and as described in section 3.3.2.

The species composition to be used in the enhancement areas will be the same as the native vegetation matrix actually observed within the riparian habitat along upstream and downstream reaches of the East Branch of Green Valley Creek (Table 3). The recommended planting densities equate to trees planted with an average of 15-ft. centers and shrubs sufficient to provide multi-level canopy and fill between trees.

While the species palette laid out in table 3 is recommended, the actual species and numbers of each species used will depend upon the availability of onsite and local nursery stock. Any changes to the planting palette shall be made in consultation with a qualified plant ecologist.

Barren areas between the installed plantings and areas left barren following eradication of invasives will be reseeded with native grasses and forbs to prevent a post-planting influx of invasive species (see section 3.2.2 for reseeded treatment).

Signage will be posted along the creek trail cautioning the public not to enter environmentally sensitive habitat and not to feed wildlife.

Table 3. Recommended species palette for enhancement areas along East Branch Green Valley Creek.			
Species	Planting Stock Size (gallons)	Planting Density (plants per 100m ²)	Slope Placement
<i>Shrubs</i>			
Mugwort (<i>Artemisia douglasiana</i>)	1	3	Low, mid
California rose (<i>Rosa californica</i>)	1	4	Low, mid
California blackberry (<i>Rubus ursinus</i>)	1	3	Low
Common snowberry (<i>Symphoricarpos albus</i> var. <i>laevigatus</i>)	1	2	Mid
<i>Trees</i>			
Coast live oak (<i>Quercus agrifolia</i>)	t-pots or larger	1	Mid, high
Valley oak (<i>Quercus lobata</i>)	t-pots or larger	1	Low, mid, high
California buckeye (<i>Aesculus californica</i>)	t-pots or larger	1	Mid, high
Fremont cottonwood (<i>Populus fremontii</i> ssp. <i>fremontii</i>)	t-pots or larger	1	Low, mid
Red willow (<i>Salix laevigata</i>)	Pole cutting	1	Low, mid
Arroyo willow (<i>Salix lasiolepis</i>)	Pole cutting	1	Low
No. California black walnut (<i>Juglans hindsii</i>)	t-pots or larger	1	Mid, high

3.2.2 Planting Recommendations

Plant Installation

For the treatment regarding willows, see “Willow Pole Cuttings” below.

To the maximum extent practicable, planting stock for the revegetation will be collected from onsite plants or within a 10-mile radius and within the same watershed as Magee Ranch to maintain genetic integrity of the species naturally occurring in the vicinity of the mitigation site. The collection of seed or other appropriate plant materials is encouraged at least 1 year in advance (consult with nursery supplier for specific requirements) of the anticipated mitigation effort in order to grow trees or shrubs to the recommended planting size. Installation of new

plantings shall be completed between November 1 and January 31 to capitalize on the winter rainfall, encourage root establishment prior to the spring and summer dry season, and minimize the amount of supplemental irrigation required in the first years following planting. Once installation of the plants is completed, the biologist monitoring the site will be provided with as-built installation plans to confirm that they are consistent with this planting plan. If a species that is called for in the planting plan is not available, the biologist will be consulted to provide recommendations for appropriate alternate replacement species.

The plant installation contractor will utilize tried and successful methods for planting, including use of organic mulch at time of planting, soil preparation methods such as loosening soil prior to planting in the case of compaction, and use of basins and other slight topographical techniques to increase water retention for plantings. If soil compaction has occurred during project buildout, this should be ameliorated as appropriate including through use of mulch and possibly through soil auguring prior to planting. Weed species described above will compete with native species for available water and substrate resources; therefore, regular weed control maintenance may be critical to the success of revegetation efforts. Also, local wildlife may damage planted trees and shrubs. Appropriate browse protection measures, such as temporary tree cages or tubes, will be implemented to ensure that the planting effort is not harmed by herbivory.

Plantings should follow natural contours of the landscape. Clumping is recommended especially in surface folds and closer to the site's riparian habitat to increase survivorship. Planting in uniform layout including rows is discouraged, as these placements result in reduced ecological value and natural aesthetic over a more random to clumping design. Slight crowding of species is natural in the establishment phase of habitat creation; however, crowding should not be such that planted trees out-compete with one another in the course of the monitoring period. Trees should be planted no less than 8 ft. from one another. Shrubs should be planted with their mature canopies in consideration.

Willow Pole Cuttings

Prior to their removal, pole cuttings shall be collected from existing willows on the site to ensure that genetically local and pre-adapted stock is used. As the success of this mitigation effort will

be determined by survivorship of the plantings (section 3.3), it would be beneficial to plant more than the required number of pole cuttings, although the 5:1 replacement-to-removal ratio anticipates some mortality by the end of the monitoring period.

Replacement plantings shall consist of plant material propagated from onsite trees to the maximum extent practicable. If onsite collection is not feasible, replacement plantings shall be collected from within a 10-mile radius and in the watershed of the project site in order to maintain the genetic integrity of the species naturally occurring in the vicinity of the project site.

Willow cuttings shall be collected from dormant donor plants, preferably from November to January. Cuttings should be approximately four feet long and $\frac{3}{4}$ inches to 2 inches in diameter at the thick end. Cuttings should consist of non-succulent material (i.e., should come from plants that are at least one year old). For best results, cuttings should be taken from the lower branches of the donor trees. The cuttings shall be removed from the donor plant with the use of loppers, a small hand saw, or equivalent sharp cutting instrument. Small side branches should be trimmed from the cutting before planting.

There are different approaches that can be used to establish cuttings into trees which depend on the time and resources available. For best results, cuttings should be placed in a large bucket of water from the subject aquatic habitat for at least 2 weeks until root growth is noted. This water should be refreshed weekly. After roots are clearly establishing, these cuttings can be planted onsite following procedures described below or they can be planted into pots. If the latter, soils in the pots should be kept moist to saturated at all times. If cuttings are taken the year prior to planting, cuttings should be up-planted into larger containers to ensure that the plants do not get root bound. If time does not permit this level of pretreatment, cuttings can be planted directly into the ground where they are desired.

Planting techniques will be similar for planting fresh cuttings, bare-root cuttings that were kept in water, or cuttings that have been allowed to establish in pots of soil. Planting should take place between November to early February. For fresh cuttings, trimmed stems shall be planted within three days of collection, ideally when the soil is saturated. Interim storage is permitted

provided that rooting ends of the cuttings are kept cool and moist. A vertical hole should be prepared to a depth of approximately 2 feet. This can be done with a soil auger or a trenching spade. Ideally, the soil at the bottom of the hole should be saturated from the adjacent aquatic habitat. Dry, upland habitat will not easily support willow plantings. The rooting end of the cutting shall be planted in a vertical hole, leaving approximately $\frac{1}{4}$ to $\frac{1}{2}$ of the cutting exposed. To distinguish the upper and lower ends, the rooting end shall be cut at an angle and the upper end cut squarely during collection. Soil shall be tamped against the cutting throughout the length of the planting hole to eliminate air pockets. For bare-root cuttings that were permitted to establish roots in a bucket of water, this same method should be used; however, extreme caution should be taken not to damage the roots during backfilling of the hole. For plants established in pots, these should be planted in a hole dug to a diameter twice as wide as the root ball. If roots are knotted, the bottom of the root-ball should be gently pulled apart before planting.

All willow pole cuttings shall be planted along the channel banks, as their function is to help prevent bank erosion and provide cover for the channel bed. Plantings shall be installed no lower than the ordinary high water mark and no higher than the top of the bank. No plantings shall be installed in the channel bed. Cuttings shall be planted on 10- to 15-foot centers so that, over time, a dense, full, canopy can be achieved. To the maximum extent practicable, pole cuttings shall be installed where the channel banks are barren of vegetation (i.e., where banks are most susceptible for erosion). Some light removal of herbaceous vegetation may occur in order for the cuttings to be planted (i.e., removal of woody vegetation to install pole cuttings is not permitted).

Broadcast/Hydroseed Mix

Areas where the soils have been left exposed from grading and replanting shall be reseeded through broadcasting or with a hydroseeder.

For broadcasting, a thin mulch of weed-seed free compost should be raked into the top layer of the soil. The seed mix should be raked in after that, followed by a light tamping. The primary purposes of seeding are to stabilize soils and prevent a significant post-disturbance influx of non-native species. The seed mix shall be comprised predominantly (approximately 95%) of sterile barley or some other non-invasive sterile grass species but should also include at least 5% native

species such as mugwort (*Artemisia douglasiana*), creeping wildrye (*Elymus triticoides*), California barley (*Hordeum brachyantherum*), California brome grass (*Bromus carinatus*), California fescue (*Festuca californica*), and purple needle grass (*Nasella pulchra*) or other plant species native to the Magee Ranch watershed.

If hydroseeding is chosen as the seeding method, composition of the hydroseed slurry should include species similar to those described for broadcasting. Seed content should be approved by a qualified biologist (such as by the monitoring biologist).

3.2.3 Soil Preparation

In areas of heavy compaction, the soil will be loosened, and mulch will be incorporated to aid in the establishment of enhancement plantings. Incorporation of organic material should be done in such a way as to ensure that further compaction does not result and that runoff does not move large volumes of soil into the riparian system. To control for weeds and increase soil moisture, thick mulch or other suitable materials will be applied around each planting at the time of installation.

3.2.4 Supplemental Water

All installed plantings will receive supplemental water for a minimum of three years to encourage root growth and successful establishment. Should replacement plantings be required, these will be irrigated for the appropriate period following their installation. The number of additional years that supplemental water must be given will be determined by plant health at the conclusion of the third year following installation.

Irrigation should be designed so that it does not adversely impact the riparian habitat present on site. Specifically, a drip system or equivalent should be installed and timed to increase root depth of plantings (e.g., long, periodic watering at intervals that take into account weather conditions), thereby increasing the ability of the plantings to be self-supporting following the removal of irrigation. Overhead spraying is discouraged.

3.2.5 Weed Control

To control for weeds and increase soil moisture, thick mulch or other suitable materials will be applied around each planting at the time of installation. An area of a minimum of two feet in circumference will be cleared of weedy vegetation from around the base of each installed plant. See section 3.3.2 for further weed control treatment, including control of invasive species.

3.2.6 As-Built Plans

An as-built plan of the site will be developed and prepared by a qualified landscape architect. This plan will include the identity and approximate location of species planted within the mitigation areas and will be submitted to the biologist for approval prior to plant installation.

3.2.7 Collection of Baseline Data (Year 0)

All newly installed plantings will be tallied by species for the restoration area immediately following their installation (i.e., Year 0) to ensure that it has been completed per the vegetation enhancement plan. Actual plant totals will be compared against the planting numbers required by the vegetation enhancement plan. If planting numbers are below those required in the plan, additional plantings will be installed immediately to compensate for any differences to ensure that plantings were installed per the plan prior to the first year of monitoring.

Photo points to be used during the annual monitoring period should be established during the Year 0 baseline data establishment. These should be taken with consideration of the future need to recreate the photograph in place (e.g., not within any undeveloped house footprint), and they should be planned to ensure good coverage of the planted area. Photo points should be included in a map showing its location and direction. Photographs representative of the enhancement areas should be taken before and after installation. These images should be stored for comparison during the Year 1 and final year monitoring reports.

3.3 MAINTENANCE

Each restoration area will be maintained for the duration of their respective monitoring period to ensure the successful establishment of the installed plantings.

3.3.1 Supplemental Water

All installed plantings will receive supplemental water for a minimum of three years to ensure that they successfully establish within the first few years following installation. Should replacement plantings be required, these will be irrigated for the appropriate period following their installation. The number of additional years that supplemental water must be given will be determined by plant health at the conclusion of the third year following installation.

The frequency of watering will be determined by a qualified biologist after reviewing the onsite conditions.

The irrigation system will be inspected monthly through the first growing season and at least monthly during the growing season for the remainder of the required irrigation period. Any identified malfunctions or problems will be repaired immediately.

3.3.2 Weed Control

Any weeds within the immediate vicinity of installed plantings or any other vegetation that appears to directly compromise the successful establishment of the plantings will be immediately removed by hand. During weed removal activities, care should be taken not to damage the mitigation plantings and, when practical, other naturally recruited native plants. Weeds will be removed on at least a quarterly basis for the first three years of the monitoring period and at least on a semi-annual basis for the remainder of the monitoring period.

Invasive species given a “high” impact rating (i.e., causing severe ecological impacts to the environment) by the California Invasive Plant Council (Cal-IPC) will be specifically targeted for eradication. The entire plants, including their roots, will be removed from all parts of the restoration areas. These invasive species have the potential to threaten the success of the mitigation effort by dominating site vegetation, crowding out mitigation plantings, discouraging natural recruitment and establishment of other native species, and interfering with irrigation systems. Once these pest plants become well-established, they can be very difficult to control.

Therefore, it is critically important that eradication efforts begin before plants flower and go to seed. Weed abatement should continue following every major rain event. Eradication efforts should be supervised by someone familiar with the identification and ecology of these target weed species, and maintenance personnel should continue to be educated accordingly.

Irrigation drip zones will also be cleared of weedy vegetation to ensure that weeds do not interfere with their intended water dispersal patterns.

3.3.3 Annual Maintenance Report

An annual report documenting all maintenance activities that have occurred in the enhancement areas will be provided to the biologist responsible for monitoring the area. This information will be incorporated into the annual monitoring report.

3.4 MONITORING PLAN

The DEIR states that the mitigation effort for waters of the U.S. shall be monitored for no less than five years, and the riparian mitigation effort shall be monitored for no less than ten years. The success of the waters of the U.S. and riparian habitat mitigation efforts will be monitored annually by a qualified biologist for a five-year and ten-year period, respectively, beginning the first year after the successful installation of the mitigation plantings. Results of the annual monitoring will be compared against the performance criteria specified below. The annual monitoring report will be completed and provided to the Town of Danville by December 31 of each year, and to other agencies to the extent required under permits those agencies may issue.

3.4.1 Monitoring Methods

Monitoring shall occur in the spring or summer of each year (March 15 through June 15). This is the peak bloom season when most plant species are easiest to identify.

Vegetation Monitoring

Installed plantings will be monitored annually for a 10-year period by a qualified biologist beginning with the first blooming season following plant installation.

Wetland and Aquatic Vegetation Monitoring for Waters of the U.S.

The annual field survey for the ponds and channel beds (restoration areas 5 through 8) will be completed to document the survivorship of the planted native wetland vegetation using a vegetative cover metric, with the final goal being that the native plantings have survived with an overall relative percent coverage of at least 30 percent (Table 4). If significant mortality is observed, or if it appears that an overall percent cover of at least 30% cannot be achieved by the fifth year of monitoring, then non-native species that have become reestablished will be controlled, and replanting of natives, where necessary, will occur. Survival results following the cessation of irrigation will indicate whether plant roots are sufficiently developed to support the plants under natural conditions.

Surveying for the presence of invasive plant species around the ponds will occur during monitoring surveys. Control of weeds on the Cal-IPC plant list will occur if any of these species are found in the restoration areas (sections 3.3.2).

Table 4. Vegetation performance criteria for the stock pond and created ponds.

Measurement	Yr 0	Yr 1	Yr 2	Yrs 3-4	Yr 5 Final Performance Criteria
Relative percent cover by native species	Baseline	Baseline plus 5%	20%	25%	30%
Cal-IPC species with "high" rating	Baseline	Baseline minus 10%	<30%	<20%	<10%

Riparian Vegetation Monitoring

Survivorship of riparian trees and shrubs. The survivorship of all installed mitigation trees and shrubs will be monitored and inventoried by species annually beginning in Year 1. A separate inventory will be made of any naturally-recruited native trees. These natural recruits can be used to offset mortality of the enhancement plantings at the biologist’s discretion. This will be acceptable if the natural recruit is determined to provide the same ecological value as those species originally included in the enhancement.

Health and vigor of riparian trees and shrubs. The health and vigor of all installed mitigation trees and shrubs will be assessed beginning in Year 1 according to the following scale:

Dead = 1

Poor = 2-4 = 0-33% healthy foliage and bark

Fair = 5-7 = 34-66% healthy foliage and bark

Good = 8-10 = 67-100% healthy foliage and bark

This qualitative observation of health and vigor considers several factors, including foliage color, bud development, new growth, herbivory, drought stress, fungal/insect infestation, and physical damage. If a tree or shrub’s foliage is abnormally sparse, then the health and vigor rating will be lowered accordingly, even if the foliage present is healthy.

Performance criteria. Overall survivorship of 60% (or maximum mortality of 40%) is required after ten years following plant installation for woody-stemmed vegetation (i.e., trees and shrubs). It is expected that most of this mortality would occur in the initial three-year period as plants become established. This is reflected in the incremental performance criteria for tree and shrub survivorship shown in Table 5. Should the incremental performance criteria for survivorship and/or health and vigor not be met for a given year, adaptive management strategies discussed in section 3.5 will be implemented.

If survivorship falls below 60%, all dead plants will be replaced. If survivorship for a particular area falls below 50% at any time in Years 1-10, then the monitoring period shall start anew for that area (i.e., at Year 1).

Table 5. Riparian vegetation performance criteria.					
Measurement	Yr 0	Yr 2	Yr 4	Yrs 5-9	Yr 10 Final Performance Criteria
Survivorship	Baseline	90% of baseline	80% of baseline	70% of baseline	60%
Health and vigor	Baseline	5-10	6-10	7-10	8-10

Wildlife Monitoring

Wildlife species observed within the riparian corridors of East Branch Green Valley Creek and the southern seasonal drainage shall be recorded in a field notebook and included in the annual monitoring reports. While no performance criterion is associated with this, it will provide an anecdotal indicator of the habitat value of the riparian corridor and enhancement areas.

3.4.2 Photodocumentation

In order to photodocument site conditions, photos will be taken on at least an annual basis at the photo points established during the Year 0 baseline data collection effort.

3.4.3 Final Performance Criteria

The final performance criteria that will be used to determine the success of the waters of the U.S. mitigation effort at the end of the five-year monitoring period are as follows:

- Relative percent cover by native species will exceed 30% within the ponds;
- Invasive weeds given a “high” rating by the Cal-IPC will not exceed 10% cover within any enhancement area.

In the fifth and final year of monitoring, the project proponent will also be required to demonstrate that at least 0.5 acres of waters of the U.S. have been created or enhanced. This will be accomplished by conducting a formal wetland delineation consistent with guidelines found in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008), and *Minimum Standards for Acceptance of Preliminary Wetland Delineations* (USACE 2001), or any new guidelines in addition to or in place of the above, during the fifth year of monitoring. A waters of the U.S. report will be prepared outlining the results of the delineation, including a map and acreage calculations of all areas meeting the definition of waters of the U.S. The report will be submitted to the USACE and any other relevant agencies along with the Year 5 monitoring report.

The final performance criteria that will be used to determine the success of the riparian mitigation effort at the end of the ten-year monitoring period are as follows:

- At least 60% of planted riparian mitigation vegetation (i.e., trees and shrubs) in the enhancement areas will be alive and healthy.
- Invasive weeds given a “high” rating by the Cal-IPC will not exceed 10% cover within any enhancement area.

3.5 ANNUAL MONITORING REPORT

At the end of each annual monitoring period, including the Year 0 baseline monitoring, the annual monitoring report will be completed and provided to the Town of Danville by December 31 of each year, and to other agencies to the extent required under permits those agencies may issue.

For the Year 0 baseline monitoring, elements contained in the report will include the following:

- The final planting plan and, if different from the final planting plan, the as-built plans. If inconsistencies were found between the two during the baseline monitoring, then the report will also include any additional plantings to be installed the following autumn or winter to make up the difference;
- A summary of the Year 0 baseline data collected immediately following plant installation; and
- Photo documentation.

For the Year 1 through Year 10 monitoring, the annual monitoring report will address or include the following:

- A summary of the previous years’ data;
- Results of monitoring efforts conducted in the late spring or summer;
- A discussion of any performance criterion that was not met and any adaptive management strategies to be employed (e.g., additional plantings to be installed, weeding activities to be implemented, and adjustments to the irrigation schedule/design);
- A discussion of maintenance activities completed during the year;
- Photo documentation of the enhancement and mitigation areas juxtaposed with photo documentation for the previous year of monitoring; and

- An analytical discussion regarding the habitat enhancement effort with regard to performance criteria and the overarching habitat creation goals.

The Year 5 monitoring will also include a waters of the U.S. report discussing the results of the formal wetland delineation conducted for the mitigation site.

3.6 ADAPTIVE MANAGEMENT

Adaptive management strategies will be implemented if the results of the annual monitoring indicate that the incremental or final performance criteria will not be met. Adaptive management strategies may include, but would not be limited to:

- Evaluation of the irrigation system for necessary repairs;
- Adjustment of the irrigation regime;
- Assessment and modifications to weed control practices;
- Assessment and modification to protection measures aimed at reducing damage from herbivores and other wildlife;
- Replanting of restoration areas following annual monitoring surveys (the amount of replanting to be completed should be determined in consultation with the monitoring biologist);
- Replanting with other native shrub and tree species that are approved by a qualified biologist;
- Further application of organic mulches or other appropriate water retention/weed suppression devices around plants so long as they don't pose an adverse impact to the riparian habitat;
- Experimentation with alternative replanting and/or maintenance methods in test plots within the restoration areas, such as backfilling erosion wattles with locally native seed material, in order to determine viable strategies for overcoming barriers to successful establishment.

A summary of all adaptive management actions taken during the year will be discussed in the annual monitoring report.

4.0 CONSERVATION MANAGEMENT PLAN

The term “conservation lands” refers to the approximately 308 acres of lands onsite that are proposed to be preserved as open space. This section focuses on the management of the conservation lands. Through land management and monitoring, the conservation lands will meet conservation goals and objectives.

4.1 KEY ELEMENTS OF CONSERVATION STRATEGY

The following are the key elements of the conservation strategy for fully mitigating impacts to habitat for the covered species (i.e., CRLF).

- The conservation lands will be managed for the protection of habitat for the covered species.
- The existing habitat conditions on the conservation lands will be preserved and enhanced for the benefit of the covered species. This includes the creation and enhancement of aquatic habitat, control of invasive plant species, and/or planting native species as discussed in this plan for the aquatic and riparian habitats (section 3.0). This also includes the continued grazing of cattle on the conservation lands.
- A conservation easement or deed restriction on approximately 308 acres of Magee Ranch, including 26.4 acres of the seven custom lots, will be recorded prior to the start of construction. Future development rights will be prohibited on these lands except as defined by the conservation easements or deed restrictions. The purpose of the conservation easements and/or deed restrictions is to retain and enhance the conservation value of the preserved lands while permitting allowable uses for open space or recreational value that is compatible with the development agreement and the Town’s General Plan policies.
- The long-term management of the conservation lands will be funded via ongoing GHAD revenues, which must be sufficient to pay for the monitoring and management of the conservation lands specified herein.
- Conservation lands will be managed for endangered species from the start of the project (i.e., mitigation precedes impact).

- Covered species found in impact areas will be salvaged and relocated to the conservation lands.

4.2 CONSERVATION GOALS AND OBJECTIVES

The conservation goals are broad, guiding principles for the conservation program. The objectives provide direction in management in order to meet the conservation goals. The goals and objectives guide the development of an adequate and effective conservation program.

Goal 1

Maintain viable, self-sustaining populations of the covered species within the identified conservation lands.

Objective: Establish, enhance and manage permanent conservation areas to benefit the covered species.

Objective: Preserve and enhance a large, continuous space with a mosaic of habitats for CRLF and other regionally occurring species.

Objective: To the degree it can, maintain connectivity with adjacent landscapes.

Objective: Implement a monitoring program that provides sufficient information to determine relative fluctuations in covered species numbers in the project area and associated conservation lands that provides a feedback loop for adaptive management.

Goal 2

Establish a conservation program for the project and conservation lands that are consistent with published recovery plans.

Objective: Protect conserved lands in perpetuity in order to benefit covered species.

Goal 3

Implement an effective adaptive management program.

Objective: Use the ongoing monitoring for the project site and mitigation lands to adjust management and avoidance and minimization strategies in order to promote covered species viability.

Objective: Collect data systematically on covered species on an annual basis and manage data for accessibility.

Objective: Maintain a central database that uses geographical information system for spatial analysis and presentation of covered species locations.

4.3 CONSERVATION LANDS MANAGEMENT

4.3.1 Overview

Those parts of Magee Ranch that constitute the conservation lands have been grazed since 1949 and will continue to be used for cattle grazing in perpetuity. In addition to cattle grazing, the conservation lands may also be grazed by sheep and goats. Grazing operations will include herding, watering, animal care, maintenance and/or repair activities associated with cattle operations, existing and future surface and subsurface utilities, and existing roads or future roads all within the guidelines stipulated herein to preserve conservation lands and conserve covered species in perpetuity.

4.3.2 Management Goals and Objectives

The overall management goal of the conservation lands is:

1. To maintain and, where feasible, enhance the habitat values within the conservation lands for CRLF.
2. Ensure that the use of the conservation lands for cattle operations is compatible with the overall goal of maintaining habitat values for CRLF.
3. Ensure that uses of the conservation lands as provided for in the conservation easements and/or deed restrictions and as provided for herein, such as repair and/or maintenance of existing and future roads or trails, are conducted in such a manner as to limit disturbance of habitat values for CRLF.
4. Annually survey for the status of any populations of CRLF within the conservation lands.
5. Conduct annual qualitative and quantitative monitoring of the conditions and characteristics of vegetation that may support populations of CRLF within the conservation lands.

4.3.3 Management Strategy

1. Provide suitable fencing (i.e., wire fencing) around the perimeter of the site and in designated areas identified in section 3.0 of this MMP/CMP and signage that restricts access by individuals not authorized by the ranching operation or conservation easement (e.g., public trail network) and permits wildlife species free access (e.g., egress and ingress) to the conservation lands.
2. Restrict adverse farming practices, creation of new roads, development, or other activities that are not expressly permitted by the conservation easement or deed restriction.
3. The conservation easement will permit ongoing grazing operations, especially to reduce potential fire danger, but prohibit future development of these lands.
4. Ongoing grazing is integral to managing the conservation lands for the covered species. Grazing management will be controlled for timing, duration, and intensity for the expressed purpose of optimizing the landscape for the covered species and reducing potential fire danger. Monitoring of grazing intensity may result in recommendations for the ongoing ranching operation to modify timing, duration, and intensity of grazing to best benefit the covered species.
5. Relocate CRLF salvaged from project construction areas and areas on the conservation lands where CRLF are at risk of being harmed through anthropogenic effects to suitable conservation areas on the site.
6. A limited number of roads currently exist on the conservation lands, some of which may be converted to trail use. Any conversion of existing roads to trails that results in a trail that is smaller than the existing road footprint will be restored to native and other suitable habitats that support the covered species. Any authorized personnel accessing the remaining roads will adhere to a 15 mph speed limit. Any road use will be limited to maintenance and monitoring activities.
7. The limited placement of trails will be generally cited in areas that contain existing trails and roads. Recreational use of the conserved lands will be constrained to these trails.
8. No garbage will be disposed of on the conservation lands. Trash will be picked up twice per year, if necessary.

9. All trash and garbage within the residential subdivision and estate lots is to be contained in covered receptacles. This is to minimize the availability of artificial food sources that would attract raccoons and other predators of CRLF.
10. Increase the breeding potential for CRLF on the conservation lands and in areas onsite where CRLF are known to occur (i.e., along the East Branch of Green Valley Creek). This includes installing appropriate fencing to control livestock access to the stock pond and pools along the southern seasonal drainage channel as described in section 3.0.
11. Preserve and manage the East Branch of Green Valley Creek riparian corridor in a manner that is consistent with the conservation values. Allowable uses will be permitted as defined in the development agreement and EIR. Allowable uses could include the future siting of a public trail along the creek corridor with a possible bridge crossing.
12. The following activities are prohibited:
 - a. Supplemental watering except for restoration and enhancement activities described in section 3.0;
 - b. Use of herbicides, pesticides, rodenticides, fertilizers, or other agricultural chemicals or weed abatement activities, except weed abatement activities necessary to control or remove invasive, exotic plant species as described in section 3.0;
 - c. Incompatible fire protection activities except fire prevention activities set forth within this document;
 - d. Use of off-road vehicles and use of any other motorized vehicles except as set forth within this document;
 - e. Recreational activities except as permitted by the development agreement and the DEIR;
 - f. Residential, commercial, retail, institutional, or industrial uses;
 - g. Planting, gardening, or introduction or dispersal of non-native plant or animal species;
 - h. Filling, dumping, excavating, draining, dredging, mining, drilling, removing or exploring for or extraction of minerals, loam, gravel, soil, rock, sand or other material on or below the surface of the conserved lands;

- i. Altering the general topography of the conservation lands, including, but not limited to, building of roads and other development, except as necessary to implement the MMP as described in section 3.0; and
- j. Removing, destroying, or cutting of trees, shrubs or other vegetation, except for fire breaks, prevention or treatment of disease, control of invasive species that threaten the integrity of the habitat, completing the MMP as described in section 3.0, or activities described in the conservation easement or deed restriction.

4.3.4 Current Conservation Lands Grazing Practices

Grazing operations have been conducted on Magee Ranch since 1949. This plan proposes to employ adaptive management strategies to make annual adjustments to stocking rates based on rainfall, grass type and stock, seasonality of rainfall, and other variables that adhere to the following grazing practices and levels.

1. The average stocking rate for cow/calf operations is expected to be one cow per 10 acres over a 10-year annual average. This ratio will vary from year to year based on rainfall, grass type and stock, seasonality of rainfall and other variables.
2. Grazing schedule: Grazing for cow/calf operations is year-round.
3. Residual dry matter (RDM): retain at least four inches of dry grass cover or 500 pounds per acre of RDM.

The conservation lands have been grazed at this level and schedule consistently since Magee Ranch has been in operation. In some cases, due to the relatively dry nature of the ranchlands, cattle may need to be removed from portions of the ranch to allow for recovery of grass stocks. The conservation lands manager may allow for periods of no grazing on portions of the ranch to allow for grass stock recovery as long as it is consistent with the conservation of the listed species and does not constitute a significant fire danger.

4.3.5 Adaptive Management Strategy for the Annual Grazing Plan

The development of annual grazing plans will be based on an adaptive management strategy that has been defined as an integrated method for addressing uncertainty in natural resource management (Holling 1978; Walters 1986; Gundersen 1999). The purpose of adaptive management is to provide ways to improve conservation actions in the rubric of the stated

biological goals and objectives of maintaining or improving conditions, where feasible, on the project site. As a frame of reference, for example, the USFWS Five Point Policy for Habitat Conservation Plans (HCPs) (USFWS 2000) states that adaptive management is defined as a method for examining alternative strategies for meeting measurable biological goals and objectives, and then, if necessary, adjusting future conservation management actions according to what is learned. The ranch manager and the conservation lands manager shall meet annually to develop the annual grazing plan. Factors to be considered in development of the annual grazing plan shall include, but would not be limited to, the following:

1. Rainfall amount and timing;
2. Type and amount of seasonal grass stocks;
3. Cattle market economics; and
4. Impact of grazing on covered species.

The annual grazing plan shall be formulated and prepared at the annual meeting. Grass stocks will be evaluated, and results from the prior year's monitoring reports and recommendations will be reviewed. Specific grazing plans for the current year will be developed and shall include, but would not be limited to:

1. Amount of cattle to be grazed on the conservation lands;
2. Timing of grazing and, if necessary, movement of cattle on the conservation lands;
and
3. Timing of removal of cattle from all or portions of the conservation lands.

The annual grazing plan will also record any maintenance activities such as fence repair, road maintenance, well or cattle watering system repair, and cleanup of trash or trespass debris that are to be done in the calendar year. A schedule and budget will be prepared for the annual repair and maintenance activities. A copy of the annual grazing plan will be included in the annual report.

The conservation lands are grazed year-round. Adaptive management will be used to adjust the stocking rates and/or level of grazing to account for variations in the natural conditions from year to year. Adaptive management will also continue to be used at the conservation lands to adjust to fluctuations of plant biomass production due to timing, duration and amounts of precipitation events.

4.3.6 Avoidance and Minimization Measures for CRLF

Carrying out the management and maintenance responsibilities included in this plan may require activities such as large equipment use, construction of temporary access roads, trenching or digging, construction of fire breaks, grading of existing dirt roads, approved vegetation cutting or disking, and other activities associated with cattle operations, emergency operations, or the disturbance or removal of endangered species habitat within the conservation lands. If these or any other anthropogenic uses of the land (e.g., use of recreational trail) put CRLF in harm's way, then the avoidance and minimization measures as summarized in section 3.1.2 and described more fully in Appendix A will be implemented. CRLF can be relocated to the East Branch of Green Valley Creek or to ponds in the southern part of the conservation lands.

4.3.7 Permanent Disturbances to Habitat Within the Conservation Lands

No permanent structures, pads, roads, or other facilities shall be permitted on the conservation lands, except as provided for below:

1. In order to facilitate the ability of the land manager to carry out its management and monitoring responsibilities, additional roads may need to be constructed within or along the boundary of the conservation lands. The roads shall only be constructed of compacted earth or soil and shall be constructed in such a way as to minimize or avoid impacts to known populations of listed species if they occur.

4.3.8 Security, Safety, and Public Access

A future public trail network is being considered on lands to be preserved as open space on Magee East. The trail network is conceptually proposed for alignment along existing fire and private service roads. The applicant would dedicate one or more easements for another agency to construct and maintain the public trail network. This network would connect to the existing Sycamore Valley Open Space trail on lands immediately east of the site.

Until such time that an easement for the public trail network is granted, the conservation lands will be fenced and shall have no general public access, nor any regular public or private use. Research, educational programs, or other efforts may be allowed on the conservation lands site

as deemed appropriate by the permitting agencies but are not specifically funded or a part of this long-term management plan.

Should an easement for a public trail network be granted, individuals using the trail shall not go off trail so as to minimize disturbance to the preserved lands.

If required, potential mosquito abatement issues will be addressed through the development of a plan by the land manager and the mosquito and vector control district in coordination with and approved by the permitting agencies.

Potential wildfire fuels will be reduced as needed by mowing or disking in areas where approved by the permitting agencies.

4.4 CONSERVATION LANDS MONITORING PLAN

4.4.1 Overview

The overall goal of monitoring is to foster the long-term viability of the conservation lands to support covered species. Routine monitoring and maintenance tasks are intended to assure conservation lands meet the stated conservation goals in perpetuity. The conservation lands will be monitored to verify health of rangelands within defined parameters in order to maintain viable populations of CRLF. The results from monitoring will inform management decisions that address changes in distribution and abundance of CRLF. Monitoring evaluates the success of the conservation program in meeting its stated biological objectives.

4.4.2 Monitoring Program

Monitoring will be implemented annually to document CRLF presence, distribution, and relative abundance. Effectiveness in monitoring evaluates the success of the conservation program in meeting its stated biological objectives. In this case, annual monitoring of relative abundance of targeted species populations will serve to inform the effectiveness of ongoing management, including the timing and extent of grazing.

All conservation lands will be monitored to inform decisions related to modifications of any management prescription (e.g., grazing). Standard monitoring methods include walking surveys.

4.4.3 Land Management: Initial Monitoring and Baseline

Biological Assessment

The annual report in Year 1 shall include a biological assessment within the conservation lands to serve as a baseline against which to measure future habitat conditions and values and any subsequent habitat enhancement. This effort will be repeated every five years to ensure that conditions on the site have been improved or maintained as per conservation goals and objectives. The assessment should include the following biological measurements:

Vegetation/Habitat

- Plant species diversity (species list of dominant species). A separate inventory should be maintained for the grasslands (i.e., upland habitat) and aquatic features such as the stock pond and seasonal drainage channel, as these represent different uses in the life history of the CRLF;
- Hydroperiod of the stock pond and created pond;
- Litter/residual dry matter;
- Soil erosion (extent and location); and
- Natural disturbances.

Wildlife

- Wildlife species diversity (species list); and
- Distribution status (if any) of listed species.

The results of the assessment shall be maintained in an appropriate database. The biological assessment shall be conducted by a qualified biologist. The initial baseline assessment methodology and approach shall be submitted to the Town of Danville, and to other agencies to the extent required by other permits.

Annual Grazing Assessment

All of the covered species would benefit from a program that manages the grazing cycle specific to their needs. Grazing intensity, season of livestock use, type and class of livestock, and frequency of use are important grazing parameters for managing for the covered species. Moderate to heavy stocking rates have been found to benefit all of the covered species (Barry 2011; Germano et al. 2011). The RDM is the typical metric for grazing intensity. Moderate stocking rates removes about 50 to 75 percent of the forage each year, retaining about 1,000 to 1,500 pounds of RDM on the ground prior to fall rains, while heavy stocking removes more than 75 percent of the forage, retaining less than 500 pounds of RDM.

The annual report shall include an assessment of the previous year's grazing practices and their associated impacts on the biological values of the conservation lands and their impact on listed species. Once per year, the conservation lands managers shall evaluate the habitat conditions and values within the conservation lands. Proper grazing practice should insure that:

- Habitats are meeting management objectives;
- Plant cover, height, density is adequate;
- Plant community composition indicates good rangeland health;
- Native and non-native plant species are at acceptable levels;
- Invasive weeds are at acceptable levels;
- Plant age-class indicates community maintenance;
- Plant form-class indicates normal growth characteristics;
- Groundcover is within normal range;
- Wildlife and plant species diversity are at acceptable levels; and
- Livestock grazing/management is or is not a significant factor.

Grazing levels will be adjusted appropriately if the following occur:

- RDM exceeds 1500 pounds or falls below 500 pounds; or
- It is determined that grazing practices are adversely affecting the function and value of existing aquatic or riparian resources or are inhibiting achievement of the success criteria of the aquatic and riparian mitigation effort (section 3.4).

If a problem is identified with a particular grazing practice or a particular criterion is not being met, then a more in-depth quantitative assessment of grazing practices may be required.

Waters of the U.S. Assessment

One annual survey will be conducted to qualitatively monitor the general condition of restored or enhanced aquatic features (i.e., the stock pond, created pond, and seasonal drainage channel). General topographic conditions, hydrology, general vegetation cover and composition, invasive species, and erosion will all be noted, evaluated, and mapped during a site examination in the spring. Notes to be made will include observations of species encountered, water quality, general extent of wetlands, and any occurrences of erosion and/or weed invasion.

Because the stock pond is being enhanced to serve as potential CRLF breeding habitat, the hydroperiod of the pond should also be monitored. Ideally, the pond should hold water from December/January through August and should have a minimum depth of 4 ft. from winter through early summer (i.e., June/July) during seasons of normal or above rainfall.

Invasive Species

The annual report shall include any new invasive species that may threaten the diversity or abundance of native species through competition for resources or by causing physical or chemical changes to the invaded habitat. Each year's annual survey will include a qualitative assessment (e.g., visual estimate of cover) of potential or observed noxious weeds or other non-native species invasions. Additional actions to control invasive species will be evaluated and prioritized.

Trash and Trespass

The annual report will monitor sources of trash and trespass. During each site visit, occurrences of trash and/or trespass will be recorded, as well as the type, location, and management mitigation recommendations to avoid, minimize, or rectify a trash and/or trespass impact. At least once yearly, trash will be collected and removed, and any vandalism and/or trespass impacts will be repaired and rectified.

Fire Hazard Reduction

The annual report shall report on any fire hazard conditions that may need corrective action as required for fire control while limiting impacts to biological values.

Infrastructure

The annual report shall monitor the condition of fences and gates. Fences and gates must be maintained to prevent casual trespass and to allow necessary access. During each site visit, the condition of fences and gates will be recorded, and, if necessary, recommendations to implement fence and/or gate repair or replacement will be made. Fences and gates will be maintained as necessary by replacing posts, wire, and/or gates, as funding allows.

Annual Report Preparation and Submittal

The annual report will be prepared along with any other additional documentation and submitted by December 31 of each year to the Town of Danville and to other agencies as required by permits they may issue.

Included will be recommendations with regard to (1) any habitat enhancement measures deemed to be warranted, (2) any problems that need near, short, and/or long-term attention, and (3) any changes in the monitoring or management program that appear to be warranted based on monitoring results to date. The grazing and rangeland management scheme, schedules, and practices that have been applied to date within the conservation lands shall be insured to continue. The adaptive management approach shall also continue to be implemented. Finally, the report will insure the implemented grazing systems are compatible with the overall management goals of this MMP/CMP.

4.4.4 Annual Wildlife Monitoring

Monitoring is an essential component of maintaining the conservation lands. The goals and objectives of the conservation strategy center on maintaining suitable habitat conditions for CRLF. Monitoring is also an important component of an effective adaptive management

program. Monitoring refers to activities that document the presence, abundance, and distribution of CRLF on the conservation lands. All incidental sightings of CRLF will be entered into a central database, and this information will be reported annually with the monitoring results.

Annual monitoring for CRLF will take place on the conservation lands. Monitoring efforts will focus on indices that are indicative of a long-term trend. The expectation is that CRLF populations, if present onsite, will fluctuate due to changing weather conditions. During drought periods, CRLF are expected to decline to accommodate reduced forage or prey, while during normal or wet years, populations are expected to increase, in some cases quite dramatically. Therefore, fluctuations in the populations of covered species is normal and to be expected; what is not expected is if populations do not recover during favorable rainfall years. Monitoring, particularly grazing intensity and timing, can be key to ensuring that forage capacity is not adversely affected to the point that the species cannot persist through drought cycles. Therefore, reducing stocking rates during drought cycles can provide necessary relief to the covered species by maximizing available forage (prey) during poor years. This is a key part of managing these systems in an adaptive manner: shifting management strategies to maximize forage capacity for the species.

If a decline in CRLF population is regional and unrelated to specific conditions on the conservation lands, changing management practices on the conservation lands will most likely not affect the population numbers, as the reason for decline is most likely on a larger scale than the conservation lands. Adaptive management of the conservation lands will be applied using information gathered during monitoring efforts. This allows for management of the site to remain appropriate given the amount and pattern of annual precipitation or other regional factors; in a drought year, one may expect some populations to decline in a natural setting; this decline should not be attributed to the management practices on the conservation lands, but to the lack of moisture on the landscape if the decline is region wide. This monitoring has been designed to determine the effectiveness of management in meeting goals and objectives of the conservation strategy. Monitoring efforts and techniques can be modified in consultation with USFWS and CDFW.

4.4.5 CRLF Monitoring Methods

In general, monitoring data will consist of location of covered species (spatial distribution), presence (or absence), and relative abundance (number detected per given unit of effort). When feasible, additional data such as density and occupancy may also be collected. Density data collected using distance sampling and occupancy estimates using occupancy analysis provides probability of detection allowing a reliable way to compare these estimates between sites and across years. Without a probability of detection estimate, there is no way to reliably compare relative abundance numbers over years. Occupancy estimates can be derived using presence/absence data and can be used as a surrogate for abundance.

During monitoring efforts, general information such as location, duration, weather conditions, and observers will be recorded. All sightings of covered and special status species and their sign will be recorded and location data collected. Qualified biologists familiar with CRLF will conduct this monitoring.

Monitoring for CRLF will occur annually for the first five years of the monitoring effort and every three years thereafter. A qualified biologist shall perform surveys on foot in accordance with U.S. Fish and Wildlife Service (2005) protocol methods. This protocol recommends that a qualified herpetologist complete a total of eight surveys, with six of these surveys taking place during the breeding season (January 1 to February 28) and the remaining two surveys taking place during the non-breeding season (July 1 through September 30), with all surveys being concluded over a minimum of a six-week period. The recommended six breeding-season surveys consist of two day and four night surveys, while the two non-breeding season surveys consist of one day and one night survey. These surveys shall be conducted along the East Branch of Green Valley Creek and along the seasonal drainage channel system in the south part of the conservation lands.

4.4.6 Annual Monitoring Report

The annual report will include recommendations with regard to (1) any habitat enhancement measures deemed to be warranted, (2) any problems that need near, short, and/or long-term

attention, and (3) any changes in the monitoring or management program that appear to be warranted based on monitoring results to date. Finally, the report will insure the implemented grazing systems are compatible with the overall management goals of this MMP/CMP.

Five-year summary reports will also be prepared to compare data from multiple years. The findings from the five-year reports will be used to inform any adaptive management recommendations or changes to current management practices. In addition, these findings will be used to identify the need for any additional monitoring or data gathering that augments information regarding the status of covered species in the project area.

4.5 OTHER MANAGEMENT ELEMENTS

4.5.1 Transfer, Replacement, Amendments, and Notices

Transfer

Any subsequent transfer of responsibilities under this long-term management plan to a different land manager shall be requested by the land manager in writing to the permitting agencies, shall require written approval by the permitting agencies, and shall be incorporated into this long-term management plan by amendment. Any subsequent property owner assumes land manager responsibilities described in this long-term management plan and as required in the conservation easement unless otherwise amended in writing by the permitting agencies.

Replacement

If the land manager fails to implement the tasks described in this long-term management plan and is notified of such failure in writing by any of the permitting agencies, the land manager shall have 90 days to cure such failure. If failure is not cured within 90 days, the land manager may request a meeting with the permitting agencies to resolve the failure. Such meeting shall occur within 30 days or a longer period, if approved by the permitting agencies. Based on the outcome of the meeting, or if no meeting is requested, the permitting agencies may designate a replacement land manager in writing by amendment of this long-term management plan. If the land manager fails to designate a replacement land manager, then such public or private land or resource management organization acceptable to and as directed by the permitting agencies may

enter onto the conservation lands property in order to fulfill the purposes of this long-term management plan.

Amendments

The land manager, property owner, and the permitting agencies may meet and confer from time to time, upon the request of any one of them, to revise the long-term management plan to better meet management objectives and the habitat and conservation values of the conservation lands. Any proposed changes to the long-term management plan shall be discussed with the permitting agencies and the land manager. Any proposed changes will be designed with input from all parties. Amendments to the long-term management plan shall be approved by the permitting agencies in writing, shall include required management components, and shall be implemented by the land manager.

Notices

Any notices regarding this long-term management plan shall be directed as follows:

Land Manager (name, address, telephone and FAX)

Property Owner (name, address, telephone and FAX)

Permitting Agencies, Signatory Agencies:

U.S. Army Corps of Engineers
_____ District
[DISTRICT ADDRESS]
Attn: Chief, Regulatory Branch
Telephone:
Fax:

U.S. Fish and Wildlife Service
_____ Office

[FIELD OFFICE ADDRESS]

Attn: Field Supervisor

Telephone:

Fax:

U.S. Environmental Protection Agency

Region IX

75 Hawthorne Street

San Francisco, CA 94105

Attn: Director, Water Division

Telephone: 415-947-8707

Fax: 415-947-3549

California Department of Fish and Wildlife

_____ Region

[REGION ADDRESS]

Attn: Regional Manager

Telephone:

Fax:

Telephone: 916-653-4875

Fax: 916-653-2588

4.5.2 Funding and Task Prioritization

Funding

The aquatic and riparian enhancements and annual monitoring effort outlined in section 3.0 will be funded by SummerHill Homes.

The long-term management of the conservation lands will be funded via the GHAD and managed by a third-party land management entity. The GHAD will be financed through real property assessments levied on each parcel within the project. The project will remain in the GHAD in perpetuity.

Task Prioritization

Due to unforeseen circumstances, prioritization of tasks, including tasks resulting from new requirements, may be necessary if insufficient funding is available to accomplish all tasks. The land manager and the permitting agencies shall discuss task priorities and funding availability to determine which tasks will be implemented. In general, tasks are prioritized in this order: 1)

those required by a local, state, or federal agency; 2) tasks necessary to maintain or remediate habitat quality; and 3) tasks that monitor resources, particularly if past monitoring has not shown downward trends. Equipment and materials necessary to implement priority tasks will also be considered priorities. Final determination of task priorities in any given year of insufficient funding will be determined in consultation with the permitting agencies.

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APPENDIX A: MINIMIZATION MEASURES FOR CALIFORNIA RED-LEGGED FROGS

The following measures will minimize direct and indirect impacts to California red-legged frogs (CRLF).

1. Prior to the start of construction, a qualified biologist will train all project staff regarding habitat sensitivity, identification of special status species, and required practices. The training shall include the general measures that are being implemented to conserve these species as they relate to the project, the penalties for non-compliance, and the boundaries of the project area. A fact sheet or other supporting materials containing this information should be prepared and distributed. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures.
2. A qualified biologist will survey the project site prior to, and be present to monitor, construction activities during any initial ground disturbance or vegetation clearing or other periods during construction, as necessary. The biologist will capture and relocate any CRLF that are discovered during the surveys or construction monitoring. Any individuals that are captured should be held for the minimum amount of time necessary to release them to suitable habitat outside of the work area.
3. A qualified biologist will stake and flag exclusion zones around all known locations of CRLF breeding and upland refugia areas in the construction zone. These areas will be avoided during construction activities to the maximum extent practicable. All construction areas will be flagged, and all activity will be confined to these areas.
4. If a CRLF is encountered during construction work, activities will cease until the animal is removed and relocated by a qualified biologist.
5. Construction activities should be limited to the period from May 1 through October 31.
6. Permanent and temporary construction disturbances and other types of project-related disturbances to CRLF habitat shall be minimized to the maximum extent practicable and confined to the project site. To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, designated cross-country routes, and other designated areas. These areas also should be included in preconstruction surveys and, to the maximum extent possible, should be established in locations disturbed by previous activities to prevent further adverse effects. Sensitive habitat areas shall be delineated with high visibility flagging or fencing to prevent encroachment of construction personnel and equipment into any sensitive areas during project work activities. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site without authorization from the Service.
7. Because the time period between dusk and dawn are often the times when CRLF are most

actively foraging and dispersing, all construction activities should cease one half hour before sunset and should not begin prior to one half hour after sunrise.

8. No canine or feline pets or firearms (except for federal, state, or local law enforcement officers and security personnel) shall be permitted at the project site to avoid harassment, killing, or injuring of CRLF.
9. A representative shall be appointed by the applicant who will be the contact source for any employee or contractor who might inadvertently kill or injure a CRLF or who finds a dead, injured or entrapped individual. The representative shall be identified during the tailgate/training session. The representative's name and telephone number shall be provided to the Service prior to the initiation of ground disturbance activities.
10. Tightly woven fiber netting or similar material shall be used for erosion control or other purposes at the project site to ensure that CRLF do not get trapped.
11. A litter control program shall be instituted at the entire project site. All construction personnel should ensure that food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers should be removed from the project area at the end of each working day.

MAGEE RANCHES MITIGATION AREA

WATER BALANCE ANALYSIS FOR PROPOSED WATER PONDS DANVILLE, CALIFORNIA

The logo for ENGEO, featuring the word "ENGEO" in large, white, 3D block letters. The letters are set against a background of a green, rolling hillside under a blue sky. The 'E' and 'O' are partially obscured by a white horizontal line that runs through the middle of the letters.

Expect Excellence

Submitted to:
Ms. Wendi Baker
Summerhill Homes
5000 Executive Parkway, Suite 150
San Ramon, CA 94583

Prepared by:
ENGEO Incorporated

February 28, 2012

Project No.
8889.000.000

Project No.
8889.000.000

February 28, 2013

Ms. Wendi E. Baker
Land Acquisition Manager
SummerHill Homes
5000 Executive Parkway, Suite 150
San Ramon, CA 94583

Subject: Magee Ranches Project
Danville, California

WATER BALANCE ANALYSIS FOR PROPOSED WATER PONDS

Dear Ms. Baker:

At your request, we have prepared a Water Balance Analysis for Proposed Water Ponds for the Magee Ranches Mitigation Area (MRMA) within the larger Magee Ranches Project in Danville, California. This report summarizes an estimate of the water that will be impounded daily within the proposed mitigation ponds that are to be constructed to satisfy California Red-Legged Frog compensatory mitigation requirements. We have strived to prepare this report in general conformance the applicable and/or relevant standards and design procedures.

We look forward to continuing to work with your design team on this project. If you have any questions regarding this report, please contact us at your convenience.

Sincerely,

ENGEO Incorporated



Sean Cleary, PE
sc/jb/pgc/dt



Jonathan Buck, PE

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REFERENCES

FIGURES

Figure 1 – Vicinity Map

Figure 2 – Site Photos

APPENDIX A – Historical Daily Precipitation Data, Livermore Municipal Airport, Livermore, California

APPENDIX B – Proposed Mitigation Pond Calculations

1.0 INTRODUCTION

1.1 PURPOSE

This report provides an estimate of the volume of impounded water in the Proposed Pond System (PPS) of the MRMA. The objective of this analysis is to understand and manage the water resources for the PPS, which is being developed to satisfy compensatory mitigation requirements for the California Red-Legged Frog due to the impacts of the greater Magee Ranches project to special habitats, wetlands, and water features. We anticipate that the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), the United States Army Corps of Engineers (USACE) regulatory division, and the San Francisco Bay Regional Water Quality Control Board (RWQCB) may review this study.

The analysis conducted for this report identifies typical flow volumes that could be expected in the PPS. The results of the water balance analysis are used to develop an estimate of daily impounded water volume within the proposed water feature during an average rainfall year.

The report is organized into the following sections:

- Introduction
- Setting
- Methodology
- Proposed Mitigation Ponds
- Results and Discussion
- Conclusions
- Technical Appendices

2.0 SETTING

2.1 LOCATION

The MRMA is located in Danville, California in the upper reaches of Green Valley Creek as shown in Figure 1. The MRMA consists of portions of the property that will not be developed as part of the residential housing component of the Magee Ranches project and will be maintained as undeveloped open space areas in conformance with the project Mitigation and Monitoring Plans prepared by Live Oak Associates.

The proposed PPS is located south of a ridge which runs across the Magee Ranches project near the southerly boundary of the project and to the west of the existing Magee Ranch project.

According to the project Mitigation and Monitoring Plan prepared by Live Oak Associates for the project, two new mitigation ponds are proposed and one existing stockpond in an existing drainage swale is proposed to be expanded, as shown on Figure 1. Photos of the proposed pond areas are shown on Figure 2.

2.2 HYDROLOGIC SETTING

Published hydrologic mapping of the area on *Mean Seasonal Isohyets Compiled From Precipitation Records 1879 – 1973* (Contra Costa County Public Works Department, 1977) indicates that approximately 19 inches of annual precipitation occurs per year in the area of the proposed project. Analysis of long-term precipitation records and historic photographs indicate that wetter and drier cycles lasting several years are common in the region. More severe rainstorms occur approximately once every 3 years.

Topographically, the PPS is moderately hilly, with moderate slopes and peak elevations to the west, northeast, and southeast that are approximately 360 to 400 feet above the elevation of the proposed ponds. The PPS area is currently vegetated with annual grasses that are utilized for cattle grazing.

Historical daily precipitation amounts from 1998 to present were available from the weather station located at the Livermore Municipal Airport, which is located approximately 12 miles to the southwest of the site. Since the PPS has approximately the same precipitation characteristics as the Livermore Municipal Airport in terms of expected rainfall intensity, this data was utilized in this analysis. Appendix A contains a graph depicting historical monthly precipitation at the Livermore Municipal Airport over the last 11 years.

2.3 GEOLOGY

The Magee Ranches project is located in Green Valley within the Mount Diablo fold-and-thrust belt on the south flank of the Mount Diablo uplift. The bedrock formations in the area south of Mount Diablo and north of the Livermore Valley have been folded and cut by thrust faults that typically dip toward the north, according to recent geologic mapping by Crane (1995) and Graymer, et al. (1996). The site is underlain by Pliocene non-marine sedimentary rock consisting of weakly indurated claystone, siltstone and thin beds of sandstone and pebble conglomerate. Soil mapping of the watershed prepared by the National Resource Conservation Service (NRCS) indicates that surficial soil materials are primarily comprised of montmorillonitic clay soils with a hydrologic group rating of 'D.' Group 'D' soils are defined as having a very slow infiltration rate when thoroughly saturated. As a result, the watershed is characterized by rapid run-off characteristics after saturation has occurred.

2.4 CLIMATE

This study uses the average daily precipitation data to determine the water balance of the studied system. The area near the site generally exhibits a mild, Mediterranean-type climate with warm, dry summers and cool, wet winters. Table 2.4-1 summarizes the mean monthly precipitation amounts for the site.

ENGEO is unaware of any current or historic precipitation study performed at or near the site that could be used to estimate the mean monthly precipitation amounts for the PPC. Therefore,

data from a weather station located at the Livermore Municipal Airport, which is approximately 12 miles from the site, was utilized to estimate the values shown in Table 2.4-1. Historical daily precipitation data for water years 1998 to present were obtained from the Livermore Municipal Airport weather station from the joint National Oceanic and Atmospheric Administration (NOAA) and National Climatic Data Center (NCDC) website (NOAA and NCDC, 2010); this website identifies this weather station as Weather Station Number 724927. The site has approximately the same precipitation (Contra Costa County Public Works Department, 1977) and temperature characteristics as the Livermore Municipal Airport, in terms of expected rainfall and temperature intensities.

TABLE 2.4-1
 Monthly Mean Precipitation (inches)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2.48	2.91	1.65	1.04	0.48	0.04	0.01	0.00	0.10	0.96	1.34	2.66

Source: Livermore Municipal Airport Station (NOAA and NCDC, 2010)

We estimated the mean precipitation volume per month for the PPC by taking the historical daily precipitation data from the Livermore Municipal Airport weather station, converting the data to monthly volumes through summation, and then taking the mean of each year’s monthly precipitation volume.

2.5 OFFSITE DRAINAGE

The PPS will receive flows from its upstream watershed area, as approximated on Figure 1. The majority of the offsite drainage area is within the Magee Ranches Project, which ENGEO understands is not subject to future development. We also understand that the portion of the drainage area lying outside the Magee Ranches project is subject only to agricultural and non-urban future development; consequently, the water balance analysis for water volume in this report estimates impounded volumes for undeveloped watershed conditions.

3.0 METHODOLOGY

The water balance defines and quantifies the important input and output parameters, such as surface runoff, precipitation, evapotranspiration, and infiltration, into and out of a given body of water. Each of these parameters is analyzed individually to develop expected numerical flux estimates, and the sum of the parts provides an estimate of the stored (i.e. “available”) water at a given time.

In order to estimate the quantity of impounded water in the proposed pond at a given time for the PPS, the typical water budget analysis was modified to yield the anticipated impounded water volume each day for an average water year (WY), where a WY is defined as August 1 to July 31 of the succeeding year.

For this project, this summation analysis approximates the volumes of available surface water expected to flow through or be retained in the PPS each day.

As illustrated in Diagram 1 below, the model that is analyzed in this report is expressed mathematically as:

$$\Delta S / \Delta t = R_{in} + DP - E - ET - R_{out} - G_{out}$$

Where,

$\Delta S/\Delta t$: Change in storage over time

R_{in} : Surface Inflow (including upstream runoff and development stormwater runoff)

DP: Direct Precipitation

E: Evaporation

ET: Evapotranspiration

R_{out} : Surface Outflow

G_{out} : Subsurface Infiltration

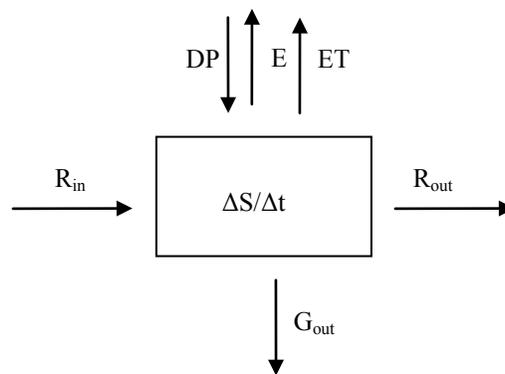


DIAGRAM 1
Water Balance Model

4.0 PROPOSED MITIGATION PONDS

4.1 INPUT PARAMETERS

For the water volume analysis used to determine the daily quantities of impounded water anticipated in the proposed ponds during a WY with average precipitation amounts, we quantified several sources of inflows (inputs) to the project. Inflow components included predicted runoff from the upstream watershed of each PPS and direct precipitation falling on the pond surface. These inflows were calculated using published precipitation data, approximate project surface areas, and typical hydrologic calculations to estimate runoff from grassland areas. Note that numbers are generally rounded to the nearest whole integer or tenth in this report.

Runoff Inputs

Streamflow input (R_{in}) volume from surface runoff within an upstream watershed area can be calculated by multiplying a runoff coefficient (RC) by the precipitation (P) and by the upstream watershed area (A). The RC is closely related to land-use characteristics. Paved, impervious land has a very high RC, while natural landscapes on sandy soils have a very low RC. It is assumed that only a negligible amount of paved, impervious land exists in the upstream watershed of the proposed ponds. Therefore, when estimating average year daily runoff volumes for the subject watersheds, ENGEO used an RC equal to the C-Factor of 0.10, as published by the California Stormwater Quality Association (CASQA) in Table 2-2 of *Stormwater Best Management Practice Handbook, New Development and Redevelopment* (CASQA, p. 2-15, 2003). CASQA lists a C-Factor of 0.10 as an appropriate C-Factor for grass areas during small storms; the upstream watershed of the WBCCC can be characterized as consisting mainly of annual grassland that is over-utilized as cattle grazing land. Review of rainfall records near the Magee Ranches project area indicated that many of the rainstorms that will occur in the study watershed are likely to be small (CASQA, Section 5.5, 2003) and, thus, will not produce significant runoff compared to large storms. The near-surface soil conditions and the land-use of the proposed project and its vicinity suggest that this is an adequate assumption for this study. Thus, the utilization of an RC of 0.10 in this study is conservative in the sense that the coefficients do not overestimate runoff for smaller rainfall events.

In the case of the PPS for Pond 2, R_{in} also includes surface runoff from the proposed upstream pond (Pond 1) for instances when the pond is full and overtops into the downstream drainage which eventually enters Pond 2 as surface flow.

The estimated upstream watershed area of each pond is shown on Figure 1.

ENGEO estimated average monthly R_{in} volumes, utilizing historical precipitation data as discussed in Section 2.4 of this report, in acre-feet and then used these values in the water budget to represent the volume of streamflow runoff into the PPS. The analysis calculation for the average monthly R_{in} volumes and the resulting values, estimated from our analysis, that were utilized in this study are shown in the following equation and in Table 4.1-1:

$$(R_{in}) = (P)(A)\left(\frac{foot}{12in}\right)$$
$$\left(\frac{acre-foot}{month}\right) = \left(\frac{in}{month}\right)(acres)\left(\frac{foot}{12in}\right)$$

The average year daily R_{in} volumes for small storm events was estimated utilizing historical precipitation data for WY 1998-1999, in cubic feet. These values were used in the water budget to represent the volume of runoff entering the proposed pond during an average WY. The average WY monthly precipitation amounts utilized in this study are listed in Table 4.1-1.

TABLE 4.1-1
Average WY Monthly Precipitation (inches)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2.99	3.92	1.95	0.81	0.50	0.01	0.00	0.00	0.26	0.52	1.80	1.26

Source: Livermore Municipal Airport Station (NOAA and NCDC, 2010)

We note that the existing seep upstream of Pond 1 has not been considered in the analysis which makes the analysis somewhat conservative in terms of runoff inputs for Ponds 1 and 2.

4.2 LOSS PARAMETERS

For the water budget, we quantified outflows (losses) to the project. Outflow components included predicted evapotranspiration rates ($E_{t_{out}}$) and surface runoff (R_{out}) from the proposed pond when its volume has reached its maximum capacity. These outflows were calculated using published and approximated evapotranspiration data, approximate project surface areas, and typical hydrologic calculations to estimate runoff from grassland areas. Losses through infiltration were assumed to be negligible and were not included in the analysis based on the soil types where the ponds are proposed.

Surface Runoff

Surface runoff R_{out} from the proposed ponds occurs when the volume of impounded water within the proposed ponds exceeds the maximum capacity of the ponds. Any inflow while the volume of impounded water within the proposed pond equals maximum capacity exits the system as R_{out} . Thus, any inflow in excess of the current $E_{t_{out}}$, while the volume of impounded water within the proposed pond equaled the maximum capacity, were assumed to exit the system.

Losses from Evaporation

Losses from evaporation were considered as part of the evapotranspiration calculation for this analysis which is a conservative assumption. Our experience is that some wetland grasses may establish in the ponds which would utilize water faster than if just pan evaporation rates were considered.

Losses from Evapotranspiration

ET is a process in which water uptake occurs when a plant rooting system transpires excess water to the atmosphere, which causes evaporation and transpiration. Typical evapotranspiration rates were acquired from the California Irrigation Management Information System (CIMIS) website for the Livermore Area. Evapotranspiration rates were acquired from 2011-2012. The values were converted to inches per day from the data provided by CIMIS.

4.3 RESULTS AND DISCUSSION

The results of our analysis, using the methodology discussed in Section 4, the following estimates are provided based on the analysis.

Pond	Pond 1	Pond 2	Pond 3
Description	3 Connecting Ponds 30 ft x 100 ft x 4 ft.	Enhance Existing Stockpond	1 Pond 40 ft x 100ft x 4 ft.
Watershed Area (ac.)	17.37	17.38	14.07
Volume (cubic feet)	36000	28250	16000
Depth of Ponding August 30 average Water Year (ft.)	1.71	2.18	1.77
Volume of Water diverted due to impoundment (ac-ft)*	0.77	0.56	0.34

* This is the amount of water that is evapotranspired through impoundment that would otherwise discharge downstream per water year.

According to our discussions with the Jed Magee, the current owner of the property, the existing stockpond generally holds water through the end of August on a typical rainfall year. Based on our experience with other mitigation ponds ENGEO has built in the Danville, San Ramon, Dublin and Livermore areas, it is reasonable to assume surface water will be retained in the ponds through late August for a typical rainfall year based on on-site soil types and tributary watershed areas.

5.0 CONCLUSIONS

Based on statements from the project biologist, it is our understanding that continual ponding of water within the proposed mitigation pond is required through August for these proposed ponds. Based on the results of our analysis, it is estimated that water will be continually impounded within the proposed ponds through August for an average WY. However, the actual length of continual impounding within the proposed ponds will vary based on actual rainfall.

REFERENCES

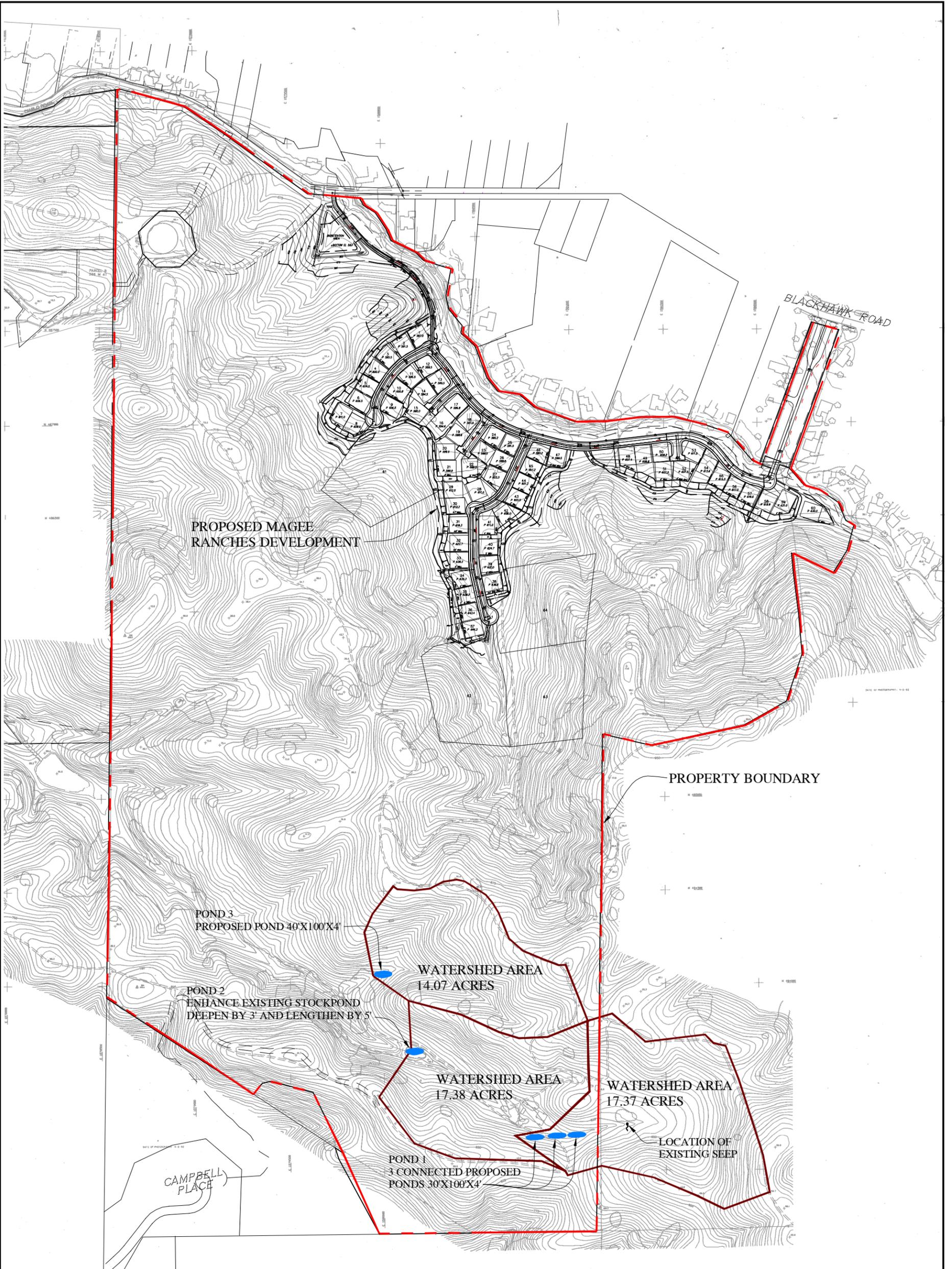
1. California Stormwater Quality Association (CASQA). *Stormwater Best Management Practice Handbook, New Development and Redevelopment*. January 2003.
2. Contra Costa County Public Works Department. *Mean Seasonal Isohyets Compiled From Precipitation Records*. Isohyets Shown in Inches and Millimeters. Drawing Number: B-166. December 1977.
3. Google. *Google Earth*. Version 4.3.728.3916 (beta). Computer Software. Microsoft Windows XP (Service Pack 3) Operating System. July 8, 2008 Build Date.
4. Graymer, R.W. et al., 1994, Preliminary Geologic Map Emphasizing Bedrock Formations in Contra Costa County: U.S. Geological Survey, Open-File Report 94-622.
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6. California Irrigation Management Information System. www.cimis.com, Livermore, California.
7. Live Oak Associates, Mitigation and Monitoring Plan Magee Ranches Project, Danville, California
8. Discussions with Jed Magee Property Owner, February 23, 2013.

FIGURES

- Figure 1 – Location of Mitigation Ponds**
- Figure 2 – Site Photographs**



G:\Drafting\DRAWING\DWG\8889\000\MitigationPonds_888900000-1-MitigationPonds-0213.dwg Plot Date: 2-28-13 dbw/ade



BASE MAP SOURCE: RJA



LOCATION OF MITIGATION PONDS
MAGEE RANCHES
DANVILLE, CALIFORNIA

PROJECT NO: 8889.000.000

SCALE: AS SHOWN

DRAWN BY: SRP

CHECKED BY: PCG

FIGURE NO.

1

ORIGINAL FIGURE PRINTED IN COLOR



APPROXIMATE LOCATION OF POND 1



POND 2: EXISTING STOCKPOND TO BE ENHANCED



APPROXIMATE LOCATION OF POND 3



SITE PHOTOGRAPHS
MAGEE RANCHES
DANVILLE, CALIFORNIA

PROJECT NO.: 8889.000.000

SCALE: NO SCALE

DRAWN BY: SRP

CHECKED BY: PCG

FIGURE NO.

2

ATTACHMENT D

**LETTERS FROM THE ARMY CORPS OF ENGINEERS VERIFYING
JURISDICTIONAL WATERS ON THE PROJECT SITE
(JANUARY 12, 2012, NOVEMBER 26, 2012)**



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET, 16TH FLOOR
SAN FRANCISCO, CALIFORNIA 94103-1398

JAN 12 2012

Regulatory Division

SUBJECT: File Number 2011-00044S

Ms. Wendi E. Baker
SummerHill Homes
5000 Executive Parkway, Suite 150
San Ramon, California 94583

Dear Ms. Baker:

This correspondence is in reference to your submittal dated January 7, 2011, requesting an approved jurisdictional determination of the extent of navigable waters of the United States and waters of the United States occurring on an approximately 330 acre site located near Diablo Road and Blackhawk Road (APNs 202050078, 202050071, 215040002, 202050073, 202100019, 202100040, 20210038, and 202100017), in the Town of Danville, Contra Costa County, California.

All proposed discharges of dredged or fill material occurring below the plane of ordinary high water in non-tidal waters of the United States; or below the high tide line in tidal waters of the United States; and within the lateral extent of wetlands adjacent to these waters, typically require Department of the Army authorization and the issuance of a permit under Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq.*). Waters of the United States generally include the territorial seas; all traditional navigable waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters subject to the ebb and flow of the tide; wetlands adjacent to traditional navigable waters; non-navigable tributaries of traditional navigable waters that are relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally; and wetlands directly abutting such tributaries. Where a case-specific analysis determines the existence of a "significant nexus" effect with a traditional navigable water, waters of the United States may also include non-navigable tributaries that are not relatively permanent; wetlands adjacent to non-navigable tributaries that are not relatively permanent; wetlands adjacent to but not directly abutting a relatively permanent non-navigable tributary; and certain ephemeral streams in the arid West.

All proposed structures and work, including excavation, dredging, and discharges of dredged or fill material, occurring below the plane of mean high water in tidal waters of the United States; in former diked baylands currently below mean high water; outside the limits of mean high water but affecting the navigable capacity of tidal waters; or below the plane of ordinary high water in non-tidal waters designated as navigable waters of the United States, typically require Department of the Army authorization and the issuance of a permit under Section 10 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. § 403 *et seq.*). Navigable waters of the United States generally include all waters subject to the ebb and flow of

the tide; and/or all waters presently used, or have been used in the past, or may be susceptible for future use to transport interstate or foreign commerce.

The enclosed delineation map entitled, "Magee Ranch East", in one sheet, date certified December 16, 2011, accurately depicts the extent and location of wetlands, and other waters of the United States, within the boundary area of the site that are subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act. This approved jurisdictional determination is based on the current conditions of the site, as verified during a field investigation of July 14, 2011, a review of available digital photographic imagery, and a review of other data included in your submittal. This approved jurisdictional determination will expire in five (5) years from the date of this letter, unless new information or a change in field conditions warrants a revision to the delineation map prior to the expiration date. The basis for this approved jurisdictional determination is further explained in the enclosed *Approved Jurisdictional Determination Form*. This approved jurisdictional determination is presumed to be consistent with the official interagency guidance of June 5, 2007, interpreting the Supreme Court decision, *Rapanos v. United States*, 126 S. Ct. 2208 (2006).

The enclosed delineation map further depicts the extent and location of non-tidal drainage ditches and water-filled excavated pits within the boundary area of the site that are **not** subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act. Waters of the United States do not generally include non-tidal drainage and irrigation ditches excavated on dry land; artificially irrigated areas which would revert to upland, if the irrigation ceased; artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water, and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing; artificial reflecting or swimming pools, or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons; and water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel, unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of a waters of the United States (51 Fed. Reg. 41,217; Nov. 13, 1986). Based on a case-by-case analysis, the U.S. Army Corps of Engineers may elect to not exert jurisdiction over these categories of water bodies. These delineated water bodies, however, may be considered as "waters of the State," and, therefore, subject to regulation by the California Regional Water Quality Control Board under the Porter-Cologne Water Quality Control Act, as amended (California Water Code § 1300 *et seq.*).

You are advised that the approved jurisdictional determination may be appealed through the U.S. Army Corps of Engineers' *Administrative Appeal Process*, as described in 33 C.F.R. Part 331 (65 Fed. Reg. 16,486; Mar. 28, 2000), and outlined in the enclosed flowchart and *Notification of Administrative Appeal Options, Process, and Request for Appeal* (NAO-RFA) Form. If you do not intend to accept the approved jurisdictional determination, you may elect to

provide new information to this office for reconsideration of this decision. If you do not provide new information to this office, you may elect to submit a completed NAO-RFA Form to the Division Engineer to initiate the appeal process; the completed NAO-RFA Form must be submitted directly to the Appeal Review Officer at the address specified on the NAO-RFA Form. You will relinquish all rights to a review or an appeal, unless this office or the Division Engineer receives new information or a completed NAO-RFA Form within 60 days of the date on the NAO-RFA Form. If you intend to accept the approved jurisdictional determination, you do not need to take any further action associated with the Administrative Appeal Process.

You may refer any questions on this matter to Kyle Dahl of my Regulatory staff by telephone at (415) 503-6783 or by e-mail at kyle.j.dahl@usace.army.mil. All correspondence should be addressed to the Regulatory Division, South Branch, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. My Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner, while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website: <http://www.spn.usace.army.mil/regulatory/>.

Sincerely,



Jane M. Hicks
Chief, Regulatory Division

Enclosures

Copy Furnished (w/o encls):

Davinna Ohlson, Live Oak Associates, Inc., 6840 Via del Oro, Suite 220, San Jose, CA 95119



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET, 16TH FLOOR
SAN FRANCISCO, CALIFORNIA 94103-1398

NOV 26 2012

Regulatory Division

SUBJECT: File Number 2011-00044S

Ms. Wendi E. Baker
Summerhill Homes
5000 Executive Parkway, Suite 150
San Ramon, California 94583

Dear Ms. Baker:

This correspondence is in reference to your submittal of February 2, 2012, requesting an approved jurisdictional determination of the extent of navigable waters of the United States and waters of the United States occurring on an approximately 74 acre property, known as Magee West, located off of Diablo Road and McCauley Road, in the Town of Danville, Contra Costa County, California (APNs 202050079 and 202050080).

All proposed discharges of dredged or fill material occurring below the plane of ordinary high water in non-tidal waters of the United States; or below the high tide line in tidal waters of the United States; and within the lateral extent of wetlands adjacent to these waters, typically require Department of the Army authorization and the issuance of a permit under Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq.*). Waters of the United States generally include the territorial seas; all traditional navigable waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters subject to the ebb and flow of the tide; wetlands adjacent to traditional navigable waters; non-navigable tributaries of traditional navigable waters that are relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally; and wetlands directly abutting such tributaries. Where a case-specific analysis determines the existence of a "significant nexus" effect with a traditional navigable water, waters of the United States may also include non-navigable tributaries that are not relatively permanent; wetlands adjacent to non-navigable tributaries that are not relatively permanent; wetlands adjacent to but not directly abutting a relatively permanent non-navigable tributary; and certain ephemeral streams in the arid West.

All proposed structures and work, including excavation, dredging, and discharges of dredged or fill material, occurring below the plane of mean high water in tidal waters of the United States; in former diked baylands currently below mean high water; outside the limits of mean high water but affecting the navigable capacity of tidal waters; or below the plane of ordinary high water in non-tidal waters designated as navigable waters of the United States, typically require Department of the Army authorization and the issuance of a permit under Section 10 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. § 403 *et seq.*). Navigable waters of the United States generally include all waters subject to the ebb and flow of

the tide; and/or all waters presently used, or have been used in the past, or may be susceptible for future use to transport interstate or foreign commerce.

The enclosed delineation map entitled, "Magee West; Wetland Delineation", date certified November 15, 2012, accurately depicts the extent and location of other waters of the United States, within the boundary area of the site that are subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act. This approved jurisdictional determination is based on the current conditions of the site, as verified during a field investigation of July 14, 2011 and a review of other data included in your submittal. This approved jurisdictional determination will expire in five (5) years from the date of this letter, unless new information or a change in field conditions warrants a revision to the delineation map prior to the expiration date

The enclosed delineation map further depicts the extent and location of a non-tidal drainage ditch within the boundary area of the site that is **not** subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act. Waters of the United States do not generally include non-tidal drainage and irrigation ditches excavated on dry land; artificially irrigated areas which would revert to upland, if the irrigation ceased; artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water, and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing; artificial reflecting or swimming pools, or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons; and water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel, unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of a waters of the United States (51 Fed. Reg. 41,217; Nov. 13, 1986). Based on a case-by-case analysis, the U.S. Army Corps of Engineers may elect to not exert jurisdiction over these categories of water bodies. This delineated water body, however, may be considered as a "waters of the State," and, therefore, subject to regulation by the California Regional Water Quality Control Board, under the Porter-Cologne Water Quality Control Act, as amended (California Water Code § 1300 *et seq.*).

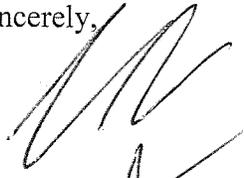
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receives new information or a completed NAO-RFA Form within 60 days of the date on the NAO-RFA Form. If you intend to accept the approved jurisdictional determination, you do not need to take any further action associated with the Administrative Appeal Process.

You may refer any questions on this matter to Kyle Dahl of my Regulatory staff by telephone at (415) 503-6783 or by e-mail at kyle.j.dahl@usace.army.mil. All correspondence should be addressed to the Regulatory Division, South Branch, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. My Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner, while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website: <http://www.spn.usace.army.mil/regulatory/>.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Hicks', written over a horizontal line.

Jane M. Hicks
Chief, Regulatory Division

Enclosures

Copy Furnished (w/ encls):

Davinna Ohlson, Live Oak Associates, 6840 Via del Oro, Suite 220, San Jose, CA 95119

ATTACHMENT E

MAGEE RANCHES FISCAL IMPACT ANALYSIS (FEBRUARY 2013)

The Economics of Land Use



Report

Magee Ranch Fiscal Impact Analysis

Prepared for:

SummerHill Homes

Prepared by:

Economic & Planning Systems, Inc.

February 2013

EPS #131002

*Economic & Planning Systems, Inc.
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1. INTRODUCTION AND FINDINGS

This report presents a fiscal impact analysis of the proposed Magee Ranch Development Project located in the Town of Danville. SummerHill Homes is proposing a 69-home community on a 410-acre site, including development of 63 single-family detached units in cluster areas, six custom home lots, and a 372-acre open space preserve (the Project).

This analysis compares the potential additional costs incurred by the Town from providing public services to the Project with the additional tax and other public revenues generated by the Project. The analysis indicates whether the Project can be expected to have a positive or negative overall effect on the Town's General Fund and key special funds at Project buildout. It should be noted that fiscal results (annual surpluses or deficits) are simply indicators of fiscal performance; they do not mean that the entity will automatically have surplus revenues or deficits because the budget must be balanced each year. Persistent shortfalls shown in a fiscal analysis may indicate the need to reduce service levels or obtain additional revenues; persistent surpluses will provide the Town with resources to reduce liabilities such as deferred maintenance or improve service levels.

The impacts of the proposed Project are considered upon completion of construction and full stabilization (Project buildout). The analysis is based on a number of sources, including the Town's Fiscal Year 2012-13 Adopted Operating Budget, November 2012 Magee Ranch Draft EIR, FY2011-12 Adopted CAFR, and FY2011-12 San Ramon Valley Fire Protection District Annual Operation Budget, information on the development program and price points provided by SummerHill Homes, other data sources, and EPS's prior work experience in the Town of Danville and for similar jurisdictions. The fiscal impact estimates are based on available information on City budget conditions and practices, economic conditions, and expected market performance; to the extent these factors change substantially, the fiscal impact analysis would need to be refined. All results are expressed in constant 2013 dollars.

Key Findings

- ***The Project will result in a positive net fiscal impact on the Town's General Fund.*** The fiscal surplus (General Fund revenues minus expenditures) is estimated at \$92,000 a year after completion of the Project. This impact is based on the estimated, annual additional revenues of about \$157,700 and estimated annual expenditures of about \$65,700 each year associated with the Project. The net additional funds will be available to support additional investment in City services (see **Table S-1**).
- ***Property tax, property tax in lieu of VLF, and sales tax will account for the largest revenue sources for the Town of Danville.*** Over half of the General Fund revenues generated by the Project, or \$80,000 a year, will come from property taxes collected on the new assessed value of the Project. Property tax in lieu of VLF and sales taxes will be the second and third largest revenue sources.

- **Police cost will make up the largest expenditure to the Town's General Fund.** The Project will not trigger the addition of new sworn officers alone, though, to be conservative, an average cost allocation to the Project is appropriate. On this basis, the Project's share of police costs, on project completion, is estimated at \$26,400 annually based on the projected calls for service increase.
- **The Project will result in a positive net fiscal impact on the San Ramon Valley Fire Protection District's General Fund.** The fiscal surplus (General Fund revenues minus expenditures) is estimated at \$131,000 each year after completion of the Project. This impact is based on the estimated, annual additional revenues of about \$182,300 and estimated annual expenditures of about \$51,300 each year associated with the Project (see **Table S-1**).

Table S1 Magee Ranch Fiscal Impact Summary on the Town of Danville (\$2013)

Item	Total
General Fund	
Revenues	
Property Tax	\$79,915
Property Tax in Lieu of VLF	\$35,991
Transfer Tax	\$5,765
Sales and Use Tax	\$15,995
Franchise Fees	\$9,029
Fines and Forfeitures	\$1,015
Recreation Services	<u>\$10,007</u>
Total Project Revenues	\$157,717
Expenditures	
Police Department	\$27,383
Maintenance Department	\$23,943
Recreation Department	<u>\$14,367</u>
Total Project Expenditures	\$65,693
Net General Fund Fiscal Impact	\$92,025
Fire Protection District	
Revenues	
Property Taxes	\$179,961
Charges for Services	<u>\$2,407</u>
Total Project Revenues	\$182,368
Expenditures	
Salaries and Benefits	\$49,020
Services and Supplies	<u>\$2,308</u>
Total Project Expenditures	\$51,328
Net General Fund Fiscal Impact	\$131,040

Sources: Town of Danville [FY2012-13 Adopted Budget, FY2011-12 Adopted CARF, and FY2011-12 San Ramon Valley Fire Protection District Annual Operation Budget], and Economic & Planning Systems, Inc.

2. BACKGROUND

This chapter provides the description of the proposed Project and background information on Town of Danville demographic data that inform the fiscal impact analysis described in the subsequent chapter. A summary of the key parameters for the Project site located in Danville is provided in **Table 1**. The Town of Danville is located in central Contra Costa County and is home to over 42,000 residents. The town is known for a high quality of life, small town charm, and abundance of open space.

Table 1 Danville Citywide Assumptions, 2012

Item	Total
Housing Units	15,950
Occupied Households	15,436
Population	42,450
Persons/Household	2.73

Sources: Department of Finance 2012, and Economic & Planning Systems, Inc.

Project Description

The proposed Magee Ranch development is located at Diablo/Blackhawk Road in Danville. The Project consists of 69 homes, including development of 63 single-family detached units and preparation of six custom home lots. The 410-acre Project is envisioned to include 372 acres of open space preserved through conservation easements, as shown in **Figure 1**.

The homes are envisioned as a mix of four different layouts ranging between 3,100 and 4,700 square feet per unit. Six homes are planned to include casitas to ensure compliance with the Town's affordable housing ordinance.¹ The Project is estimated to increase population by 187 new residents based on projections in the Magee Ranch Draft EIR. SummerHill Homes expects to achieve price points that range between \$1.5 million and \$1.7 million per unit. In addition, EPS estimates the custom homes would have an average value of \$2.0 million per unit based on the recent market comparables. These estimates result in the Project's assessed value of \$108 million, as shown in **Table 2**.

¹ Any additional fiscal impacts of the casitas and assumptions regarding their occupancy are not considered in this analysis.

Figure 1: Magee Ranch Development

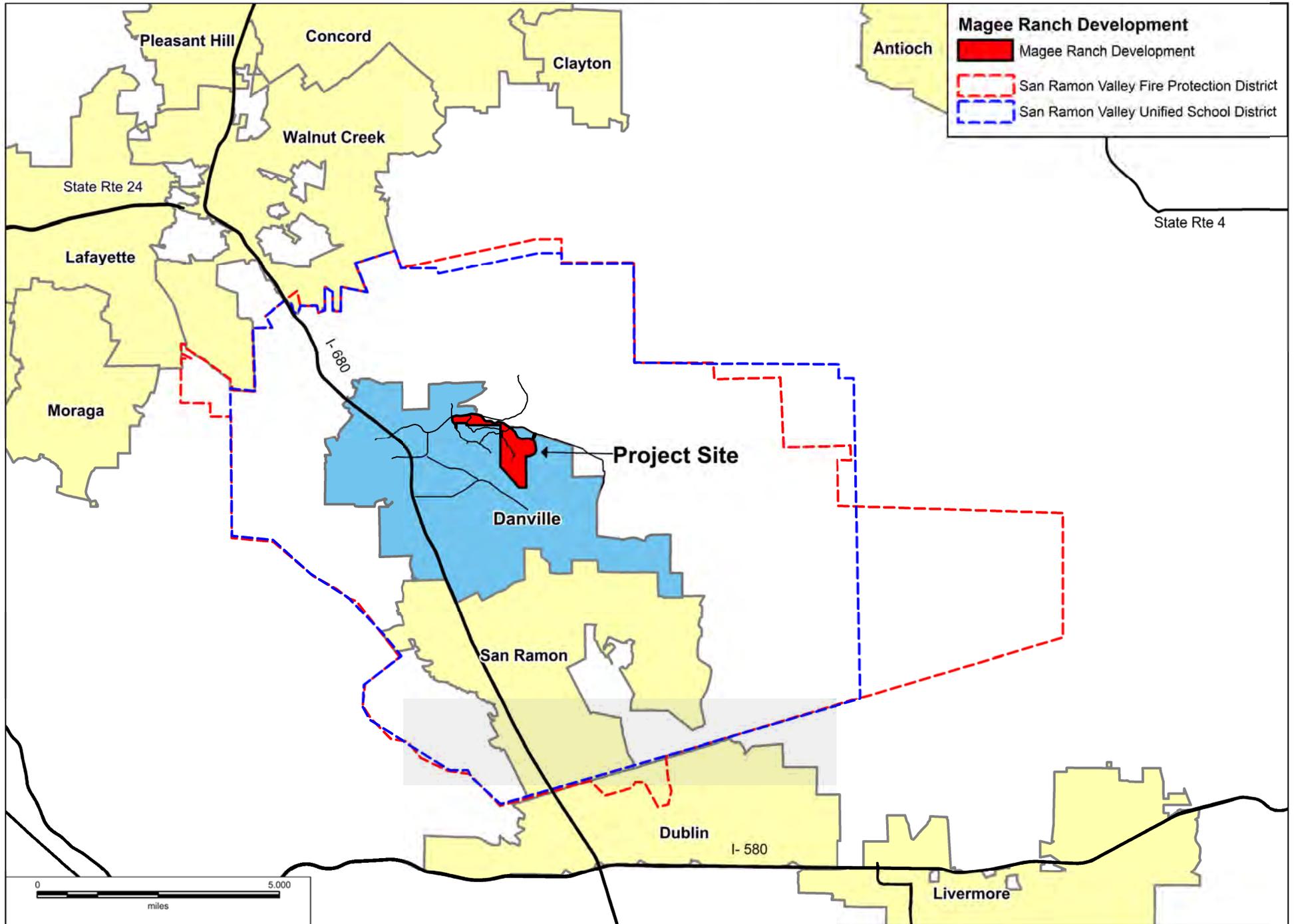


Table 2
Magee Ranch Development Program
Magee Ranch Fiscal Impact Analysis Study; EPS #131002

Plan Type	Units (1)	Average Unit Size (sq.ft.) (1)	Projected Population		Assessed Value	
			Residents/ Unit (2)	Total	\$ per Unit (1)	Total
1	12	3,112	2.73	33	\$1,465,000	\$17,580,000
2	15	3,756	2.73	41	\$1,501,667	\$22,525,005
2c	2	4,315	2.73	5	\$1,580,000	\$3,160,000
3	16	3,825	2.73	44	\$1,511,250	\$24,180,000
3c	2	4,398	2.73	5	\$1,590,000	\$3,180,000
4	14	4,116	2.73	38	\$1,582,143	\$22,150,002
4c	2	4,623	2.73	5	\$1,660,000	\$3,320,000
Custom Home Lots	<u>6</u>	na	2.73	<u>16</u>	\$2,000,000	<u>\$12,000,000</u>
Total	69			187		\$108,095,007

(1) Provided by SummerHill homes with the exception of values for custom home lots.

(2) Based on the Project's Draft EIR Nov. 2012; reflects the town's average household size.

Sources: SummerHill Homes, and Economic & Planning Systems, Inc.

3. FISCAL IMPACT ANALYSIS

This chapter describes the methodology and key assumptions used in calculating impact of the proposed residential project on the key local operating funds, including the Danville General Fund and San Ramon Valley Fire Protection District. The forecasting approach and the summary of results at buildout are shown in **Table 3** and summarized below. For each revenue and expenditure item, EPS used the most appropriate forecasting methodology available.

- **Per Capita.** The relative impacts of items affected by residential population are evaluated. EPS uses an average cost approach with new population assumed to result in similar revenue or cost shares as existing population.
- **Not Impacted.** Some budget items are not estimated because certain revenues and expenditures are not affected by the new development associated with this Project. In some cases, cost items are directly recovered by offsetting revenues.
- **Case Study.** A case study approach is used to calculate budget items for which none of the above approaches is deemed appropriate, such as property and sales taxes.

Danville General Fund

Revenues

This section describes the methodology and assumptions used for each General Fund revenue item estimated in this analysis. Several General Fund revenue items are not forecasted because the Project is not expected to affect them.

Property Tax

Property taxes are based on the assessed value of land and improvements, such as new development. According to the home value estimates provided by Summerhill Homes, the Project's assessed value of \$108.0 million will result a net increase of \$104.8 million at buildout after existing site value is considered (see **Table 4**). Contra Costa County collects property tax based on 1.0 percent of the assessed value, and the Town of Danville receives 7.6 percent of the County's property tax base from the area². This share is assumed to be fixed for the foreseeable future.

² Based on the TRA 16002.

Table 3
FY2012-13 City of Danville General Fund Summary and Estimating Factors
Magee Ranch Fiscal Impact Analysis Study; EPS #131002

Item	FY 2012-13 Adopted Budget	Approach/Allocation Factor	Total
General Fund Revenues			
Property Tax	\$7,424,092	case study approach	\$79,915
Property Tax in Lieu of VLF	\$3,172,266	case study approach	\$35,991
Transfer Tax (1)	\$323,000	case study approach	\$5,765
Sales and Use Tax	\$3,624,000	1.00% of estimated taxable sales	\$15,995
Transient Occupancy Tax	\$88,000	- not impacted	-
Charges for Services	\$49,988	- not impacted	-
Business Licenses	\$352,300	- not impacted	-
Franchise Fees	\$2,049,633	\$48.28 per capita	\$9,029
Fines and Forfeitures	\$230,520	\$5.43 per capita	\$1,015
Other Revenue (2)	\$968,018	- not impacted	-
Recreation Services	<u>\$2,271,716</u>	\$53.52 per capita	<u>\$10,007</u>
Total Project Revenues	\$20,553,533		\$157,717
General Fund Expenditures			
General Government	\$4,360,679	- not impacted	-
Police			
Patrol/Traffic	\$5,253,965	case study approach	\$26,395
Animal Control	\$224,162	\$5.28 per capita	\$987
Other (3)	\$2,604,010	- not impacted	-
Development and Transportation Service			
Building/Planning	\$1,614,299	- not impacted	-
Engineering	\$315,048	- not impacted	-
Clean Water Program	\$605,976	- not impacted	-
Other (4)	\$2,015,432	- not impacted	-
Maintenance Service			
Management	\$329,662	- not impacted	-
Services	\$5,540,318	\$347 per unit	\$23,943
Recreation Service	<u>\$3,261,332</u>	\$76.83 per capita	<u>\$14,367</u>
Total Project Expenditures	\$26,124,883		\$65,693
Net Fiscal Impact			\$92,025

(1) Assumes that average turnover rate is 10%

(2) Includes vehicle license fees, use of money and property, lease payments, and other and miscellaneous revenue.

(3) PD Mgmt./Community Svcs., Investigation, Disaster Preparedness, and School Resource Program.

(4) D&T Management, C.I.P. Management, Transportation, and Economic Development.

Sources: Town of Danville [FY2012-13 Adopted Budget and FY2011-12 Adopted CARF], and Economic & Planning Systems, Inc.

Table 4 Property Tax and Property Tax In Lieu of VLF Calculation

Item	Assumption / Factor	Total
<u>Property Tax</u>		
New Assessed Value		\$108,095,007
(less) Existing Assessed Value		(\$3,284,055)
Net Value Increase		\$104,810,952
Property Tax	1.0%	\$1,048,110
Danville General Fund Share (1)	7.6% of the new value increase	\$79,915
<u>Property Tax in Lieu of VLF</u>		
Danville Assessed Value		\$9,238,178,145
Project as % of Citywide	1.1%	
Property Tax in Lieu of VLF Revenue		\$3,172,266
General Fund Increase		\$35,991
<u>Property Transfer Tax</u>		
Annual Turnover Value	10% of new assessed value	\$10,481,095
General Fund Increase	\$0.55 of \$1,000 in value	\$5,765

(1) Based on the Contra Costa County Auditor FY2012-13 data for TRA 16002.

Sources: Contra Costa County Auditor, and Economic & Planning Systems, Inc.

Property Tax In-Lieu of Vehicle License Fees

In 2004, the State of California adjusted the method for sharing vehicle license fees (VLF) with local jurisdictions. Recent state budget changes replaced the VLF with property tax, which grows proportionate to increases in assessed value of the Town. The Project will add slightly more than 1 percent to the current assessed value in Danville and will generate the same increased percentage in in-lieu VLF revenues (see **Table 4**).

Property Transfer Tax

The Town receives \$0.55 per \$1,000 of value transferred during a sale of property. The analysis assumes on average that 10 percent of properties will sell annually. This rate will vary year to year depending on economic conditions, the age of the housing stock, and demographic factors.

Sales Tax

Sales tax generation is based on estimates of taxable sales generated by the new population in the Project. To estimate the level of new sales tax, household income, spending on taxable items, and the proportion of spending expected to occur in Danville are estimated in **Table 5**. EPS constructed weighted average household incomes based on projected sale prices. On average, new Project households will earn close to \$365,000 with 16 percent of household

income estimated to be spent on taxable expenditures.³ About 40 percent of total taxable expenditures are assumed to be captured by retailers located in Danville based on the overall supply of retail in Danville and the typical expenditure distribution between local, regional, and other retail.

Table 5 Taxable Sales from Residents

Item	Assumption	Total
Average Home Value		\$1,566,594
Average Annual Mortgage Payment (1)		\$91,049
Average Household Income (2)	25% spent on mortgage	\$364,196
Lots		69
Total Household Income		\$25,129,551
Taxable Retail Expenditures (3)	16% spent on taxable expenditures	\$3,998,752
Taxable Expenditures Captured in Danville	40%	\$1,599,501
Sales Tax Revenue to Danville General Fund	1.0% of taxable sales	\$15,995

(1) Based on the 30-year loan with 6% interest and a 20% down payment.

(2) Reflects 25% of household income spent on mortgage payment; while a typical mortgage ratio falls closer to 30 percent, BLS consumer expenditure survey indicates that higher income households spend a smaller share of income on housing cost.

(3) Based on the BLS 2011 Consumer Expenditure Survey of households with annual incomes of \$150,000 and above.

Sources: BLS Consumer Expenditure Survey, and Economic & Planning Systems, Inc.

Franchise Fees

Franchise fees are paid in association with certain utility services (PG&E, cable, solid waste) provided within the Town of Danville. The increase in franchise fees is estimated on a per capita basis.

Fines and Forfeitures

The Town receives a small amount of revenue from various fines and forfeitures, including parking fines, violations of Town codes, etc. Additional proceeds are estimated based on a per capita basis.

Recreation Services

New park and recreation fee revenues are envisioned from increase in recreation use by the added residents and associated user fees. This revenue is estimated on a per capita basis. The cost side of recreation service provision is estimated in the expenditure section.

³ Based on the household income segment of above \$150,000 a year provided by the Bureau of Labor Statistics Consumer Expenditure Survey.

Other Revenues

The Town of Danville collects other revenues that impact the General Fund. These revenues include the Transient Occupancy Tax, Business License Fees, Charges for Services, Vehicle License fees, Use of Money and Property, Lease Payments, and Other and Miscellaneous Revenue. The amount of development in the Project is not anticipated to generate additional revenues from these sources; therefore, their impact is not calculated.

Expenditures

This section describes the methodology and key assumptions used for calculating various General Fund expenditure items. Certain expenditures, such as General Government, consist of fixed costs. While fixed costs are independent of new development, variable costs are assumed to increase based on new growth. Only variable costs are used to project expenditures in this fiscal impact analysis. The approach is described in **Table 3**. Several items are not forecast because they are not expected to be affected by the proposed Project.

General Government

The analysis assumes that current General Government functions, including the Town Council, Town Manager, Town Clerk, Town Attorney, Human Resources, are sufficiently staffed to handle the population potential increase associated with the Project. No cost increase is assumed.

Police Services

Police services are provided by the Town of Danville Police Department and, primarily, through contracted police protection services with the Contra Costa County Sheriff's Department. Overall police staffing for the Town of Danville includes 39 staff (with 31 sworn officers and 8 volunteers), including 5 sergeants and 19 patrol officers. The Department is organized into Administration, Patrol, Investigations, Traffic, School Resource, and Community Services. Each division is staffed by sworn and civilian personnel.

The Magee Ranch Draft EIR found existing response times to not be adversely affected by Project development and the Project's impacts on the Danville Police Department were not considered significant. However, the Project would result in police demand and is expected to increase the number of police calls for service. Specifically, Danville Police Department projects the increase of 0.5 percent in calls for service associated with new development. EPS estimates the increase in ongoing, variable contract costs based on the calls for service projection and existing Police Department costs by position, as shown in **Table 6**.

Table 6 Police Department Service and Cost Estimate

Item	Staffing	Cost/Officer (1)	Total
<u>Existing Police Personnel</u>			
Sergeant	5	\$242,373	\$1,211,865
Officer	<u>19</u>	\$214,063	<u>\$4,067,197</u>
Subtotal	24		\$5,279,062
<u>Contribution to New Staffing (2)</u>			
Sergeant	0.03	\$242,373	\$6,059
Officer	<u>0.10</u>	\$214,063	<u>\$20,336</u>
TOTAL (ongoing operations)	0.12		\$26,395

*Note: reflects patrol and traffic staffing contracted with Contra Costa County Sheriff's Office; given the minimal amount of additional staffing required by the Project, the cost is not likely to translate into the contract increase until additional demand for staffing is generated by other projects.

(1) Contract City managers' Meeting, March 3, 2010 unless otherwise noted; applicable to FY11.

(2) Based on the 0.5% calls for service increase identified in the EIR. Assumes sergeant and patrol officer staffing need is proportional to the calls volume.

Sources: Town of Danville, Magee Ranch Draft EIR, and Economic & Planning Systems, Inc.

Animal Control

Animal control costs are estimated proportionate to increases in population.

Development and Transportation Service

Net development-related planning or building costs expenditures associated with the Project and incurred by the Town's General Fund are expected to be minimal. Any services required are assumed offset by fees and charges for services.

Maintenance Service

Maintenance services are estimated based on a "per-unit" calculation, derived from existing "per-unit" costs town-wide. Management costs related to maintenance services are assumed to be fixed, and therefore are deducted from total costs before calculating the "per-unit" cost. The average "per-unit" cost is applied to the Project.

Recreation Service

The Project entails preservation of 372 acres of open space. While the Project's residents will require recreational amenities, the Magee Ranch Draft EIR indicates that a significant share of the increased recreational demand would be accommodated by the Sycamore Valley Regional Open Space Preserve due to its adjacency to the Project. The use of this open space will have no impact on the Town's General Fund as it is maintained by the East Bay Regional Parks District. However, to be conservative, EPS assumes that there would be an additional increase in recreational use by new residents, impacting the Town's parks and facilities. This cost is estimated is estimated on a per capita basis.

San Ramon Valley Fire Protection District

The Project falls within the jurisdiction of the San Ramon Valley Fire Protection District (SRVFPD). The District serves 160,500 residents in the 155 square mile area encompassed by Alamo, Blackhawk, Danville, Diablo, San Ramon, the southern boundary of Morgan Territory, and the Tassajara Valley. The District is autonomous and operates ten fire stations, a 911 dispatch center, an administrative office building, a tactical training site and various ancillary facilities including an essential services warehouse, a communications annex building and several radio towers. The District consists of 203 personnel, including administrative and fire prevention staff⁴. In addition, the District uses volunteer firefighters. Most of the staff fall within emergency operations and emergency medical categories.

Out of the two fire stations located within Danville, Fire Station 33 is the nearest to the Project and is located immediately west of the Project across McCauley Road at 1051 Diablo Road. The station has a minimum staffing of six personnel at all times. It receives an annual average of 800 calls for service, falling within a typical range of the other stations in the District. For comparison, station 34 receives 1,300 annual calls for service. The Project will generate revenues to the SRVFPD in the form of property tax and user fee revenues (charges for services), as shown in **Table 7**.

These revenues are expected to exceed the new fire expenditures associated with Project based on the current per daytime population fire expenditure by the District. To the extent that additional capacity for service increase exists in station 33, the District's operating expenditure will be lower than estimated. For instance, the District's staff does not anticipate the Project to significantly affect fire protection operation as it is not envisioned to affect existing response times, require new facilities, or otherwise adversely affect the District's service provision.⁵

⁴ Based on the FY2011-12 Annual Operating Budget, assuming the 12 staff planned to be hired during the year have been hired.

⁵ Draft Magee Ranch EIR.

Table 7
FY2011-12 San Ramon Valley Fire Protection District General Fund Summary and Estimating Factors*
Magee Ranch Fiscal Impact Analysis Study; EPS #131002

Item	FY 2011-12 Adopted Budget	% Variable (1)	Approach/Allocation Factor	Total
Revenues				
Property Taxes	\$48,350,698		16.65% of 1% of base assessed value	\$179,961
Charges for Services	\$2,283,300		\$12.87 per capita	\$2,407
Intergovernmental	133,000		- no impact	-
Use of Money & Property	\$123,400		- no impact	-
Rent	\$150,000		- no impact	-
Other	<u>\$15,000</u>		- no impact	-
Total Revenues	\$51,055,398			\$182,368
Expenditures (2)				
Salaries and Benefits	\$46,505,180		\$262 per capita	\$49,020
Services and Supplies	<u>\$4,379,393</u>	50%	\$12 per capita	<u>\$2,308</u>
Total Expenditures	\$50,884,573			\$51,328
Net Fiscal Impact				\$131,040

*Note: the latest year for which data is available.

(1) Reflects the share of the cost that is likely to be affected by new growth as opposed to the fixed cost.

(2) Reflects a conservative average cost approach. The Project's EIR found that potential impacts to fire protection services would be less-than-significant assuming the Project complies with existing regulatory requirements. Furthermore, the Project would not substantially affect existing levels of service and no new facilities would be needed.

Sources: San Ramon Valley Fire Protection District FY2011-12 Operating Budget and CAFR, Magee Ranch Draft EIR, and Economic & Planning Systems, Inc.

ATTACHMENT F

DRAFT CEQA MITIGATION MONITORING & REPORTING PLAN

**MITIGATION MONITORING AND REPORTING PROGRAM – MAGEE RANCHES
April 2013**

NOTES: Section 21081.6 of the Public Resources Code requires all state and local agencies to establish monitoring or reporting programs whenever approval of a project relies upon an environmental impact report (EIR). The purpose of the monitoring or reporting program is to ensure implementation of the measures being imposed to mitigate or avoid the significant adverse environmental impacts identified in the EIR.

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
The project would create new sources of light that would adversely affect nighttime views in the area.	4.1-1 All buildings shall be designed so that reflective surfaces are limited and exterior lighting is down-lit and illuminates the intended area only. Building applications for new structures shall include an exterior lighting plan subject to approval by the Town of Danville that includes the following requirements: 1) exterior lighting shall be directional; 2) the source of directional lighting shall not be directly visible; and 3) vegetative screening shall be installed, where appropriate.	Prior to Issuance of Building Permit	Applicant	Town of Danville	<input type="checkbox"/>
Construction activities, including clearing, excavation and grading operations, would generate diesel exhaust emissions (NOx) that exceed BAAQMD thresholds.	4.3-1 The project proponent shall implement following measures to control diesel exhaust emissions associated with grading and new construction. A plan indicating how compliance will be achieved shall be submitted to the Town of Danville prior to construction. a. During the grading phase, the developer or contractor shall provide a plan for approval by the Town or BAAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average for the year 2010; This plan should address all equipment that will be on site for more than 2 working days, b. During the building construction phase, establish on-site electric power to reduce the use of diesel-powered generators and where feasible, on-site generators with internal combustion engines shall utilize alternative fuels such as bio-diesel blended fuels;	Prior to Building Construction	Applicant	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	<ul style="list-style-type: none"> c. If acceptable to the Town and neighbors, arrange for service to provide on-site meals for construction workers to avoid travel to off-site locations; d. Stage construction equipment at least 200 feet from existing or new habitable residences; e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes in accordance with the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations. Clear signage shall be provided for truck operators and construction workers at all access points. f. All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. g. Encourage use of alternative fuels for construction equipment. h. Recycle construction waste generated on site to the greatest extent feasible that doesn’t create new air quality impacts. i. Require an on-site disturbance coordinator to ensure that the construction period mitigation measures are enforced. This coordinator shall respond to complaints regarding construction activities and construction caused nuisances. The phone number of this disturbance coordinator shall be clearly posted at the construction site and provided to nearby residences. A log documenting any complaints and the timely remedy or outcome of such complaints shall be kept. 				X
<p>If uncontrolled, dust generated by grading and construction activities represents a significant air quality impact.</p>	<p>4.3-2 Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to less- than-significant. The contractor shall implement the following best management practices:</p> <ul style="list-style-type: none"> a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be 	During Project Construction	Applicant	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	<p>watered two times per day.</p> <p>b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</p> <p>c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.</p> <p>d. All vehicle speeds on unpaved roads shall be limited to 15 mph.</p> <p>e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.</p> <p>f. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.</p>				X
<p>Construction of the proposed subdivision could result in potential impacts to California red-legged frog.</p>	<p>4.4-1 The project proponent shall implement the following measures during construction activities in or along East Branch Green Valley Creek to avoid take of individual CRLF:</p> <p>a. Prior to the start of construction, the project proponent shall retain a qualified biologist to train all construction personnel regarding habitat sensitivity, identification of special status species, and required practices.</p> <p>b. Prior to the start of construction, the project proponent shall retain a qualified biologist to conduct pre-construction surveys to ensure that CRLF are absent from the construction area. If CRLF are present, a qualified biologist possessing all necessary permits shall relocate them or they shall be allowed to move out of the construction area on their own.</p> <p>c. Immediately following the pre-construction surveys and a determination that CRLF are not present in the construction</p>	<p>Prior to Project Construction</p>	<p>Applicant & Qualified Biologist</p>	<p>Town of Danville</p>	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	<p>zone, the construction zone shall be cleared and silt fencing erected and maintained around construction zones to prevent CRLF from moving into these areas.</p> <p>d. The project proponent shall retain a qualified biological monitor to be present onsite during times of construction within the riparian habitat of East Branch Green Valley Creek to ensure no CRLF are harmed, injured, or killed during project buildout.</p>				X
See impact for Mitigation Measure 4.4-1	<p>4.4-2 The project would impact approximately 0.3 acres of moderate-quality riparian habitat resulting from construction of the vehicular bridges across East Branch Green Valley Creek. The project shall replace the lost value of this impact by restoring the impacted riparian habitat at a minimum 1:1 replacement-to-loss ratio. (Final mitigation amounts will be based on actual impacts to be determined during the design phase.) This shall be accomplished by restoring riparian habitat at the four following locations:</p> <p>a. The existing wet crossing and asphalt near the panhandle (i.e., where the new bridge is to be constructed) shall be removed. The silt and sediment buildup behind and adjacent to the wet crossing and asphalt shall also be removed and the creek bed shall be lowered to restore the natural flow of this portion of the creek.</p> <p>b. The existing crossing from San Andreas Drive shall be removed and the creek restored in this area.</p> <p>c. The two existing cattle grates on Magee West near the existing culverts shall be removed. One of these is causing sediment build up and adversely impacting the creek. The natural flow of this channel shall be restored back to its original condition prior to the original installation of the grates.</p> <p>d. The riparian corridor along the East Branch of Green Valley Creek will be enhanced with suitable planting and placement of riparian vegetation along the proposed trail on Magee East. Approximately 2 acres along East Branch Green Valley Creek</p>	Prior to Project Construction	Applicant	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	<p>between the creek and the trail is available to accommodate the minimum 0.3 acres of riparian enhancement plantings. The enhancement area shall be planted with native species appropriate for the corridor.</p>				X
<p>See impact for Mitigation Measure 4.4-1</p>	<p>4.4-3 The project would impact approximately 0.5 acres of jurisdictional waters that are of a degraded quality and marginal value for the CRLF. The project shall replace the lost functions and value of this impact to aquatic habitats at a minimum of 1:1 replacement-to-loss acreage ratio. The final mitigation amounts will be based on actual impacts to be determined during the design phase. Habitat replacement via creation of and/or enhancements to existing waters shall occur onsite. Onsite lands proposed to be preserved as open space are within the same watershed as the offsite detention basin known to support breeding CRLF and are expected to fully accommodate creation of and/or enhancements to aquatic habitats that would be of substantially higher value to CRLF than the impacted waters. Compensation for impacts to jurisdictional waters to benefit the CRLF will include all of the aforementioned components discussed under “Compensation: riparian restoration,” along with improving the wetland character of the onsite stock pond and enhancing the associated riparian habitat between the stock pond and the detention basin. (Refer also to mitigation measures 4.4-13 and 4.4-14 below for impacts to jurisdictional waters.)</p>	<p>Prior to Project Construction</p>	<p>Applicant</p>	<p>Town of Danville</p>	<input type="checkbox"/>
<p>See impact for Mitigation Measure 4.4-1</p>	<p>4.4-4 The project proposes to preserve approximately 302 acres of the project site as open space. Areas to be preserved would be placed under a conservation easement or deed restriction to prohibit construction and preserve conservation value. The project proposes to create a geologic hazard abatement district (GHAD) to provide suitable funding for management and long-term maintenance of the site. Upland habitats shall be managed via a long-term management plan to maintain the quality of the habitat for the movement and dispersal of CRLF. Prior to construction, the project proponent shall retain a qualified</p>	<p>Prior to Project Construction</p>	<p>Applicant & Qualified Biologist</p>	<p>Town of Danville</p>	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	<p>biologist to prepare an open space management plan for the explicit purpose of managing and monitoring the proposed open space area. This plan shall be submitted to the Town of Danville for review and approval prior to issuance of grading permits. At a minimum this plan shall include the following components:</p> <ol style="list-style-type: none"> a. Identify the location of the restoration efforts for replacing jurisdictional waters and riparian habitats. The replacement ratio for both habitats will be at a minimum of a 1:1 ratio. b. Identify the approaches to be used, including the extent that the onsite stock pond be expanded, reconfiguring of the pond bottom and increase in depth, and providing evidence that sufficient water budget exist for any proposed enhancement. c. Identify a suitable planting regime for restoring wetland and riparian habitats. d. Identify success criteria for monitoring both the wetland and riparian habitats that are consistent with similar habitats regionally. e. Monitor restored wetland habitats for at least five years and restored riparian habitats for 10 years. f. Define and identify the GHAD maintenance and management activities to manage the open space habitats to meet the stated goals of support habitat characteristics suitable for the CRLF. This would include suitable fencing so as to control access, limited cattle grazing or other procedures to manage grass height and forage production at levels that benefit the CRLF, and removal of trash. g. Define the financial mechanism for the GHAD to manage the open space into perpetuity. 				X
<p>Construction of the proposed subdivision could result in potential impacts to western pond turtle.</p>	<p>4.4-5 Prior to the start of construction, the project proponent shall retain a qualified biologist to train construction personnel regarding habitat sensitivity, identification of special status species, and required practices.</p>	<p>Prior to Project Construction</p>	<p>Applicant & Qualified Biologist</p>	<p>Town of Danville</p>	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
See impact for Mitigation Measure 4.4-5	4.4-6 Prior to the start of construction within the East Branch Green Valley Creek riparian area, the project proponent shall retain a qualified biologist to conduct pre-construction surveys to ensure that western pond turtles are absent from the construction area. If western pond turtles are present, a qualified biologist possessing all necessary permits shall be retained to relocate them.	Prior to Project Construction	Applicant & Qualified Biologist	Town of Danville	<input type="checkbox"/>
See impact for Mitigation Measure 4.4-5	4.4-7 If western pond turtles are found to be absent from the construction zone, immediately following the pre-construction surveys the project proponent shall clear the construction zone and install/maintain silt fencing around the construction zone to prevent western pond turtles from entering these areas.	Prior to Project Construction	Applicant & Qualified Biologist	Town of Danville	<input type="checkbox"/>
See impact for Mitigation Measure 4.4-5	4.4-8 During construction within the East Branch Green Valley Creek riparian area, the project proponent shall retain a biological monitor to be present onsite during times of construction to ensure that turtles are not harmed, injured, or killed.	During Project Construction	Applicant & Qualified Biologist	Town of Danville	<input type="checkbox"/>
Construction of the proposed subdivision could result in potential impacts to nesting raptors and migratory birds.	4.4-9 To the maximum extent practicable, the project proponent shall remove trees during the non-breeding season (September 1 through January 31). If it is not possible to avoid tree removal and associated disturbances during the breeding season (February 1 through August 31), the project proponent shall retain a qualified biologist to conduct a pre-construction survey for tree-nesting raptors and other tree- or ground-nesting migratory birds in all trees or other areas of potential nesting habitat within the construction footprint and 250 feet of the footprint, if such disturbance would occur during the breeding season. This survey shall be conducted no more than 14 days prior to the initiation of demolition/construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). If nesting raptors or migratory birds are detected on the site during the survey, a suitable construction-free buffer shall be established around all active nests. The precise dimension of the buffer (a minimum of	Prior to Project Construction	Applicant & Qualified Biologist	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	<p>150 feet up to a maximum of 250 feet) shall be determined at that time and may vary depending on location and species. Buffers shall remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are independent of their parents. Pre-construction surveys during the non-breeding season are not necessary, as the birds are expected to abandon their roosts during construction activities.</p>				X
<p>Construction of the proposed subdivision could result in potential impacts to burrowing owls.</p>	<p>4.4-10 In order to avoid impacts to active burrowing owl nests, the project proponent shall retain a qualified biologist to conduct pre-construction surveys for burrowing owls within the construction footprint and within 250 feet of the footprint no more than 30 days prior to the onset of ground disturbance. These surveys shall be conducted in a manner consistent with the CDFG's burrowing owl survey methods (CDFG 2012b). If pre-construction surveys determine that burrowing owls occupy the site during the non-breeding season (September 1 through January 31), then a passive relocation effort (e.g., blocking burrows with one-way doors and leaving them in place for a minimum of three days) may be used to ensure that the owls are not harmed or injured during construction. Once it has been determined that owls have vacated the site, the burrows can be collapsed, and ground disturbance can proceed. If burrowing owls are detected within the construction footprint or immediately adjacent lands (i.e., within 250 feet of the footprint) during the breeding season (February 1 through August 31), a construction-free buffer of 250 feet shall be established around all active owl nests. The buffer area should be enclosed with temporary fencing, and construction equipment and workers may not enter the enclosed setback areas. Buffers must remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are independent of their parents. After the breeding season, passive relocation of any remaining owls may take place as described above.</p>	<p>Prior to Project Construction</p>	<p>Applicant & Qualified Biologist</p>	<p>Town of Danville</p>	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
<p>Construction of the proposed subdivision could result in potential impacts to American badgers.</p>	<p>4.4-11 Pre-construction surveys conducted for burrowing owls shall also be used to determine the presence or absence of badgers in the development footprint. If an active badger den is identified during pre-construction surveys within or immediately adjacent to the construction envelope, the project contractor shall establish a construction-free buffer around the den of up to 300 feet or a distance specified by the resource agencies (i.e., CDFG). Because badgers are known to use multiple burrows in a breeding burrow complex, the project contractor shall retain a biological monitor during construction activities to ensure the buffer is adequate to avoid direct impacts to individuals or nest abandonment. The monitor shall be present onsite until it is determined that young are of an independent age and construction activities would not harm individual badgers. Once it has been determined that badgers have vacated the site, the burrows can be collapsed or excavated, and ground disturbance can proceed.</p>	<p>Prior to Project Construction</p>	<p>Applicant & Qualified Biologist</p>	<p>Town of Danville</p>	<p><input type="checkbox"/></p>
<p>Development of the proposed subdivision would impact wetlands (0.5 acres) and riparian habitat (0.3 acres).</p>	<p>4.4-12 The project proponent shall replace wetland and riparian habitat at a 1:1 replacement-to-loss ratio. It is expected that all compensation measures can be accommodated within the 302 acres of the site proposed as open space. Prior to issuance of a grading permit, the project proponent shall retain a qualified biologist to prepare an onsite habitat mitigation and monitoring plan (HMMP) that includes both an aquatic habitat restoration plan and a riparian habitat restoration plan. The HMMP would specifically address the wetland and riparian habitats and is separate from the Open Space Management Plan identified in Mitigation 4.4-4, although there may be some overlap. The HMMP shall include the following components, at a minimum:</p> <ol style="list-style-type: none"> a. Define the location of all restoration/creation activities; b. Provide evidence of a suitable water budget to support any created wetland and riparian habitats; c. Identify the species, amount, and location of plants to be installed; d. Identify the time of year for planting and method for 	<p>Prior to Issuance of Grading Permit</p>	<p>Applicant & Qualified Biologist</p>	<p>Town of Danville</p>	<p><input type="checkbox"/></p>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	<p>supplemental watering during the establishment period;</p> <p>e. Identify the monitoring period, which should be not less than 5 years for wetland restoration and not less than 10 years for riparian restoration, defines success criteria that will be required for the wetland restoration to be deemed a success;</p> <p>f. Identify adaptive management procedures that include (but are not limited to) measures to address colonization by invasive species, unexpected lack of water, excessive foraging of installed wetland plants by native wildlife, and similar;</p> <p>g. Define management and maintenance activities (weeding of invasives, providing for supplemental water, repair of water delivery systems) of the proposed GHAD; and</p> <p>h. Provide for assurance in funding the monitoring and ensuring that the created wetland and riparian habitats fall within lands to be preserved and managed into perpetuity. Confirm that the proposed GHAD will meet these responsibilities.</p>				X
See impact for Mitigation Measure 4.4-12	4.4-13 The project proponent shall comply with all state and federal regulations related to construction work that will impact aquatic habitats occurring on the site. Prior to construction, the project proponent shall obtain a Section 404 Clean Water Act permit from the USACE, Section 401 Water Quality Certification from the RWQCB, and/or Section 1600 Streambed Alteration Agreement from the CDFG, and submit proof of such documentation to the Town of Danville.	Prior to Project Construction	Applicant	Town of Danville	<input type="checkbox"/>
The project would result in the removal of 38 trees on the site, which represents a potentially significant impact.	4.4-14 Prior to issuance of a grading permit, a tree preservation plan shall be prepared for all trees to be retained that identifies all protection and mitigation measures to be taken and includes the tree preservation guidelines by HortScience in their tree report(s). These measures shall remain in place for the duration of construction activities at the project site.	Prior to Issuance of Grading Permit	Applicant	Town of Danville	<input type="checkbox"/>
See impact for Mitigation Measure 4.4-14	4.4-15 Upon completion of construction, the project proponent shall replace all ordinance-size trees to be removed with approved species “of a cumulative number and diameter necessary to equal	Upon Completion of Project	Applicant	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	the diameter of the tree(s) which are approved for removal” in accordance with the Town’s tree ordinance. Tree removal shall be conducted in accordance with the Town’s requirements, including planting a mixture of small and large box trees to meet the cumulative diameter number of the removed trees. The project proponent shall replace all non-ordinance-size trees (i.e., trees less than 10 inches in diameter for single-trunk trees or less than 20 inches in diameter for multi-trunk trees) at a replacement-to-removal ratio of 1:1. To the maximum extent practicable, all native trees that are removed shall be replaced with like species. All non-native trees that are removed shall be replaced with species that are known to occur naturally within similar habitats in the region.	Construction			X
See impact for Mitigation Measure 4.4-14	4.4-16 Prior to construction, the project proponent retain a qualified arborist to develop a monitoring plan for replacement trees (outside the riparian habitat) and submit it to the Town of Danville during the permit process. The basic components of the monitoring plan shall include final success criteria, specific performance criteria, monitoring methods, data analysis, monitoring schedule, contingency/remedial measures, and reporting requirements.	Prior to Project Construction	Applicant & Qualified Arborist	Town of Danville	<input type="checkbox"/>
The improvements to the Diablo Road/Green Valley Road intersection would require the removal of 18 trees within the Town right-of-way.	4.4-17 If the Town determines that the improvements to the Diablo Road/Green Valley Road intersection are required, the project shall implement Mitigation Measures 4.4-14 through 4.4-16 above, as applicable.	Prior to Project Construction	Applicant & Qualified Arborist	Town of Danville	<input type="checkbox"/>
Construction of the project may result in the discovery and disturbance of unknown archaeological resources and/or human remains.	4.5-1 If during the course of project construction, archaeological resources or human remains are accidentally discovered during construction, work shall be halted within 20 feet of the find until a qualified professional archaeologist can evaluate it. Work shall not recommence until the project archaeologist has submitted documentation to the Town indicating that discovered resources	During Project Construction	Applicant & Qualified Archaeologist	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	have been adequately salvaged and no further resources have been identified within the area of disturbance.				X
See impact for Mitigation Measure 4.5-1	4.5-2 Pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California, in the event of the discovery of human remains during construction, no further excavation or disturbance shall be conducted on the site or any nearby area reasonably suspected to overlie adjacent remains. The Contra Costa County Coroner shall be notified and make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.	Prior to Grading Permit and During Project Construction	Applicant	Town of Danville	<input type="checkbox"/>
Construction of the project may result in the discovery and disturbance of unknown paleontological resources.	4.5-3 If during the course of project construction, paleontological resources are accidentally discovered during construction, work shall be halted within 20 feet of the find until a qualified professional paleontologist can evaluate it. Work shall not recommence until the project paleontologist has submitted documentation to the Town indicating that discovered resources have been adequately salvaged and no further resources have been identified within the area of disturbance.	During Construction	Applicant & Qualified Paleontologist	Town of Danville	<input type="checkbox"/>
Construction of the project could result in temporary soil erosion and loss of topsoil.	4.6-1 In order to reduce wind and water erosion on the project site, an erosion control plan and Storm Water Pollution Prevention Plan (SWPPP) shall be prepared for the site preparation, construction, and post-construction periods (see mitigation measure 4.8-1 in 4.8 Hydrology and Water Quality). The project shall prepare an erosion control plan in accordance	Prior to Issuance of Grading Permit	Applicant	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X						
	<p>with the Town's Erosion Control Ordinance. The project proponent shall implement the following measures, where appropriate, to control erosion: 1) keep construction machinery off of established vegetation as much as possible, especially the vegetation on the upwind side of the construction site; 2) establish specific access routes at the planning phase of the project, and limits of grading prior to development, which should be strictly observed; 3) utilize mechanical measures (i.e., walls from sand bags and/or wooden slat or fabric fences) to reduce sand movement; 4) immediate re-vegetation (plus the use of temporary stabilizing sprays), to keep sand movement to a minimum; and 5) for larger-scale construction, fabric or wooden slat fences should be placed around the construction location to reduce sand movement. This erosion control plan shall be submitted to the Town of Danville for review and approval prior to issuance of a grading permit.</p>				X						
<p>The project would be exposed to potential adverse effects from the seven existing landslides on the project site located near the areas of proposed development.</p>	<p>4.6-2 In order to minimize potential impacts from landslides, final project design plans shall incorporate the recommendations in the preliminary geotechnical report (Appendix E), which includes the following corrective measures:</p> <ul style="list-style-type: none"> a. Landslide avoidance b. Construction of catchment areas between landslides and proposed improvements c. Partial landslide debris removal and buttressing with engineered fill d. Complete landslide debris removal and replacement as engineered fill <p>The table below sets forth the required mitigation measures by landslide area (shown in Figure 4.6-2).</p> <table border="1" data-bbox="537 1287 1253 1409"> <thead> <tr> <th data-bbox="537 1287 680 1320">Landslide</th> <th data-bbox="680 1287 1253 1320">Mitigation</th> </tr> </thead> <tbody> <tr> <td data-bbox="537 1320 680 1382" style="text-align: center;">1</td> <td data-bbox="680 1320 1253 1382">Partial landslide removal and buttressing with engineered fill</td> </tr> <tr> <td data-bbox="537 1382 680 1409" style="text-align: center;">2</td> <td data-bbox="680 1382 1253 1409">Construction of catchment areas between</td> </tr> </tbody> </table>	Landslide	Mitigation	1	Partial landslide removal and buttressing with engineered fill	2	Construction of catchment areas between	<p>Prior to Issuance of Building Permit</p>	<p>Applicant</p>	<p>Town of Danville</p>	<input type="checkbox"/>
Landslide	Mitigation										
1	Partial landslide removal and buttressing with engineered fill										
2	Construction of catchment areas between										

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X														
	<table border="1" data-bbox="537 240 1251 613"> <tr> <td></td> <td>landslides and proposed improvements</td> </tr> <tr> <td>3</td> <td>Partial landslide removal and buttressing with engineered fill</td> </tr> <tr> <td>4</td> <td>Construction of catchment areas between landslides and proposed improvements</td> </tr> <tr> <td>5</td> <td>Complete landslide removal and replacement as engineered fill</td> </tr> <tr> <td>6</td> <td>Complete landslide removal and replacement as engineered fill</td> </tr> <tr> <td>7</td> <td>Complete landslide removal and replacement as engineered fill</td> </tr> <tr> <td>8-16</td> <td>Landslide avoidance</td> </tr> </table> <p data-bbox="499 651 1287 881">Corrective grading for custom lot areas outside the proposed grading envelopes shall be evaluated when more detailed plans are available. Detailed 40-scale corrective grading plans for the entire project will be prepared when project grading plans have been finalized. Final plans showing the identified recommendations shall be submitted to the Town of Danville for review and approval prior to issuance of a building permit.</p>		landslides and proposed improvements	3	Partial landslide removal and buttressing with engineered fill	4	Construction of catchment areas between landslides and proposed improvements	5	Complete landslide removal and replacement as engineered fill	6	Complete landslide removal and replacement as engineered fill	7	Complete landslide removal and replacement as engineered fill	8-16	Landslide avoidance				X
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8-16	Landslide avoidance																		
<p>The project site contains expansive soils that could damage proposed residential development, infrastructure, and associated structures.</p>	<p>4.6-3 In order to minimize potential impacts from expansive soils, final project design shall incorporate the recommendations in the preliminary geotechnical report (see Appendix E) that include special measures for mitigating adverse impacts from expansive soils, as follows:</p> <ol style="list-style-type: none"> Conditioning the expansive soils to higher moisture content during site preparation and grading. Supporting the houses on structural slab foundations designed to withstand potential movements of expansive soils. Presoaking the near-surface expansive soils prior to concrete placement for the slab foundations. Conditioning the expansive subgrade soils in exterior concrete flatwork area to higher moisture content prior to the placement of baserock or concrete (if the flatwork is supported directly on the subgrade). 	<p>Prior to Issuance of a Building Permit</p>	<p>Applicant</p>	<p>Town of Danville</p>	<input type="checkbox"/>														

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	<p>e. Providing surface drainage away from the house foundations and draining the rainwater collected on the roof through pipes connecting to the adjacent storm drains.</p> <p>The final project plans incorporating all the finalized geotechnical recommendations shall be submitted to the Town of Danville for review and approval prior to issuance of a building permit.</p>				X
<p>Development of the proposed project, including excavation and other land disturbance could result in the release of hazardous materials that may be present on portions of the project site, exposing construction personnel and the environment to potential health and safety risks.</p>	<p>4.7-1 In order to minimize potential human health hazards associated with the historical use of hazardous materials on portions of the project site, the project proponent shall retain a trained professional to prepare a Site Management Plan to maintain the safety of construction workers and assure proper management of any contaminated soils on the site in accordance with federal, state and local regulatory requirements. This plan shall be subject to review and approval by Contra Costa County Health Services, and evidence of approval provided to the Town of Danville, prior to the issuance of any grading permit, demonstrating that all necessary remedial actions have been completed pursuant to the approved Site Management Plan. At a minimum, the Site Management Plan shall include 1) the collection and chemical analysis of soil samples from the former UST location and 2) excavation and soils characterization to confirm that sufficient soils removal has occurred for OCPs and elevated 4, 4-DDE at location SB-3, and 3) proper removal and disposal of all hazardous materials on the site, including contaminated soils, chemical containers observed in the storage shed, and herbicides spray bottles at an approved disposal facility.</p>	<p>Prior to Issuance of Grading Permit</p>	<p>Applicant</p>	<p>Town of Danville</p>	<input type="checkbox"/>
<p>See impact for Mitigation Measure 4.7-1</p>	<p>4.7-2 The diesel generator enclosure and surrounding area at the western edge of the Magee West site shall be periodically monitored for evidence of a diesel release. An annual report on the status of the enclosure shall be submitted to the Town of Danville.</p>				<input type="checkbox"/>
<p>Construction and operation of the project</p>	<p>4.8-1 In order to avoid water quality impacts, a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared for the site</p>	<p>Prior to Issuance of</p>	<p>Applicant</p>	<p>Town of Danville</p>	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
could impact surface water quality.	preparation, construction, and post-construction periods. The SWPPP shall incorporate best management practices consistent with the requirements of the National Pollution Discharge Elimination System (NPDES) Municipal Stormwater permit (No. CAS612008). The project proponent shall obtain a NPDES General Construction Permit and prepare the SWPPP in accordance with all legal requirements, prior to the issuance of a grading permit. Additional requirements for erosion control are detailed in mitigation measure 4.6-1 in 4.6 Geotechnical and Geologic Hazards.	Grading Permit			X
The noise environment would exceed the City's noise level goal for normally acceptable exterior noise (55 dBA) Ldn at residential building sites for custom lots 69 and 70 near Diablo Road, which represents a potentially significant noise impact.	<p>4.10-1 In order to avoid noise impacts at proposed residential lots located near Diablo Road, the project proponent shall prepare site-specific acoustical analyses where proposed homes are located in noise environments that exceed 55 dBA Ldn (i.e., custom lots 69 and 70). Exterior and interior noise levels at these residences shall be maintained in accordance with the standards presented in the General Plan and Municipal Code. The specific determination of necessary treatments, such as forced-air mechanical ventilation or sound-rated windows shall be conducted on a unit-by-unit basis for affected lots based on the results of the site-specific acoustical studies. Evidence shall be provided to the Town of Danville, prior to the issuance of the building permit for the affected lots, demonstrating that all acoustical recommendations have been incorporated into final design.</p> <p>Site planning may be adequate to minimize noise in outdoor activity areas, i.e., locating the outdoor activity areas behind homes or in courtyards. If site planning cannot bring noise levels to acceptable levels, then solid noise barriers shall be incorporated into final design plans to interrupt the sound transmission path between roadway traffic and private outdoor use areas of lots 69 and 70, which may be exposed to an Ldn greater than 55 dBA. The type and height of such barriers shall be determined through the site-specific acoustical analyses described above to reduce the</p>	Prior to Issuance of Building Permit	Applicant	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	Ldn at the primary outdoor areas of these lots to an Ldn of 55 dBA or less. Barriers should be airtight over the surface and at the base, with a minimum surface weight of 3.0 pounds per square foot. Evidence shall be provided to the Town of Danville, prior to the issuance of the building permit for the affected lots, demonstrating that noise barriers have been incorporated into final design.				X
Construction of the project would result in significant short-term noise impacts on nearby sensitive receptors.	<p>4.10-2 Prior to any grading or other construction activities, the applicant shall develop a construction mitigation plan in close coordination with the Town of Danville staff, Diablo Community Service District, and Diablo Municipal Advisory Council to assure that construction activities are scheduled to minimize noise disturbance. The following conditions shall be incorporated into the building contractor specifications.</p> <ul style="list-style-type: none"> a. Muffle and maintain all equipment used on site. All internal combustion engine driven equipment shall be fitted with mufflers, which are in good condition. Good mufflers shall result in non-impact tools generating a maximum noise level of 80 dB when measured at a distance of 50 feet. b. Utilize “quiet” models of air compressors and other stationary noise sources where technology exists. c. Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area. d. Prohibit unnecessary idling of internal combustion engines. e. Prohibit audible construction workers’ radios on adjoining properties. f. Restrict noise-generating activities at the construction site or in areas adjacent to the construction site to the hours between 8:00 a.m. and 5:00 p.m., Monday through Friday. g. Do not allow machinery to be cleaned or serviced past 6:00 p.m. or prior to 7:00 a.m. Monday through Friday. h. Limit the allowable hours for the delivery of materials or equipment to the site and truck traffic coming to and from the site for any purpose to Monday through Friday between 7:00 	Prior to Project Construction	Applicant	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	<p>a.m. and 6:00 p.m.</p> <p>i. Do not allow any outdoor construction or construction-related activities at the project site on weekends and holidays. Indoor construction activities may be allowed based on review/approval of the Town.</p> <p>j. Allowable construction hours shall be posted clearly on a sign at each construction site.</p> <p>k. Designate a Disturbance Coordinator for each of the clustered development sites for the duration of the Phase 1 (site work) and for each home site during the Phase 2 (home building) construction. Because each home would be constructed individually and would have its own building permit, a Disturbance Coordinator should be designated during the construction of each home. The requirement for a Disturbance Coordinator for each home site should be incorporated in the CCRs of the development, such that responsibility of the Property Owners' Association and/or home builder to designate this Disturbance Coordinator for each lot for the duration of construction until full site buildout. The Disturbance Coordinator shall conduct the following: receive and act on complaints about construction disturbances during infrastructure installation, landslide repair, road building, residential construction, and other construction activities; determine the cause(s) and implement remedial measures as necessary to alleviate significant problems; clearly post his/her name and phone number(s) on a sign at each clustered development and home building site; and, notify area residents of construction activities, schedules, and impacts.</p>				X
<p>The project would result in an incremental increase in the student population in the SRVUSD.</p>	<p>4.11-1 The applicant shall pay a school impact fee pursuant to the criteria set forth within California Government Code Section 65995. Prior to the issuance of building permits, the applicant shall pay required school mitigation fees, subject to the review and approval of the Town of Danville and San Ramon Valley Unified School District. The fees set forth in Government Code Section</p>	<p>Prior to Issuance of Building Permit</p>	<p>Applicant</p>	<p>Town of Danville and San Ramon Valley Unified</p>	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
	65996 constitute the exclusive means of both “considering” and “mitigating” school facilities impacts of projects [Government Code Section 65996(a)]. They are “deemed to provide full and complete school facilities mitigation” [Government Code Section 65996(b)].			School District	X
The project trips added to the intersection of Hidden Oaks Drive/Magee Ranch Road and Blackhawk Road during the cumulative plus project AM peak hour would increase the v/c ratio by 0.13, which constitutes a significant impact based on the thresholds of significance.	4.12-1 Per the Town of Danville, signalize the intersection of Hidden Oaks Drive/Magee Ranch Road and Blackhawk Road. Because the impact occurs under cumulative conditions and not under existing plus project conditions, the project is not the sole cause of the impact. For this reason, the project applicant shall make a fair share contribution toward signalization at this intersection. With signalization, the intersection would operate at LOS B or better under all scenarios. Signalization of this intersection is identified as a project within the Town’s Capital Improvement Program, with funds collected for its installation as part of the North East Roadway Improvement Association District.	Prior to Issuance of Building Permit	Applicant	Town of Danville	<input type="checkbox"/>
The project trips added to the intersection of Mt. Diablo Scenic Boulevard and Diablo Road during the cumulative plus project AM and school PM peak hour would increase the v/c ratio by more than 0.05, which constitutes a significant impact based on the thresholds of significance.	4.12-2 The intersection of Mt. Diablo Scenic Boulevard/Diablo Road should be considered for signalization. The project is not the sole cause of the impact. For this reason, the mitigation for this impact shall be the project applicant’s fair share contribution towards the installation of a traffic signal. With signalization, the intersection would operate at LOS C or better under all scenarios.	Prior to Issuance of Building Permit	Applicant	Town of Danville	<input type="checkbox"/>
Access to Driveway D (southbound left) during the AM and school PM peak periods has the	4.12-3 The project proponent shall modify the roadway striping along McCauley Road between the intersection and approximately 350 feet south of the Diablo Road/Green Valley Road. The modified roadway striping shall substantially conform to the	During Project Construction	Applicant	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
potential to cause unsafe conditions and vehicle queuing.	following: a) reconfigure the existing 17-foot southbound through lane to a 10-foot shoulder and a 12-foot through lane; b) replace the existing 3-foot double-double yellow centerlines with a single double yellow center-line; c) maintain the existing 10-foot northbound left turn lane while shifting it two feet toward the easterly curb line; d) reduce the existing 16-foot northbound through/right turn lane to 13 feet; and e) transition existing downstream (to the south) centerline/left turn lane on McCauley Road accordingly to accommodate the new configuration, as illustrated in the body of the EIR.				X
The project main entrance (Driveway A) has the potential to provide an unsafe condition for pedestrian crossings of Blackhawk Road.	4.12-4 The project proponent shall install a new pedestrian crossing, with in-pavement lighting or other equivalent pedestrian safety improvement, at the project main entrance on Blackhawk Road. The crossing shall physically connect the project's pedestrian traffic to the existing paved pathway located along the north side of Blackhawk Road.	During Project Construction	Applicant	Town of Danville	<input type="checkbox"/>
Development of the proposed project would require the construction of new water infrastructure in order to serve the project. EBMUD has identified that specific improvements may be necessary to serve new uses located above the 650 foot elevation contour. These improvements are necessary to mitigate potential water supply infrastructure impacts.	4.13-1 Prior to final map recordation, the applicant shall enter into a Low Pressure Service Agreement with East Bay Municipal Utility District for each residential parcel located entirely or partially above the 650 elevation contour. All appropriate water supply infrastructure, including pumping and storage facilities, shall be provided in accordance with the Low Pressure Service Agreement. For new residential parcels that are partially located above the 650 foot contour residential building envelopes may be delineated below the 650' contour to avoid the need for additional site-specific infrastructure, subject to approval by the Town of Danville. New building envelopes, if identified, shall be coordinated directly with East Bay Municipal Utility District. These facilities shall be incorporated into the final design-level infrastructure drawing for the project. The applicant shall sign and execute a Low Pressure Service Agreement prior to final map recordation. All infrastructure improvements shall be incorporated into design-level drawings.	Prior to the Recordation of the Final Map	Applicant	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
See impact for Mitigation Measure 4.13-1	4.13-2 Prior to the recordation of the final map for each phase of development, the applicant shall submit detailed design-level infrastructure drawings to the East Bay Municipal Utility District and the Town of Danville for review and approval. All new water supply infrastructure shall be designed in accordance with all applicable East Bay Municipal Utility District specifications. All water supply infrastructure plans shall be reviewed and approved prior to final map recordation.	Prior to the Recordation of the Final Map	Applicant	Town of Danville	<input type="checkbox"/>
See impact for Mitigation Measure 4.13-1	4.13-3 The East Bay Municipal Utility District maintains a right-of-way (R/W 1581) through the project site, which provides access to the Green Valley Reservoir. In order to avoid potential effects to East Bay Municipal Utility District's existing operations, the final map shall clearly delineate all known easements, including East Bay Municipal Utility District's right-of-way (R/W 1581). Any and all activities proposed within the right-of-way shall be coordinated with East Bay Municipal Utility District. This easement shall be reflected in all final design-level improvement plans and appropriate notes shall also be included, subject to the review and approval of the East Bay Municipal Utility District and the Town of Danville.	Prior to Issuance of Building Permit	Applicant	Town of Danville	<input type="checkbox"/>

Impacts	Mitigation Measures	Timing of Implementation	Implementation Responsibility	Verified for Compliance	X
<p>Development of the proposed project would increase demands for electricity and natural gas consumption.</p>	<p>4.13-4 In order to ensure that energy demand is reduced to avoid the wasteful or inefficient use of energy, the project proponent shall submit detailed design-level plans to the Town of Danville identifying that energy conservation measures have been incorporated into design and operation of the project, prior to the issuance of any building permit. The proponent shall implement the following or comparable energy conservation measures, including, but not limited to:</p> <ol style="list-style-type: none"> a. Final-design that takes advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use. Project shall meet and/or exceed the requirements of Title 20 and Title 24. b. Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings. c. Install light-colored cool pavements, and strategically placed shade trees. d. Install energy efficient heating and cooling systems, appliances and equipment, and control systems. Including: <ul style="list-style-type: none"> • smart meters and programmable thermostats. • Heating, Ventilation, and Air Condition (HVAC) ducts sealing. e. Install light emitting diodes (LEDs) for outdoor lighting. f. Provide outdoor electrical outlets. <p>The project applicant may proposed substitute measures provide they achieve comparable energy use reductions as the measures proposed above. If alternative measures are proposed, the applicant shall provide detailed evidence demonstrating the measures efficacy at reducing energy demand.</p>	<p>Prior to Issuance of Building Permit</p>	<p>Applicant</p>	<p>Town of Danville</p>	<p><input type="checkbox"/></p>