

BIOLOGICAL TECHNICAL REPORT

FOR THE

**North Ranch Residential Development Project
City of Wildomar,
Riverside County, California**

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TABLE OF CONTENTS

	Page
1.0 INTRODUCTION	1
1.1 Report Purpose	1
1.2 Project Location	1
1.3 Background and Project Description	2
1.4 Scope and Methodology	2
1.5 Existing Conditions	3
1.6 Relationship of Project to the MSHCP	3
2.0 METHODOLOGY	4
2.1 Summary of Surveys	5
2.2 Botanical Resources	6
2.3 Wildlife Resources	7
2.4 MSHCP Riparian/Riverine Areas and Vernal Pools	9
2.5 Jurisdictional Waters	10
3.0 REGULATORY SETTING.....	16
3.1 State and/or Federally Listed Plants or Animals	16
3.2 California Environmental Quality Act	18
4.0 RESULTS.....	21
4.1 Vegetation Types/Land Uses	21
4.2 Special-Status Plants	23
4.3 Special-Status Animals	29
4.4 Nesting Birds	45
4.5 Raptor Foraging Habitat	45
4.6 MSHCP Riparian/Riverine Areas and Vernal Pools	46
4.7 Jurisdictional Waters	46
5.0 IMPACT ANALYSIS.....	50
5.1 California Environmental Quality Act	50
5.2 Impacts to Vegetation/Land Use Types	52
5.3 Impacts to MSHCP Riparian/Riverine Areas and Vernal Pools	54
5.4 Impacts to Special-Status Species	56
5.5 Impacts to Raptor Foraging Habitat	57
5.6 Impacts to Nesting Birds	57
5.7 Impacts to Jurisdictional Waters	58
5.8 Indirect Impacts to Biological Resources	59

	Page
5.9 Cumulative Impacts	59
6.0 MITIGATION	59
6.1 Burrowing Owl	59
6.2 Nesting Birds	60
6.3 MSHCP Riparian/Riverine Areas	60
6.4 Jurisdictional Waters.....	60
6.5 Level of Significance After Mitigation	61
7.0 MSHCP COMPLIANCE.....	61
7.1 Project Relationship to Reserve Assembly	61
7.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (<i>Section 6.1.2</i>).....	61
7.3 Protection of Narrow Endemic Plant Species (<i>Section 6.1.3</i>)	62
7.4 Guidelines Pertaining to the Urban/Wildland Interface (<i>Section 6.1.4</i>)	62
7.5 Additional Survey Needs and Procedures.....	62
7.6 Conclusion of MSHCP Compliance	63
8.0 REFERENCES	64
9.0 CERTIFICATION	70
 TABLES	
Table 2-1. Summary of Biological Surveys for the Project Site	5
Table 2-2. Summary of Least Bell’s Vireo Survey Dates	9
Table 3-1. CNPS: California Rare Plant Ranks	20
Table 4-1. Summary of Vegetation Mapping, On-Site.	21
Table 4-2. Summary of Vegetation Mapping, Off-Site.....	21
Table 4-3. Special-Status Plants Evaluated for the Project Site	24
Table 4-4. Special-Status Animals Evaluated for the Project Site	30
Table 4-5. Potential Corps Jurisdiction On-Site.....	47
Table 4-6. Potential Regional Board Jurisdiction On-Site	49
Table 4-7. Potential CDFW Jurisdiction On-Site.....	49
Table 5-1. Summary of Impacts to Vegetation/Land Use Types, On-Site.....	52
Table 5-2. Summary of Impacts to Vegetation/Land Use Types, Off-Site.....	53
Table 5-3. Impacts to MSHCP Riparian/Riverine Areas	55
Table 5-4. Additional Special-Status Animals with Actual or Potential Direct Impacts	56

EXHIBITS

- Exhibit 1 – Regional Map
- Exhibit 2 – Vicinity Map
- Exhibit 3A – Project Site Plan
- Exhibit 3B – MSHCP Overlay Map
- Exhibit 4 – Vegetation Map
- Exhibit 5 – Site Photographs
- Exhibit 6 – Soils Map
- Exhibit 7A – Corps/Regional Board Delineation Map
- Exhibit 7B – CDFW Delineation Map
- Exhibit 8A – CDFW/MSHCP Riparian/Riverine Impact Map
- Exhibit 8B – Corps/Regional Board Impact Map
- Exhibit 9 – Potential Mitigation Area Map, Yates Road Property

APPENDICES

- Appendix A – RCA Associates, Inc. Biological Report, Dated June 2005
- Appendix B – Jurisdictional Delineation Report

1.0 INTRODUCTION

1.1 Report Purpose

This report provides the results of general biological surveys, habitat assessments, and focused surveys conducted by Glenn Lukos Associates, Inc. (GLA) for the North Ranch (Tract 32535) Residential Development Project (Project), located in the City of Wildomar, Riverside County, California. This report identifies and evaluates impacts to biological resources associated with the proposed Project, and the relationship of the Project to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), the California Environmental Quality Act (CEQA), and State and Federal regulations such as the Endangered Species Act (ESA), Clean Water Act (CWA), and the California Fish and Game Code. This report updates the biological assessment of the site, prepared by RCA Associates, Inc. (RC) [2005], and the County of Riverside's (County) previous approved Environmental Assessment (EA), EA Number 40124 (Previous Project), for the above-referenced property. The Previous Project was approved by the County prior to the Project site's incorporation into the City of Wildomar (City). As part of EA 40124, the County had previously determined that impacts to biological resources would be less than significant. GLA has also concluded that the level of significance associated with Project-related impacts to biological resources remains unchanged at a less than significant level. A copy of the RC biological report is attached as Appendix A.

1.2 Project Location

The Project occurs within western Riverside County, California within the City of Wildomar [Exhibit 1 – Regional Map]. The Project site comprises approximately 31.40 acres of land, and is located within Assessor's Parcel Numbers 380-100-004, 380-100-005, 380-100-006, 380-110-005, 380-110-006, 380-120-001, 380-120-002, 380-130-002, and 380-130-018. The Project site is located at Latitude 33.594419 and Longitude -117.251191 within Section 1, Township 7 South, and Range 4 West (as depicted on the U.S. Geological Survey (USGS) topographic maps Wildomar, California (dated 1953 and photorevised in 1988) and Murrieta, California (dated 1953 and photorevised in 1979) [Exhibit 2]. The Project is bounded by Catt Road to the north, Clinton Keith Road to the south, Hidden Springs Road to the east, and rural residential development to the west.

1.3 Background and Project Description

The proposed Project, which is a minor modification to the Previous Project, will include a total of 81 detached single-family residential dwellings and related improvements throughout the site. Residential improvements will consist of various plan types including multi-level structures, with wood or metal frame, stucco, reinforced masonry, or similar type construction. Other improvements include the construction of landscape slopes, driveways, curb, sidewalk and gutter, storm drain improvements, wet and dry utilities, one infiltration basin, one extended detention basin and various open space lots to accommodate existing vegetation, wetlands and riparian preservation. Entrance to the site will be provided at Arnett Road and Stable Lanes Road. A graphic depicting the Project site plan is attached as Exhibit 3A.

1.4 Scope and Methodology

Biologists/Regulatory Specialists from GLA conducted site-specific surveys at the Project site on February 22, March 6, April 29, May 9, 22, June 3, 13, 24, and July 9 and 19 of 2013. This report provides a discussion of existing conditions for the Project site, all methods employed regarding general and focused surveys, the documentation of botanical and wildlife resources identified (including special-status species), an analysis of impacts to biological resources, and proposed mitigation measures to offset resource impacts pursuant to the MSHCP and CEQA. Methods of study included a review of relevant literature, general and focused field surveys, and a Geographical Information System (GIS)-based impact analysis. Where applicable, this report is consistent with accepted scientific and technical standards and survey guideline requirements issued by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), the California Native Plant Society (CNPS), and the Western Riverside County MSHCP. This report also discusses the relationship of the Project to the MSHCP, including the presence/absence of Covered Species, and compliance with provisions of the MSHCP, including requirements as outlined in *Volume I, Sections 6.1.2, 6.1.3, 6.1.4, and 6.3.2* of the MSHCP document. Finally, this report provides an analysis to demonstrate that the Project (with mitigation) will be “biologically equivalent or superior” as it pertains to riparian/riverine resources.

The field studies focused on a number of primary objectives that would satisfy the special provisions of the MSHCP and also comply with CEQA requirements, including: (1) general reconnaissance surveys and vegetation mapping; (2) general wildlife surveys; (3) habitat assessments for special-status plants (including species with applicable MSHCP survey requirements); (4) habitat assessments and focused surveys for special-status animals (including species with applicable MSHCP survey requirements); (5) assessments for riparian/riverine areas and vernal pools; and (6) assessments for areas subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA), and CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600–1616 of the California Fish and Game Code. Observations of plant and wildlife species were recorded during each of the above mentioned survey efforts.

1.5 Existing Conditions

The approximate 31.40-acre Project site is generally comprised of patchily distributed Riversidean sage scrub dominated by California buckwheat (*Eriogonum fasciculatum*), non-native grasslands dominated by *Bromus* spp., disturbed land, and ruderal vegetation. The Project site is associated with three potentially jurisdictional drainage features. Two of the drainage features are located on-site and the other is off-site to the southeast. One of the three drainages, located in the northern portion of the Project site, contains and abuts wetland habitat. Both on-site drainages support riparian habitat while the off-site drainage does not. The site contains several remnant residential building cement foundations and several areas with debris piles. Dilapidated fencing still delineates some of the parcels within the Project's boundary. Based upon GLA's review of the RC biological resources report, dated June 2005, site conditions have, in general, remained unchanged.

1.6 Relationship of the Project Site to the MSHCP

1.6.1 MSHCP Background

The MSHCP is a comprehensive habitat conservation/planning program for western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to special-status species and associated native habitats.

Through agreements with the USFWS and CDFW, the MSHCP designates 146 special-status animal and plant species as Covered Species, of which the majority have no project-specific survey/conservation requirements. The MSHCP provides mitigation for project-specific impacts to these species for Projects that are compliant/consistent with MSHCP requirements, such that the impacts are reduced to below a level of significance pursuant to CEQA.

The Covered Species that are not yet adequately conserved have additional requirements in order for these species to ultimately be considered "adequately conserved". A number of these species have survey requirements based on a project's location within a designated MSHCP survey area and/or based on the presence of suitable habitat. These include Narrow Endemic Plant Species (MSHCP *Volume I, Section 6.1.3*), as identified by the Narrow Endemic Plant Species Survey Areas (NEPSSA); Criteria Area Plant Species (MSHCP *Volume I, Section 6.3.2*) identified by the Criteria Area Plant Species Survey Areas (CAPSSA); animals species (burrowing owl, mammals, amphibians) identified by survey areas (MSHCP *Volume I, Section 6.3.2*); and species associated with riparian/riverine areas and vernal pool habitats, i.e., least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and three species of listed fairy shrimp (MSHCP *Volume I, Section 6.1.2*). An additional 28 species (MSHCP *Volume I, Table 9.3*) not yet adequately conserved have species-specific objectives in order for the species to become adequately conserved. However, these species do not have project-specific survey requirements.

The goal of the MSHCP is to have a total Conservation Area in excess of 500,000 acres, including approximately 347,000 acres on existing Public/Quasi-Public (PQP) Lands, and approximately 153,000 acres of Additional Reserve Lands targeted within the MSHCP Criteria Area. The MSHCP is divided into 16 separate Area Plans, each with its own conservation goals and objectives. Within each Area Plan, the Criteria Area is divided into Subunits, and further divided into Criteria Cells and Cell Groups (a group of criteria cells). Each Cell Group and ungrouped, independent Cell has designated “criteria” for the purpose of targeting additional conservation lands for acquisition. Projects meeting the definition of a “Covered Activity” are not required to set aside land pursuant to the Cell Criteria. However, all Projects within the Criteria Area must go through the Joint Project Review (JPR) process, where the Project is reviewed to ensure overall compliance/consistency with the biological requirements of the MSHCP.

1.6.2 Relationship of the Project Site to the MSHCP

The Project site is located within the Elsinore Area Plan of the MSHCP, but is not located within the MSHCP Criteria Area. The Project site is located within the MSHCP Burrowing Owl Survey Area, but is not located in the Narrow Endemic Plant Species Survey Area (NEPSSA), Criteria Area Plant Species Survey Area (CAPSSA), MSHCP Mammal or Amphibian Survey Areas, or Core and Linkage Areas.

Within the designated Survey Areas, the MSHCP requires habitat assessments and focused surveys within areas of suitable habitat. For locations with positive survey results, the MSHCP requires that 90 percent of those portions of the property that provide for long-term conservation value for the identified species shall be avoided until it is demonstrated that conservation goals for the particular species have been met throughout the MSHCP. Findings of equivalency shall be made demonstrating that the 90-percent standard has been met, if applicable. If equivalency findings cannot be demonstrated, then “biologically equivalent or superior preservation” must be provided. A MSHCP overlay map is attached as Exhibit 3B.

2.0 METHODOLOGY

GLA conducted biological surveys in order to identify and evaluate impacts to biological resources associated with the Project. The scope of the biological surveys was determined through initial site reconnaissance, a review of the California Natural Diversity Database (CNDDB) [CDFW 2013], the CNPS On-Line Inventory of Rare and Endangered Plants of California (2013), MSHCP species and habitat maps, MSHCP sensitive soil maps, Natural Resource Conservation Service’s (NRCS) soil data, other pertinent literature, and knowledge of the region. Site-specific general and focused surveys were conducted for all areas of suitable habitat for each target plant or animal species. In addition, the site was evaluated to determine the presence/absence of waters of the United States, including wetlands (Corps and Regional Board jurisdiction); stream/lakes, including riparian vegetation (CDFW jurisdiction); and MSHCP riparian/riverine areas and vernal pools.

Individual plant and animal species are evaluated in this report based on their “special-status”. For the purpose of this report, plants were considered “special-status” based on one or more of the following criteria:

- Listing through the Federal and/or State ESA;
- Occurrence in the CNPS Rare Plant Inventory (California Rare Plant Ranks 1B, 2B, 3, or 4);
- CNDDDB Federal/State Rankings; and/or
- Evaluation and coverage under the MSHCP.

Animals were considered “special-status” based on one or more of the following criteria:

- Listing through the Federal and/or State ESA;
- Designation as a Federal Species of Concern;
- Designation by the State as a California Species of Special Concern (SSC) or California Fully-Protected Species (CFP);
- CNDDDB Federal/State Rankings; and/or
- Evaluation and coverage under the MSHCP.

The Project Site was evaluated for riparian/riverine and vernal pool resources pursuant to *Volume I, Section 6.1.2* of the MSHCP.

2.1 Summary of Surveys

Site-specific surveys focused on a number of primary objectives that would satisfy the requirements of the MSHCP and also comply with CEQA requirements: (1) general biological surveys; (2) vegetation mapping; (3) habitat assessments and general surveys for special-status plants; (4) habitat assessments and general surveys for special-status animals (including species designated by *Sections 6.1.2 and 6.3.2* of the MSHCP document); (5) assessments for MSHCP riparian/riverine areas and vernal pools; and (6) assessments for areas subject to the jurisdiction of the Corps, Regional Board, and CDFW. Observations of all plant and animal species were recorded during each of the above-mentioned survey efforts. Table 2-1 provides a summary list of survey dates, survey types and personnel.

Table 2-1. Summary of Biological Surveys for the Project Site.

Survey Type	Survey Dates (2013)	Biologists
Least Bell’s Vireo Surveys	April 29 May 9, 22 June 3, 13, 24 July 9, 19	TB, DM, TM
General Biological Surveys	May 22 June 3	DM TM

Survey Type	Survey Dates (2013)	Biologists
Jurisdictional Delineation	February 22 March 6	LL, JF, MR
Vegetation Mapping	May 22 June 3	TM, DM

MR – Martin Rasnick, DM – David Moskovitz, TB – Tony Bomkamp , JF – Jason Fitzgibbon, LL – Lesley Lokovic, TM – Tim Morgan

2.2 **Botanical Resources**

A site-specific survey program was designed to accurately document the botanical resources within the Project site, including: 1) literature search; (2) general biological survey and habitat assessments; and (3) vegetation mapping.

2.2.1 **Literature Search**

Prior to conducting fieldwork, pertinent literature on the flora of the region was examined. A thorough archival review was conducted using available literature and other historical records. These resources included, but were not limited to, the following:

- California Native Plant Society *Online Inventory of Rare and Endangered Plants of California* (Eighth Edition) [CNPS 2010];
- California Natural Diversity Database (CNDDDB) for the Wildomar, Murrieta, and surrounding USGS quadrangle maps (CDFW); and
- MSHCP Document, including *Volume I, Sections 6.1.2, 6.1.3, and 6.3.2* (Riverside County Integrated Project 2003).

2.2.2 **Vegetation Mapping**

Vegetation communities were mapped for the Project site, using categories from the MSHCP Habitat Accounts (Volume II, Section C), which are based on the Holland (1986) classification system. Exhibit 4 [Vegetation Map] provides vegetation mapping for the Project Site. Exhibit 5 provides representative photographs of the site.

2.2.3 **Special-Status Plant Species Evaluated for the Project Site**

The CNDDDB and MSHCP were initially consulted to determine known occurrences of special-status plants in the region. Other sources used to develop a list of target species for the survey program included the CNPS Online Inventory (CNPS 2013). Based on this information, special-status plant species and habitats that could occur within the Project site were evaluated. Habitat

assessments were conducted on June 3, 2013. As noted above, the Project site was not within NEPSSA or CAPSSA; therefore, focused plant surveys were not required under the MSHCP guidelines and were not performed. Section 4.0 of this document provides a list of special-status plants evaluated for the Project, as well as the results of habitat assessments.

2.3 Wildlife Resources

Wildlife species were evaluated and detected during field surveys by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the entire Project Site by direct observation, including the use of binoculars. Wildlife species detected through direct sightings, or based on physical evidence, were recorded in field notes during each visit. Scientific nomenclature and common names for vertebrate species referred to in this report follows a number of sources, including the CDFW Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFW 2008); Collins (2009) for amphibians and reptiles; Baker, et al. (2003) for mammals; and the AOU Checklist (1998) for birds. The methodology (including any applicable survey protocols) utilized to conduct habitat assessments and focused surveys for special-status animals are included below.

2.3.1 General Biological Surveys

All wildlife species that were detected incidentally during biological surveys were documented. For reptiles, habitats were examined for diagnostic sign, which include shed skins, tracks, snake prints, and lizard tail drag marks. Birds were detected by both direct observation and by vocalizations. Mammals were detected both by direct observations and by the presence of diagnostic sign (i.e., tracks, burrows, scat, etc.).

2.3.2 Special-Status Animal Species Evaluated for the Project Site

The CNDDDB and MSHCP were initially consulted to determine known occurrences of special-status animals in the region. Based on this information, a list of target animal species (including their suitable habitats) was developed and incorporated into a survey program to achieve the following goals: (1) identify fauna on site; and (2) implement general reconnaissance field work and focused surveys to document special-status animal species within the Project site.

2.3.3 Habitat Assessments for the Burrowing Owl

The Project Site is located within the MSCHP Survey Area for the burrowing owl (*Athene cunicularia*). Surveying biologists from GLA noted the presence of low to moderately suitable habitat and several suitable burrows on-site; however, no burrowing owl, or sign of burrowing owl, was detected during general, vegetation, and habitat surveys conducted between February and July 2013 for the Project site. GLA's habitat surveys complied with the MSHCP survey guidelines. The paragraphs below describe the MSHCP burrowing owl habitat assessment and focused survey instructions.

Step I of the MSHCP Survey Instructions requires that an assessment be conducted to determine the presence of suitable habitat for the burrowing owl. Habitat assessments must be conducted

by walking the subject property. Habitat assessments should consider a 150-meter (500 foot) buffer zone around the property.

Habitat for the burrowing owl is varied, including short-grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident (Haug, et al. 1993). Burrowing owls require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows (e.g., ground squirrels, etc.). As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover. Burrowing owls may also dig their own burrows in soft, friable soil (as found in Florida) and may also use pipes, culverts, and nest boxes where burrows are scarce (Robertson 1929). The mammal burrows are modified and enlarged. In the case of nesting owls, one burrow is typically selected for use as the nest; however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl.

The MSHCP Survey Instructions acknowledge that the presence of suitable burrows is not the deciding factor on whether a site contains suitable habitat for burrowing owls. Basic suitability is more broadly defined by the vegetation structure of a given site. Once basic suitability has been confirmed, the presence/absence of suitable burrows is to be determined through focused burrow surveys (Step II of the Survey Instructions). As noted above the Project site contains marginally suitable habitat for the burrowing owl; however, no burrowing owls were identified on site during site-specific habitat assessments/surveys conducted between February and July 2013.

2.3.4 Focused Surveys for the Southwestern Willow Flycatcher

Volume I, Section 6.1.2 of the MSHCP requires focused surveys for the federally and State listed southwestern willow flycatcher (*Empidonax traillii extimus*) [SWFL] within areas of suitable riparian habitat that cannot be avoided by projects. The Project site does not contain or occur next to adjacent riparian habitat with some potential to support the southwestern willow flycatcher. As such, focused flycatcher surveys were not conducted.

2.3.5 Habitat Assessments/Focused Surveys for the Least Bell's Vireo

Volume I, Section 6.1.2 of the MSHCP requires focused surveys for the Federally and State listed least Bell's vireo (*Vireo bellii pusillus*) [LBV] within areas of suitable riparian habitat that cannot be avoided by projects. The Project site contains riparian habitat with some potential to support the LBV. As such, focused LBV surveys were conducted within riparian habitat to be affected by the Project.

The USFWS LBV survey guidelines stipulate that a minimum of eight visits be conducted within areas of suitable habitat during the period from April 10 to July 31, with at least ten days between site visits.¹ Surveys must be conducted between sunrise and 11:00 am, and weather conditions must be conducive to a high level of bird activity.

GLA biologists conducted focused vireo surveys on April 29, May 9, 22, June 3, 13, 24, and July 9 and 19 of 2013. Table 2-2 presented below summarizes the survey dates and surveying biologists for the 2013 focused surveys. The results of focused surveys are discussed in section 4.0 of this report.

Table 2-2. Summary of Least Bell’s Vireo Survey Dates

Date (2013)	Start Time	End Time	Surveyors	Temp (°F) start/end	Wind Speed (Mph)	Cloud Cover start/end
4/29	0915	1045	D. Moskovitz	68/76	0-0	Clear/Clear
5/9	0630	0830	T. Bombkamp	55/55	0-1	Overcast/Clear
5/22	0745	0845	T. Morgan	63/70	2-5	Overcast/Overcast
6/3	0845	1030	D. Moskovitz T. Morgan	69/75	0-1	Clear/Clear
6/13	0650	0830	T. Morgan	62/75	0-2	Clear/Clear
6/24	0600	0730	T. Morgan	60/60	2-5	Overcast/Overcast
7/9	0700	1030	T. Morgan	75/85	0-2	Scattered/Scattered
7/19	0700	1000	T. Morgan	68/74	0-3	Broken/Broken

2.3.6 Habitat Assessments/Focused Surveys for the Western Yellow-Billed Cuckoo

Volume I, Section 6.1.2 of the MSHCP requires focused surveys for the western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) [cuckoo] within areas of suitable riparian habitat that cannot be avoided by projects. The Project site does not contain riparian habitat with some potential to support the cuckoo. As such, focused surveys were not conducted, nor are they necessary.

2.4 MSHCP Riparian/Riverine Areas and Vernal Pools

GLA surveyed the site for riparian/riverine areas and vernal pool/seasonal pool habitat.

Volume I, Section 6.1.2 of the MSHCP describes the process through which protection of riparian/riverine areas and vernal pools would occur within the MSCHP Plan Area. The purpose is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that habitat values for species inside the MSCHP Conservation Area

¹ U.S. Fish and Wildlife guidelines for least Bell’s vireo surveys recommend surveys of up to 50 hectares (approximately 120 acres) and no more than 3 linear kilometers (approximately 1.8 miles) per day, depending on site conditions (e.g., density and width of vegetation). U.S. Department of the Interior, Fish and Wildlife Service. 1999. Least Bell’s vireo Survey Guidelines, Published guidelines by Ecological Services Carlsbad Fish and Wildlife Office, 3 pages.

are maintained. The MSHCP requires that as projects are proposed within the overall Plan Area, the affect of those projects on riparian/riverine areas and vernal pools must be addressed.

The MSHCP defines riparian/riverine areas as *lands which contain Habitat dominated by trees, shrubs, persistent emergent mosses and lichens, which occur close to or which depend upon soils moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.*

The MSHCP defines vernal pools as *seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season.*

With the exception of wetlands created for the purpose of providing wetlands Habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

2.5 Jurisdictional Waters

The Project Site was evaluated to determine the limits of (1) Corps jurisdiction pursuant to Section 404 of the CWA; (2) Regional Board jurisdiction pursuant to Section 401 of the CWA and Section 13260 of the CWC; and (3) CDFW jurisdiction pursuant to Division 2, Chapter 6, Sections 1600-1616 of the Fish and Game Code. The evaluation for Corps jurisdiction was based on regulatory guidance pursuant to the U.S. Supreme Court decisions of *Rapanos v. United States* and *Carabell v. United States*, which updated/incorporated guidance pursuant to *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et. al.* (SWANCC).

2.5.1 Corps Jurisdiction

Pursuant to Section 404 of the Clean Water Act (CWA), the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
- (2) All interstate waters including interstate wetlands;*
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or**

- (ii) *From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
- (iii) *Which are used or could be used for industrial purpose by industries in interstate commerce...*
- (4) *All impoundments of waters otherwise defined as waters of the United States under the definition;*
- (5) *Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
- (6) *The territorial seas;*
- (7) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

- (8) *Waters of the United States do not include prior converted cropland.² Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the U.S. Environmental Protection Agency (EPA).*

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark (OHWM) which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

1. Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, EPA asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of “waters of the United States” in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

² The term “prior converted cropland” is defined in the Corps’ Regulatory Guidance Letter 90-7 (dated September 26, 1990) as “wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season....” [Emphasis added.]

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the CWA.

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc.*) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the Clean Water Act (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum, which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

2. Rapanos v. United States and Carabell v. United States

On June 5, 2007, the (EPA) and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the Clean Water Act in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For project sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands as set forth in the chart below, the Corps must apply the significant nexus standard, that includes the data set forth in the *Approved Jurisdictional Determination Form*.

For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps. The information pertaining to isolated waters is also included on the *Approved Jurisdictional Determination Form*.

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters
- 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 (e.g., typically three months)

- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors

3. Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “waters of the United States”) is defined at 33 CFR 328.3(b) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions.” In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual and Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- More than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in The National Wetland Plant List: 2013 Wetland Ratings³);
- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and

³ Lichvar, R.W. 2013. The National Wetland Plant List: 2013 Wetland Ratings. Phytoneuron 2013-49: 1–241.

- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with “problematic hydrophytic vegetation”, which require a minimum of 14 days of ponding to be considered a wetland.

2.5.2 Regional Water Quality Control Board

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.⁴ The memorandum states:

California’s right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus if the Corps determines that the water body in question is not subject to regulation under the COE’s 404 program, for instance, no application for 401 certification will be required...

The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states....

Water Code section 13260 requires “any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements).” (Water Code § 13260(a)(1) (emphasis added).) The term “waters of the state” is defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” (Water Code § 13050(e).) The U.S. Supreme Court’s ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the COE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing WDRs (or waivers of WDRs) in the absence of a request for 401 certification....

In this memorandum the SWRCB’s Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to “waste” and therefore subject to the authority of the Porter Cologne Water Quality Act. However, while providing a recounting of the Act’s definition of waters of the United States, this memorandum fails to also reference the Act’s own definition of waste:

“Waste” includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any

⁴ Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

The lack of inclusion of a reference to “fill material,” “dirt,” “earth” or other similar terms in the Act’s definition of “waste,” or elsewhere in the Act, suggests that no such association was intended. Thus, the Chief Counsel’s memorandum signals that the SWRCB is attempting to retain jurisdiction over discharge of fill material into isolated waters of the United States by administratively expanding the definition of “waste” to include “fill material” without actually seeking amendment of the Act’s definition of waste (an amendment would require action by the state legislature). Consequently, discharge of fill material into waters of the State not subject to the jurisdiction of the Corps pursuant to Section 404 of the CWA may require authorization pursuant to the Porter Cologne Act through application for waste discharge requirements (WDRs) or through waiver of WDRs, despite the lack of a clear regulatory imperative.

2.5.3 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFW's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFW jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFW Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways...
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by [CDFW] as natural waterways...
- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions...

Thus, CDFW jurisdictional limits closely mirror those of the Corps. Exceptions are CDFW's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status.

3.0 REGULATORY SETTING

The proposed Project is subject to state and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: state and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species which are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities.

3.1 State and/or Federally Listed Plants or Animals

3.1.1 State of California Endangered Species Act

California's Endangered Species Act (CESA) defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the Federal Endangered Species Act (FESA), CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided." Under the CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

Exceptions authorized by the state to allow "take" require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

3.1.2 Federal Endangered Species Act

The FESA of 1973 defines an endangered species as “any species that is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to “take” any listed species. “Take” is defined in Section 3(18) of FESA: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the USFWS, through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification that result in injury to, or death of species as forms of “take.” These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

3.1.3 State and Federal Take Authorizations for Listed Species

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.
- Sections 2090-2097 of the California Endangered Species Act (CESA) require that the state lead agency consult with CDFW on projects with potential impacts on state-listed species. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

3.1.4 Take Authorizations Pursuant to the MSHCP

The MSHCP was adopted on June 17, 2003, and an Implementing Agreement (IA) was executed between the Federal and State Wildlife Agencies (USFWS and CDFW) and participating entities. The MSHCP is a comprehensive habitat conservation-planning program for western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. As such, the MSHCP is intended to streamline review of individual projects with respect to the species and habitats addressed in the MSHCP, and to provide for an overall Conservation Area that would be of greater benefit to biological resources than would result from a piecemeal regulatory approach. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to sensitive species.

Through agreements with the USFWS and the CDFW, the MSHCP designates 146 special-status animal and plant species that receive some level of coverage under the plan. Of the 146 “Covered Species” designated under the MSHCP, the majority of these species have no additional survey/conservation requirements. In addition, through project participation with the MSHCP, the MSHCP provides mitigation for project-specific impacts to Covered Species so that the impacts would be reduced to below a level of significance pursuant to CEQA. As noted above, project-specific survey requirements exist for species designated as “Covered Species not yet adequately conserved”. These include Narrow Endemic Plant Species, as identified by NEPSSA; Criteria Area Plant Species identified by CAPSSA; animal species as identified by survey area; and plant and animal species associated with riparian/riverine areas and vernal pool habitats (*Volume I, Section 6.1.2* of the MSHCP document).

3.2 California Environmental Quality Act

3.2.1 CEQA Guidelines Section 15380

CEQA requires evaluation of a project’s impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that could potentially meet the criteria for state listing. For plants, CDFW recognizes that plants with CNPS California Rare Plant Ranks of 1A, 1B, 2A, or 2B may meet the criteria for listing and should be considered under CEQA. CDFW also recommends protection of plants, which are regionally important, such as locally rare species, disjunct populations of more common plants, or plants with CNPS California Rare Plant Ranks of 3 or 4.

3.2.2 Special-Status Plants and Animals Evaluated Under CEQA

Federally Designated Special-Status Species

Within recent years, the USFWS instituted changes in the listing status of candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. However, some USFWS field offices have issued memoranda stating that former C2 species are to be considered federal Species of Concern (FSC). This term is employed in this document, but carries no official protections. All references to federally-protected species in this report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS.

For this report the following acronyms are used for federal special-status species:

- FE Federally listed as Endangered
- FT Federally listed as Threatened
- FPE Federally proposed for listing as Endangered
- FPT Federally proposed for listing as Threatened
- FC Federal candidate species (former C1 species)
- FSC Federal Species of Concern (former C2 species)

State-Designated Special-Status Species

Some mammals and birds are protected by the state as Fully Protected (CFP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California Species of Special Concern (SSC) are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's CNDDDB project. Informally listed taxa are not protected, but warrant consideration in the preparation of biotic assessments. For some species, the CNDDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

For this report the following acronyms are used for State special-status species:

- SE State-listed as Endangered
- ST State-listed as Threatened
- SR State-listed as Rare
- SCE State candidate for listing as Endangered
- SCT State candidate for listing as Threatened
- CFP California Fully-Protected
- CP California Protected

- SSC California Species of Special Concern
- WL Watch List

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The California Native Plant Society’s Sixth Edition of the *California Native Plant Society’s Inventory of Rare and Endangered Plants of California* separates plants of interest into five categories. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California (Tibor 2001). CNPS maintains an updated Online Inventory. The 8th Edition of the Online Inventory was released in December 2010. The Inventory serves as the candidate list for listing as threatened and endangered by CDFW.

CNPS has developed six categories of rarity that are summarized in Table 3-1.

Table 3-1. CNPS: California Rare Plant Ranks

CNPS Rank	Comments
1A – Presumed Extirpated in California and Either Rare or Extinct Elsewhere	Thought to be extinct in California based on a lack of observation or detection for many years.
1B – Rare, Threatened, or Endangered in California and Elsewhere	Species, which are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
2A – Presumed Extirpated in California, but Common Elsewhere	Thought to be extinct in California based on a lack of observation or detection for many years, but are more common elsewhere in their range.
2B – Rare, Threatened, or Endangered in California, More Common Elsewhere	Species that are rare in California but more common outside of California
3 – Need More Information	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate rank. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific rank. In addition, many of the Rank 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
4 – Plants of Limited Distribution	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for Rank 3 species above, CNPS lacks survey data to accurately determine status in California. Many species have been placed on Rank 4 in previous editions of the “Inventory” and have been removed as survey data has indicated that the species are more common than previously thought. CNPS recommends that species currently designated this rank should be monitored to ensure that future substantial declines are minimized.
Threat Rank	Comment
.1 – Seriously endangered in California	Species with over 80% of occurrences threatened and/or have a high degree and immediacy of threat.

.2 – Fairly endangered in California	Species with 20-80% of occurrences threatened.
.3 – Not very endangered in California	Species with <20% of occurrences threatened or with no current threats known.

4.0 RESULTS

This section discusses the results of biological surveys conducted for the Project, including general surveys; vegetation mapping; habitat assessments; focused surveys; and assessments for Corps, Regional Board, and CDFW jurisdictional waters, and MSHCP riparian/riverine areas and vernal pools.

4.1 Vegetation Types/Land Uses

A total of eight distinct vegetation/land use types were mapped for the Project site, including alkali marsh (AM), coast live oak woodland, (CLOW), developed/disturbed, disturbed Riversidean Sage Scrub (dRSS), man-made basin (MMB), non-native grasslands/ruderal (NNG/R), Riversidean sage scrub (RSS), and southern cottonwood willow riparian (SCWR). Exhibit 4 provides a vegetation map for the Project Site. Exhibit 5 provides representative site photographs. Table 4-1 (*on-site*) and 4-2 (*off-site*) below summarize vegetation type and land use acreage for each category identified for the Project site. A detailed description of each vegetation/land use type follows the table.

Table 4-1. Summary of Vegetation Mapping, On-Site.

Vegetation	Acreage On-site
Alkali marsh	0.08
Coast live oak woodland	0.21
Developed/disturbed	15.63
Disturbed Riversidean sage scrub	0.33
Non-native grasslands/ruderal	11.83
Riversidean sage scrub	1.75
Southern cottonwood willow riparian	1.57
Total	31.40

Table 4-2. Summary of Vegetation Mapping, Off-Site.

Vegetation	Acreage On-site
Alkali marsh	0.03
Coast live oak woodland	0.06
Developed/disturbed	1.25
Disturbed Riversidean sage scrub	0.25
Man-made basin	0.02

Riversidean sage scrub	0.07
Southern cottonwood willow riparian	0.003
Total	1.68

4.1.1 Alkali Marsh

Approximately 0.08 on-site acres and 0.03 off-site acres associated with the Project site are comprised of AM. The on-site AM areas occur around the northern most drainage on-site. Specifically, the marsh area is located on the northern side of the drainage along the northeastern stretch of the drainage. Alkali marsh was also mapped off-site at the western end of this drainage abutting a man-made basin. These areas are dominated by riparian species, including Mexican rush (*Juncus mexicanus*), yerba mansa (*Anemopsis californica*), basket rush (*Juncus textillus*), false carrot (*Yabea microcarpa*), curly dock (*Rumex crispus*), and common cattail (*Typha latifolia*).

4.1.2 Coast Live Oak Woodland

Approximately 0.21 on-site acres and 0.06 off site acres associated with the Project site are comprised of CLOW. The CLOW vegetation type is located in the southern portion of the Project site and is associated with a jurisdictional drainage feature. The dominant plant species in this vegetation type, accompanying the coast live oaks (*Quercus agrifolia*), includes eucalyptus (*Eucalyptus globulus*), scattered stands of mulefat (*Baccharis salicifolia*), and a patchy understory of California buckwheat (*Eriogonum californicum*), brome grasses (*Bromus* spp.), mustard (*Brassica* spp.), and fiddleneck (*Amsinckia tessellata*).

4.1.3 Developed/Disturbed

Approximately 15.63 on-site acres and 1.25 off-site acres associated with the Project site are comprised of areas that are developed and/or disturbed to a level in which only bare soil or ruderal species are present. This vegetation/land use type also includes escaped exotic and ornamental species. Non-native grass species are typically present but do not solely dominate the ground cover in these areas. This vegetation type is located throughout the Project site, especially in the northern areas. Species included in this category, existing on-site as dominants during the time of surveys, include brome grasses (*Bromus* spp.), wild oats (*Avena fatua*), Jimson weed (*Datura stramonium*), mustards (*Brassica* spp.), horseweed (*Erigeron canadensis*), and fiddleneck. This category also contains ornamental species including olive trees, eucalyptus, and oleander (*Nerium oleander*).

4.1.4 Disturbed Riversidean Sage Scrub

Approximately 0.33 on-site acres and 0.25 off-site acres associated with the Project site are comprised of areas that contain disturbed Riversidean sage scrub (dRSS). This vegetation type is located mostly around Stable Lanes Way and adjacent to Clinton Keith Road located in the southern portion of the Project. This vegetation type is dominated by California buckwheat.

4.1.5 Man-Made Basin

Approximately 0.02 acre of off site area is associated with a man-made basin. The basin is located at the west-central boundary of the Project site and receives hydrology from the northern most jurisdictional drainage feature. During the survey the basin was holding water and supports emergent vegetation around its banks including broadleaf cattail and curly dock (*Rumex crispus*).

4.1.6 Non-Native Grasslands/Ruderal

Approximately 11.83 on-site acres of the Project site support NNG. Areas containing NNG occur mostly centrally within the Project site. These areas are disturbed but not to the extent in which are the areas identified as Developed/Disturbed. This vegetation type is dominated by non-native grass species including red brome, ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), and wild oats. Ruderal forb species also occur; however, they do not dominate the ground cover as they do in other more frequently disturbed areas. A few isolated cottonwoods (*Populus fremontii*) are located within this vegetation type, along the disturbed boundary of a dirt road (Stable Lanes Way) in the eastern portion of the Project site.

4.1.7 Riversidean Sage Scrub

Approximately 1.75 on-site acres and 0.07 off-site acres associated with the Project site support RSS. This vegetation type is patchily distributed within the southern portion of the Project site and is mostly moderately to heavily disturbed throughout. This vegetation type is largely dominated by California buckwheat.

4.1.8 Southern Cottonwood Willow Riparian

Approximately 1.57 on-site acres and 0.003 off-site acres associated with the Project site are comprised of SCWR. The SCWR vegetation community is associated with a drainage feature that bisects the north central area of the Project site. Dominant species associated with this vegetation type include red willow (*Salix laevigata*), Fremont cottonwood (*Populus fremontii*), Gooding's black willow (*Salix goodingii*), arroyo willow (*Salix lasiolepis*), mulefat (*Baccharis salicifolia*), and some scattered olive trees (*Olea europaea*). The understory associated with this vegetation type is dominated by iris leaved rush (*Rumex crispus*), broadleaf cattail (*Typha latifolia*), and horseweed (*Erigeron canadensis*).

4.2 Special-Status Plants

No special-status plants were observed on site during the focused plant survey, and none are expected to occur on site due to a lack of suitable habitat and/or the level of disturbance. Table 4-3 provides a list of special-status plants evaluated for the Project Site. Plant species were considered based on a number of factors, including: 1) species identified by the CNDDDB as occurring (either currently or historically) on or in the vicinity of the Project Site, 2) MSHCP survey areas, 3) planning species identified by the Elsinore Area Plan, and 4) any other special-status plants that are known to occur within the vicinity of the property, or for which potentially suitable habitat occurs on site.

Table 4-3. Special-Status Plants Evaluated for the Project Site.

Federal

FE – Federally Endangered
 FT – Federally Threatened
 SOC – Species of Concern

State

SE – State Endangered
 ST – State Threatened

CNPS

Rank 1B – Plants rare, threatened, or endangered in California and elsewhere.
 Rank 2B – Plants rare, threatened, or endangered in California, but more common elsewhere.
 Rank 3 – Plants about which more information is needed.
 Rank 4 – Plants of limited distribution (a watch list).

CNPS Threat Rank Extensions

.1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
 .2 – Fairly endangered in California (20-80% occurrences threatened)
 .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Species Name	Status	Habitat Requirements	Potential to Occur On Site
California Orcutt grass <i>Orcuttia californica</i>	Federal: FE State: SE CNPS: List 1B.1	Vernal pools. Blooms from April through August.	Does not occur on-site due to a lack of suitable habitat.
Chaparral sand verbena <i>Abronia villosa</i> var. <i>aurita</i>	Federal: None State: None CNPS: List 1B.1	Sandy soils in chaparral, coastal sage scrub. Blooms from January through September.	Does not occur on-site due to a lack of suitable habitat.
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Covered	Playas, vernal pools, marshes and swamps (coastal salt). Blooms February through June.	Does not occur on-site due to a lack of suitable habitat.
Hammitt's Clay-cress <i>Sibaropsis hammittii</i>	FED: None ST: None CNPS: Rank 1B.2	Clay soils in chaparral and valley and foothill grasslands. Blooms from March through April.	Does not occur on-site due to a lack of suitable habitat.
Intermediate mariposa lily <i>Calochortus weedii</i> var. <i>intermedius</i>	Federal: None State: None CNPS: List 1B.2	Rocky soils in chaparral, coastal sage scrub, valley and foothill grassland. Blooms from May through July.	Does not occur on-site due to a lack of suitable habitat.
Lemon lily <i>Lilium parryi</i>	Federal: None State: None CNPS: List 1B.2	Mesic soils in lower montane coniferous forest, meadows and seeps, riparian forest, and upper montane	Does not occur on-site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
		coniferous forest. Blooms from July through August.	
Little mousetail <i>Myosurus minimus</i> ssp. <i>apus</i>	Federal: SOC State: None CNPS: List 3.1	Valley and foothill grassland, vernal pools (alkaline soils). Blooms from March through June.	Does not occur on-site due to a lack of suitable habitat.
Long-spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Federal: None State: None CNPS: List 1B.2	Clay soils in chaparral, coastal sage scrub, meadows and seeps, and valley and foothill grasslands. Blooms from April through July.	Low potential to occur on-site. Not observed during site assessment.
Many-stemmed dudleya <i>Dudleya multicaulis</i>	Federal: None State: None CNPS: List 1B.2	Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils.	Does not occur on-site due to a lack of suitable habitat.
Mesa horkelia <i>Horkelia cuneata</i> ssp. <i>puberula</i>	Federal: None State: None CNPS: List 1B.1	Sandy or gravelly soils in chaparral (maritime), cismontane woodland, and coastal scrub. Blooms from February through July.	Does not occur on-site due to a lack of suitable habitat.
Munz's onion <i>Allium munzii</i>	Federal: FE State: ST CNPS: List 1B.1	Clay soils in chaparral, coastal sage scrub, and valley and foothill grasslands. Blooms from June through July.	Does not occur on-site due to a lack of suitable habitat.
Palmer's grapplinghook <i>Harpagonella palmeri</i>	Federal: None State: None CNPS: List 4.2	Chaparral, coastal sage scrub, valley and foothill grassland. Occurring in clay soils. Blooms from March through May	Does not occur on-site due to a lack of suitable habitat.
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	Federal: None State: None CNPS: List 1B.1	Sandy or rocky soils in open habitats of chaparral and coastal sage scrub. Blooms from April through June.	Low potential to occur on-site. Not observed during site assessment.
Paniculate tarplant <i>Deinandra paniculata</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP: Not Covered	Coastal sage scrub, and valley and foothill grasslands (usually vernal mesic).	Low potential to occur on-site. Not observed during site assessment.
Parish's brittle scale <i>Atriplex parishii</i>	Federal: None State: None CNPS: List 1B	Chenopod scrub, playas, vernal pools.	Does not occur on-site due to a lack of suitable habitat.
Prostrate vernal pool navarretia <i>Navarretia prostrata</i>	Federal: None State: None CNPS: List 1B.1	Coastal sage scrub, wetland-riparian. Occurs almost always under natural conditions in wetlands.	Does not occur on-site due to a lack of suitable habitat

Species Name	Status	Habitat Requirements	Potential to Occur On Site
		Blooms from April through July.	
Robinson's pepper grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	Federal: None State: None CNPS: List 1B.2	Chaparral, coastal sage scrub	Does not occur on-site due to a lack of suitable habitat.
Round-leaved filaree <i>California macrophylla</i>	Federal: None State: None CNPS: List 1B.1	Clay soils in cismontane woodland, valley and foothill grassland. Blooms from March through May.	Does not occur on-site due to a lack of suitable habitat.
San Bernardino aster <i>Symphyotrichum defoliatum</i>	Federal: None State: None CNPS: List 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic). Blooms from July through November.	Does not occur on-site due to a lack of suitable habitat.
San Diego ambrosia <i>Ambrosia pumila</i>	Federal: FE State: None CNPS: List 1B.1	Chaparral, coastal sage scrub, valley and foothill grassland, vernal pools. Often in disturbed habitats.	Does not occur on-site due to a lack of suitable habitat.
San Diego button-celery <i>Eryngium aristulatum</i> var. <i>parishii</i>	Federal: FE State: SE CNPS: List 1B.1	Mesic soils in vernal pools, valley and foothill grasslands, coastal sage scrub. Blooms from April through June.	Does not occur on-site due to a lack of suitable habitat.
San Miguel savory <i>Satureja chandleri</i>	Federal: None State: None CNPS: List 1B.2	Rocky, gabbroic, or metavolcanic soils in chaparral, cismontane woodland, coastal sage scrub, riparian woodland, valley and foothill grassland Blooms from March through July.	Does not occur on-site due to a lack of suitable habitat.
Santa Lucia dwarf rush <i>Juncus luciensis</i>	Federal: None State: None CNPS: List 1B.2	Chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, and vernal pools. Blooms from April through July.	Does not occur on-site due to a lack of suitable habitat.
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	Federal: None State: None CNPS: List 1B.1	Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill	Low potential to occur on-site. Not observed during site assessment.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
		grasslands, disturbed habitats. Blooms from April to September.	
Spreading navarretia <i>Navarretia fossalis</i>	Federal: FT State: None CNPS: List 1B.1	Vernal pools, playas, chenopod scrub, marshes and swamps (assorted shallow freshwater). Blooms from April through June.	Does not occur on-site due to a lack of suitable habitat.
Tecate cypress <i>Cupressus forbesii</i>	Federal: None State: None CNPS: List 1B.1	Closed-cone coniferous forest, chaparral. Shrub identifiable year round.	Does not occur on-site due to a lack of suitable habitat.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	Federal: FT State: SE CNPS: List 1B.1	Clay soils in chaparral (openings), cismontane woodland, coastal sage scrub, playas, valley and foothill grassland, vernal pools. Blooms from March through June.	Does not occur on-site due to a lack of suitable habitat.
White rabbit tobacco <i>Pseudognaphalium leucocephalum</i>	Federal: None State: None CNPS: List 2B.2	Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland. Blooms from July through December.	Does not occur on-site due to a lack of suitable habitat.
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Federal: None State: None CNPS: List 2	Alkaline soils in meadows and seeps, marshes and swamps, riparian scrub, vernal pools.	Does not occur on-site due to a lack of suitable habitat.

4.2.1 Narrow Endemic Plants and/or Criteria Area Plants

As noted above, the Project site is not located within the NEPSSA or CAPSSA and is not subject to Planning Area plant species survey requirements specified under the MSHCP Elsinore Area Plan, as it is not located within a Plan Area Subunit (Volume I, Section 3.3.3). Several special-status species listed in the table above, which are known to occur within the vicinity of the Project site, have some potential to occur on-site, including Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), Paniculate tarplant (*Deinandra paniculata*), and Smooth tarplant (*Centromadia pungens* ssp. *laevis*); however, these species were not observed during GLA's site assessment.

4.2.2 Soils Mapping

The Soil Conservation Service's (SCS)⁵ Soil Survey for Western Riverside Area California maps eight soil types for the Project site [Exhibit 6]. The following eight soil types occur (currently or historically) within the overall Project site:

⁵ SCS is now known as the National Resource Conservation Service or NRCS.

Greenfield sandy loam, 2 to 8 percent slopes, eroded 9GyC2)

Soils of the Greenfield series consist of well-drained soils on terraces and alluvial fans. These soils developed in alluvium consisting mainly of granitic materials. The upper 14 inches consist of brown (10YR 5/3) sandy loam when dry and dark brown (10YR 3/3) when moist.

Permeability of this soil is moderate. Runoff is slow to medium and the hazard of erosion is slight to moderate. This soil is used for dry land grain and pasture, for irrigated potatoes, peaches, citrus, alfalfa, truck crops, and for home sites.

Hanford coarse sandy loam, 2 to 8 percent slopes (HcC)

Soils of the Hanford series consist of well-drained and somewhat excessively-drained soils on alluvial fans. These soils developed in alluvium consisting of granitic materials. The upper eight inches consist of grayish-brown (10YR 5/2) coarse sandy loam when dry and very dark grayish-brown (10YR 3/2) when moist. Permeability of this soil is moderately rapid. Runoff is slow to medium and the hazard of erosion is slight to moderate. This soil is used for dry land grain and pasture, for irrigated citrus, alfalfa, potatoes, and for home sites.

Monserate sandy loam, 8 to 15 percent slopes, eroded (MmD2)

Soils of the Monserate series consist of well-drained soils that developed in alluvium consisting of granitic materials. These soils occur on terraces and on old alluvial fans. Included with this soil are small areas that are 36 to 54 inches deep to the silica-cemented pan. The surface layer is often fine sandy loam. Permeability of this soil is moderately rapid. Runoff is medium and the hazard of erosion moderate. This soil is used for dry land grain and pasture, for irrigated citrus, and nonfarm purposes.

Placentia fine sandy loam, 5 to 15 percent slopes (PID)

Soils of the Placentia series consist of moderately well-drained soils on alluvial fans and terraces. These soils developed in alluvium consisting of granitic materials. In a typical profile, the surface layer is brown and pale-brown fine sandy loam and loam. Elevations range from 600 to 2,200 feet. Runoff is medium and the hazard of erosion is moderate. Natural fertility is low. This soil is used for dry land grain and pasture and for nonfarm purposes.

Ramona sandy loam, 0 to 5 percent slopes, severely eroded (RaB3)

Soils of the Ramona series consist of well-drained soils on alluvial fans and terraces. These soils developed in alluvium consisting of granitic materials. Elevations range from 500 to 3,500 feet. In a typical profile, the surface layer is brown sandy loam about 6 to 10 inches thick. Runoff is medium and the hazard of erosion is moderate. Natural fertility is moderate. This soil is used for dry land grain and pasture, for irrigated citrus, alfalfa, potatoes, and for home sites.

Ramona and Buren sandy loams, 15 to 25 percent slopes, severely eroded (RmE3)

These soils occupy convex, dissected, old terraces. About 45 percent of the total acreage is Ramona sandy loam and about 40 percent is Buren sandy loam. The remaining profile generally consists of less eroded soils having a sandy loam surface layer 10 to 16 inches thick. Runoff is rapid and the erosion hazard is high. The soils in this unit are used for dry land pasture and, where the climate is favorable, for irrigated citrus.

Ramona and Buren loams, 5 to 25 percent slopes, severely eroded (RnE3)

These soils occur on convex, dissected terraces. Ramona loam makes up approximately 55 percent of the total acreage and Buren loam makes up approximately 35 percent. The remaining 10 percent consists of small areas of less eroded Ramona and Buren soils. Runoff is rapid and erosion is high. Vegetation primarily consists of annual grasses, forbs, chamise, salvia, and flat-top buckwheat. These soils are used for dry land pasture and, in areas of favorable climate, for irrigated citrus.

San Timoteo loam, 8 to 25 percent slopes, eroded (SmE2)

This rolling to hilly soil occurs on dissected marine deposits. Elevations typically range from 1,200 to 2,500 feet. In a typical profile, the surface layer is pale-brown and light-gray loam about 14 inches thick. Permeability of this soil is moderate. Runoff is medium and the hazard of erosion is moderate. Natural fertility is moderate. The San Timoteo soil is used for dry land pasture and grain, as well as a source of water.

None of these soil units are identified as hydric in the SCS's publication, Hydric Soils of the United States⁶. None of these soil units are identified as hydric in the SCS's Hydric Soils Lists for Western Riverside County; however the Hydric Soils List for Western Riverside County does identify Placentia fine sandy loam, 5 to 15 percent slopes (PID) as hydric when occurring in hydric depressions if the area is frequently ponded for long durations or very long durations during the growing season.

4.3 Special-Status Animals

No special-status animals were detected within the Project site, although a number of special-status animals have the potential to occur on site.

Table 4-4 provides a list of special-status animals evaluated for the Project Site, including MSHCP Covered Species with additional survey requirements. Species were evaluated based on a number of factors, including: 1) species identified by the CNDDDB as occurring (either currently or historically) on or in the vicinity of the property, 2) MSHCP species survey areas for which the property occurs within, 3) planning species identified by the Elsinore Area Plan, and

⁶ United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

4) any other special-status animals that are known to occur within the vicinity of the property, or for which potentially suitable habitat occurs on site.

Table 4-4. Special-Status Animals Evaluated for the Project Site

Federal (FESA)

FE - Federally Endangered
 FT - Federally Threatened
 FSC - Federal Species of Concern
 BCC – Birds of Conservation Concern

State (CESA)

SE - State Endangered
 ST - State Threatened

CDFW

SSC - California Species of Special Concern
 CFP - Fully Protected
 WL – Watch List

Species Name	Status	Habitat Requirements	Occurrence Probability
Fish			
Arroyo chub <i>Gila orcutti</i>	Federal: None State: None CDFG: CSC MSHCP: Covered	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.	Does not occur on-site due to a lack of suitable habitat.
Amphibians			
Arroyo toad <i>Anaxyrus californicus</i>	Federal: FE State: SSC MSHCP: Covered	Breed, forage, and/or aestivate in aquatic habitats, riparian, coastal sage scrub, oak, and chaparral habitats. Breeding pools must be open and shallow with minimal current, and with a sand or pea gravel substrate overlain with sand or flocculent silt. Adjacent banks with sandy or gravelly terraces and very little herbaceous cover for adult and juvenile foraging areas, within a moderate riparian canopy of cottonwood, willow, or oak.	Does not occur on-site due to a lack of suitable habitat.
California red-legged frog <i>Rana draytonii</i>	Federal: FT State: SSC MSHCP: Covered	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	Does not occur on-site due to a lack of suitable habitat

Species Name	Status	Habitat Requirements	Occurrence Probability
California newt <i>Taricha torosa</i>	Federal: None State: SSC MSHCP: Covered	Found in wet forests, oak forests, chaparral, and rolling grasslands. In southern California, drier chaparral, oak woodland, and grasslands are used.	Does not occur on-site due to a lack of suitable habitat
Western spadefoot <i>Spea hammondi</i>	Federal: None State: SSC MSHCP: Covered	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Does not occur on-site due to a lack of suitable habitat.
Reptiles			
Blainville's horned lizard <i>Phrynosoma blainvillii</i>	Federal: None State: SSC MSHCP: Covered	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Not expected to occur on-site due to a lack of suitable habitat.
Coast patch-nosed snake <i>Salvadora hexalepis virgulata</i>	Federal: None State: SSC MSHCP: Not Covered	Occurs in coastal chaparral, desert scrub, washes, sandy flats, and rocky areas.	Not expected to occur on-site due to a lack of suitable habitat.
Southern California legless lizard <i>Anniella stebbinsi</i>	Federal: None State: SSC MSHCP: Not Covered	Occurs primarily in areas with sandy or loose organic soil, or where there is plenty of leaf litter. Associated with coastal sage scrub, chaparral, coastal dunes, valley/foothill grasslands, oak woodlands, and pine forests.	Not expected to occur on-site due to a lack of suitable habitat.
Red diamond rattlesnake <i>Crotalus ruber</i>	Federal: None State: SSC MSHCP: Covered	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	Not expected to occur on-site due to a lack of suitable habitat.
San Bernardino ring-necked snake <i>Diadophis punctatus modestus</i>	Federal: None State: None MSHCP: Not Covered	Moist habitats including woodlands, forest, grasslands, chaparral, farms, and gardens.	Not expected to occur on-site due to a lack of suitable habitat.
Rosy boa <i>Charina trivirgata</i>	Federal: None State: SSC MSHCP: Not Covered	Coastal sage scrub, chaparral, or mixed habitats, commonly with rocky soils and outcrops. Also in oak woodlands and	Not expected to occur on-site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence Probability
		riparian areas bordering scrub habitats.	
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	Federal: None State: SSC MSHCP: Covered	Coastal sage scrub, chaparral, non-native grassland, oak woodland, and juniper woodland.	Not expected to occur on-site due to a lack of suitable habitat.
Pacific pond turtle <i>Actinemys marmorata</i>	Federal: None State: SSC MSHCP: Covered	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	Does not occur on-site due to a lack of suitable habitat.
Two-striped garter snake <i>Thamnophis hammondi</i>	Federal: None State: SSC MSHCP: Not Covered	Aquatic snake typically associated with wetland habitats such as streams, creeks, and pools.	Does not occur on-site due to a lack of suitable habitat.
Birds			
Bell's sage sparrow <i>Amphispiza belli belli</i>	Federal: FSC State: SSC MSHCP: Covered	Chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains.	Not expected to occur on-site due to a lack of suitable habitat.
Burrowing owl <i>Athene cunicularia</i>	Federal: None State: SSC MSHCP: Covered	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Low to moderate potential to occur on-site. Not observed during site assessment; however, a 30-day pre-construction survey is recommended to document absence from the site.

Species Name	Status	Habitat Requirements	Occurrence Probability
California horned lark <i>Eremophila alpestris actia</i>	Federal: None State: None MSHCP: Covered	Occupies a variety of open habitats, usually where trees and large shrubs are absent.	Low to moderate potential to occur on-site
Coastal California gnatcatcher <i>Polioptila californica californica</i>	Federal: FT State: SSC MSHCP: Covered	Low elevation coastal sage scrub and coastal bluff scrub.	Does not occur on-site due to a lack of suitable habitat
Cooper's hawk <i>Accipiter cooperi</i>	Federal: None State: None MSHCP: Covered	Primarily occurs in riparian areas and oak woodlands, most commonly in montane canyons. Known to use urban areas, occupying trees among residential and commercial.	Moderate to high potential to occur on-site.
Ferruginous hawk (wintering) <i>Buteo regalis</i>	Federal: FSC State: SSC MSHCP: Covered	Open, dry country, perching on trees, posts, and mounds. In California, wintering habitat consists of open terrain and grasslands of the plains and foothills.	Moderate potential to occur on-site.
Golden eagle <i>Aquila chrysaetos</i>	Federal: None State: SSC MSHCP: Covered	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Does not occur on-site due to a lack of suitable habitat.
Least Bell's vireo <i>Vireo bellii pusillus</i>	Federal: FE State: SE MSHCP: Covered	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Low to Moderate potential to occur on-site. Not detected during focused surveys.
Loggerhead shrike <i>Lanius ludovicianus</i>	Federal: None State: SSC MSHCP: Covered	Forages over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural	Moderate potential to occur on-site

Species Name	Status	Habitat Requirements	Occurrence Probability
		fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	
Northern harrier (nesting) <i>Circus cyaneus</i>	Federal: None State: None CDFW: SSC MSHCP: Covered	A variety of habitats, including open wetlands, grasslands, wet pasture, old fields, dry uplands, and croplands.	Moderate potential to occur on-site
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	Federal: None State: None MSHCP: Covered	Grass covered hillsides, coastal sage scrub, and chaparral.	Not expected to occur on-site due to a lack of suitable habitat.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	Federal: FE State: SE MSHCP: Covered	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Not expected to occur on-site due to a lack of suitable habitat
White-tailed kite (nesting) <i>Elanus leucurus</i>	Federal: None State: CFP MSHCP: Covered	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	Does not occur on-site due to a lack of suitable habitat.
Yellow-breasted chat <i>Icteria virens</i>	Federal: None State: SSC MSHCP: Covered	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Moderate potential to occur on-site. Not observed during site assessment.
Yellow warbler <i>Setophaga petechia</i>	Federal: None State: SSC MSHCP: Covered	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Moderate potential to occur on-site.
Mammals			

Species Name	Status	Habitat Requirements	Occurrence Probability
Dulzura pocket mouse <i>Chaetodipus californicus femoralis</i>	Federal: None State: None CDFG: CSC MSHCP: Not Covered	Coastal scrub, grassland, and chaparral, especially at grass-chaparral edges	Not expected to occur on-site due to a lack of suitable habitat
Southern grasshopper mouse <i>Onychomys torridus ramona</i>	Federal: None State: SSC MSHCP: Not Covered	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	Does not occur on-site due to a lack of suitable habitat.
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	Federal: None State: SSC MSHCP: Covered	Fine, sandy soils in coastal sage scrub and grasslands.	Not expected to occur on-site due to a lack of suitable habitat and the disturbed nature of the Project site.
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	Federal: None State: SSC MSHCP: Covered	Coastal sage scrub, sage scrub/grassland ecotones, and chaparral.	Not expected to occur on-site due to a lack of suitable habitat.
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	Federal: None State: SSC MSHCP: Covered	Occupies a variety of habitats, but is most common among shortgrass habitats. Also occurs in sage scrub, but needs open habitats.	Moderate potential to occur on-site
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	Federal: None State: SSC MSHCP: Covered	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	Low potential to occur on-site.
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	Federal: FE State: ST MSHCP: Covered	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	Not expected to occur on-site due to a lack of suitable habitat.
Western mastiff bat <i>Eumops perotis californicus</i>	Federal: None State: SSC MSHCP: Not Covered	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Does not occur on-site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence Probability
Western yellow bat <i>Lasiurus xanthinus</i>	Federal: None State: SSC MSHCP: Not Covered	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Does not occur on-site due to a lack of suitable habitat.
Yuma Myotis <i>Myotis yumanensis</i>	Federal: None State: None CDFG: CSC MSHCP: Not Covered	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	Does not occur on-site due to a lack of suitable habitat.

4.3.1 Special-Status Animals Observed at the Project Site

No special status animal species were observed on-site during habitat assessments or other surveys. However, several species have some potential to occur on-site and are discussed in detail below.

4.3.2 Special-Status Animals not Observed but with a Potential to Occur

BIRDS

Burrowing Owl (*Athene cunicularia hypugaea*) – The burrowing owl is designated as a CDFW California Species of Special Concern at burrow sites and some wintering sites. The burrowing owl breeds from southern interior British Columbia (nearly extirpated), southern Alberta, southern Saskatchewan (extirpated from a portion of the province), and southern Manitoba (extirpated from a portion of the province), south through eastern Washington, central Oregon, and California to Baja California, east to western Minnesota, northwestern Iowa, eastern Nebraska, central Kansas, Oklahoma, eastern Texas, and Louisiana, and south to central Mexico. The winter range is much the same as the breeding range, except that most burrowing owls apparently vacate the northern areas of the Great Plains and Great Basin (Haug, *et al.* 1993). The burrowing owl winters south regularly to El Salvador (*e.g.*, AOU 1998).

Historical changes in the distribution of the burrowing owl include the recent extirpation from British Columbia for which the last confirmed sighting was in 1979. Elsewhere in Canada and the north-central U.S., the range has contracted slightly southward, westward, and eastward (Haug *et al.* 1993). In Florida, the range has expanded northward, nearly to Georgia since the 1950s (Courser 1979).

Zeiner *et al.* (1990) describe the distribution, abundance, and seasonality of the burrowing owl within California as follows. It is a year-long resident formerly common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains. It is present on the larger offshore islands and is found as high as 1,600 m (5,300 ft.) in Lassen

County. In California, burrowing owls are restricted to the central valley extending from Redding south to the Grapevine, east through the Mojave Desert and west to San Jose, the San Francisco Bay area, the outer coastal foothills area which extend from Monterey south to San Diego and the Sonoran desert (Grinnell and Miller 1944). It is a resident in the open areas of the lowlands over much of the Southern California region (Garrett and Dunn 1981).

The burrowing owl occurs in shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-long resident (Haug, *et al.* 1993). They may also use golf courses, cemeteries, road allowances within cities, airports, vacant lots in residential areas and university campuses, fairgrounds, abandoned buildings, and irrigation ditches (Haug, *et al.* 1993). They may also occur in forb and open shrub stages of pinyon-juniper and ponderosa pine habitats (Zeiner, *et al.* 1990). They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover. They may also dig their own burrow in soft, friable soil (as found in Florida) and may also use pipes, culverts, and nest boxes where burrows are scarce (Robertson 1929). The mammal burrows are modified and enlarged. One burrow is typically selected for use as the nest, however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl.

The Project site has low to moderate potential to support burrowing owl, particularly in the NNG fields which contain suitable burrows. California ground squirrel (*Otospermophilus beecheyi*) activity is present on-site.

California Horned Lark (*Eremophila alpestris actia*) - The California horned lark does not have a federal or state designation, however this species is considered locally rare. The horned lark has a holarctic distribution, ranging from the Arctic south to central Asia and Mexico with outlying populations in Morocco and Colombia. In general, the northernmost populations are migratory, moving south during the winter into remaining areas of the breeding range. There are also southward movements into areas south of the breeding range, particularly in the southeastern United States (Beason 1995).

The California horned lark breeds and resides in the coastal region of California from Sonoma County southeast to the United States/Mexican border, including most of the San Joaquin Valley, and eastward to the foothills of the Sierra Nevada (Grinnell and Miller 1944; AOU 1998). Zeiner, *et al.* (1990) summarize the distribution, abundance, and seasonality as follows. It is a common to abundant resident in a variety of open habitats, usually where trees and large shrubs are absent. It is found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above tree line. It is less common in mountain regions, on the north coast (McCaskie, *et al.* 1979), and in coniferous or chaparral habitats. It mostly leaves the mountains in the winter, but small flocks may remain to winter on windswept, snow-free areas at high elevations in the Sierra Nevada (Gaines 1977). In winter, flocks in desert lowlands and other areas are augmented by winter visitants, many migrating from outside the state (Garrett and Dunn 1981). It is a resident on the Channel Islands (Garrett and Dunn 1981). It is a year-long resident within the state. After breeding, it becomes very gregarious; it often forms large flocks

that forage and roost together. Migrants from outside of California join these wintering flocks, especially in the southeastern desert region of the state. Migrant status on the Farallon Islands indicates a latitudinal movement along the coast as well (DeSante and Ainley 1980).

The California horned lark is a common to abundant resident in a variety of open habitats, usually where trees and large shrubs are absent (Zeiner, *et al.* 1990). In the Midwest, the species has been characterized as the most abundant species in row-crop fields (Best, *et al.* 1998). Range-wide, California horned larks breed in level or gently sloping shortgrass prairie, montane meadows, "bald" hills, open coastal plains, fallow grain fields, and alkali flats (Grinnell and Miller 1944). In nonagricultural lands, it typically inhabits areas of short vegetation or bare ground, including shortgrass prairie, deserts, brushy flats, and alpine habitat. In shrubsteppe habitats, it occupies areas characterized by low vegetation. Within Southern California, California horned larks breed primarily in open fields, (short) grasslands, and rangelands (Garrett and Dunn 1981; Hamilton and Willick 1996). Grasses, shrubs, forbs, rocks, litter, clods of soil, and other surface irregularities provide cover.

There is low to moderate potential for the California horned-lark to occur on-site within areas of non-native grasslands located throughout the Project site.

Cooper's Hawk (*Accipiter cooperii*) – The Cooper's hawk does not have a federal or state designation, however this species is considered locally rare when nesting. Cooper's hawks breed from British Columbia eastward to Nova Scotia and southward to northern Mexico and Florida (AOU 1998). Specifically, it nests from southern British Columbia, northwestern Montana, Wyoming, eastern North Dakota, southern Manitoba, western Ontario, northern Michigan, southern Ontario, Southern Quebec, Maine, and Nova Scotia, south to Baja California, south-central Texas, Louisiana, central Mississippi, central Alabama, and central Florida (Terres 1980; Reynolds 1975).

The species winters from British Columbia eastward to New England and southward primarily to Honduras (AOU 1998). The wintering range includes the area from Washington, Colorado, Nebraska, Iowa, southern Wisconsin, southern Minnesota, southern Michigan, southern Ontario, New York, southern Maine and Massachusetts south through the rest of the United States to Costa Rica (Terres 1980). The Cooper's hawk makes up a large part of the great fall flights of hawks that pass over the United States in September, they fly high and seem to prefer to fly when the wind is from the northwest (Bent 1937).

In California, the Cooper's hawk is a breeding resident throughout most of the wooded portion of the state. It breeds in the southern Sierra Nevada foothills, New York Mountains, Owens Valley, and other local areas in Southern California. Its breeding range is from sea level to above 2,700 m (9,000 ft.). This species was once considered a common nester throughout California (Grinnell and Miller 1944). In Southern California, the species is present year-round nearly throughout the state, except for the Colorado River and desert areas, where the species no longer breeds (Garrett and Dunn 1981). Although the Cooper's hawk breeds in Southern California and has a year-round resident population, it also occurs in the region as a spring and fall migrant and as a winter resident (Garrett and Dunn 1981).

Throughout its range, the Cooper's hawk breeds in deciduous, mixed, and evergreen forests and deciduous stands of riparian habitat (Rosenfield and Bielefeldt 1993). The Cooper's hawk breeds primarily in riparian areas and oak woodlands and apparently is most common in montane canyons (Garrett and Dunn 1981; Hamilton and Willick 1996). It frequents landscapes where wooded areas occur in patches and groves and it often uses patchy woodlands and edges with snags for perching (Beebe 1974). This species is seldom found in areas without dense tree stands or patchy woodland habitat (Zeiner, *et al.* 1990). Within the range in California, it most frequently uses dense stands of live oak, riparian deciduous or other forest habitats near water (Zeiner, *et al.* 1990). Dense stands with moderate crown-depths are usually used for nesting (Zeiner, *et al.* 1990). The Cooper's hawk tends to nest in stands with lower densities of taller and larger trees and a greater proportion of hardwood cover than conifer species when compared to other accipiters (Trexel, *et al.* 1999). Migrant and wintering birds are generally more catholic in their choice of habitats and may be found with regularity in developed (*e.g.*, suburban) areas. They hunt in broken woodland and habitat edges, catching predominantly avian prey in the air, on the ground, and in vegetation.

There is moderate to high potential for this species to forage on-site in NNG and disturbed areas.

Ferruginous Hawk (*Buteo regalis*) - The ferruginous hawk does not have a federal or state designation, however this species is considered locally rare when wintering. The ferruginous hawk breeds from British Columbia locally eastward to southwestern Manitoba generally southward to Nevada and Texas. The species winters from central and southern parts of the breeding range southward to Baja California and northern mainland Mexico (AOU 1998). Historically, the ferruginous hawk wintered in the Los Angeles area. Christmas Bird Count data show increases in birds wintering in the eastern portion of the range and in California during the 1980s owing to loss of wintering habitat in the Great Plains (Bechard and Schmutz 1995).

It does not breed in Southern California but winters there in interior and coastal areas (Garrett and Dunn 1981). Zeiner, *et al.* (1990) describes the distribution, abundance, and seasonality of the ferruginous hawk as follows. It is an uncommon winter resident and migrant at lower elevations and open grasslands in the Modoc Plateau, Central Valley, and Coast Ranges. The ferruginous hawk is a fairly common winter resident of grasslands and agricultural areas in southwestern California (Garrett and Dunn 1981). It is casual in the northeast in summer. It is migratory; it generally arrives in California in September and departs by mid-April.

The ferruginous hawk is an occupant of open dry country and will perch on badger mounds or hillocks when trees or posts are not available. It requires large, open tracts of grasslands, sparse shrub, or desert habitats with elevated structures for nesting. Its wintering habitat is similar in being open and it may also occur in areas of mixed grassy glades and pineries (Brown and Amadon 1968).

Range-wide, within California, ferruginous hawks winter in open terrain and grasslands of plains and foothills (Grinnell and Miller 1944). Within Southern California, ferruginous hawks typically winter in open fields, grasslands, and agricultural areas (Garrett and Dunn 1981). It frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats (Zeiner, *et al.* 1990). It searches for prey from low flights over

open, treeless areas, and glides to intercept prey on the ground. It also hovers, and hunts from high mound perches. The ferruginous hawk roosts in open areas, usually in a lone tree or utility poles. It is tolerant of heat; the nest is often unshaded. There are no breeding records from California. The ferruginous hawk nests in foothills or prairies; on low cliffs, buttes, cut banks, shrubs, trees, or in other elevated structures (Zeiner, *et al.* 1990).

There is a moderate potential for the ferruginous hawk to forage on-site in the gently sloping areas containing non-native grasslands and developed areas; however, the hawk is not expected to nest on-site because the Project is out of the species nesting range.

Least Bell's Vireo (*Vireo bellii pusillus*) – The least Bell's vireo is designated as a federally and state endangered species. The Bell's vireo, consisting of four subspecies, has a widespread occurrence in central and southwestern U.S. and northern Mexico as a breeding bird. The winter range is not well known. Generally it appears to winter from southern Baja and southern Sonora south along the west coast of Mexico and Central America to the Honduras and casually to northern Nicaragua.

The least Bell's vireo occupies a more restricted nesting habitat than the other subspecies of Bell's vireo as summarized in USFWS (1986). Least Bell's vireos primarily occupy riverine riparian habitats that typically feature dense cover within 1-2 meters of the ground and a dense, stratified canopy. It inhabits low, dense riparian growth along water or along dry parts of intermittent streams. Typically it is associated with southern willow scrub, cottonwood forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, wild blackberry, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses below 1,500 feet elevation in the interior (USFWS 1986; Small 1994). In the coastal portions of Southern California, the least Bell's vireo occurs in willows and other low, dense valley foothill riparian habitat and lower portions of canyons and along the western edge of the deserts in desert riparian habitat.

The least Bell's vireo primarily nests in small, remnant segments of vegetation typically dominated by willows and mule fat but may also use a variety of shrubs, trees, and vines. The birds forage in riparian and adjoining chaparral or scrub habitat (Salata 1983). Nests are typically built within one meter of the ground in the fork of willows, wild rose (*Rosa californica*), mule fat (*Baccharis salicifolia*), or other understory vegetation (Franzreb 1989). Cover surrounding nests is moderately open mid-story with an over-story of willow, cottonwood, sycamore, or oak. Crown cover is usually more than 50 percent and contains occasional small openings. The most critical structural component to least Bell's vireo breeding habitat is a dense shrub layer at 2 to 10 feet above the ground (Goldwasser 1981; Franzreb 1989).

There is a low to moderate potential for the LBV to occupy the Project site within the riparian habitat associated with Drainage feature 1 in the northern portion of the site; however, the LBV was not detected during focused surveys conducted in 2013.

Loggerhead Shrike (*Lanius ludovicianus*) - The loggerhead shrike is designated as a CDFW California Species of Special Concern when nesting. Throughout most of the southern portion of its range, the loggerhead shrike is a resident except as described by Terres (1980) and Yosef

(1996). The northern populations are migratory (Yosef 1996). The species nests from southern Canada through the Great Basin and California, to Baja California, Mexico and the Gulf coast (Terres 1980). Specifically, in western North America, the species breeds from southeastern Alberta, western Montana, northwest Wyoming, southern Idaho, south-central Washington, eastern Oregon, and California south to southern Baja California.

Wintering grounds are found in the southern portion of the breeding range and further south into Mexico (Terres 1980). The northern populations are migratory and most winter from northern California, northern Nevada, northern Utah, central Colorado, southern and eastern Kansas, western Missouri, northern Kentucky, and northern Virginia south through the southern United States and in Mexico south throughout the breeding range (Yosef 1996).

In California, the species is found throughout the foothills and lowlands of California as a resident (Zeiner *et al.* 1990). Winter migrants are found coastally, north of Mendocino county (Zeiner *et al.* 1990). The loggerhead shrike seems to have always been most abundant in the southern and western portions of its range (Cade and Woods 1997).

The loggerhead shrike is known to forage over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs (Unitt 1984; Yosef 1996). Individuals like to perch on posts, utility lines and often use the edges of denser habitats (Zeiner, *et al.* 1990). In some parts of its range, pasture lands have been shown to be a major habitat type for this species, especially during the winter season (Yosef 1996) and breeding pairs appear to settle near isolated trees or large shrubs (Yosef 1994). The highest density occurs in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats; it occurs only rarely in heavily urbanized areas, but is often found in open cropland (Zeiner *et al.* 1990). In many regions, indices of the loggerhead shrike abundance correlate with the percentage of pastureland available (Gawlik and Bildstein 1993). In the Mojave Desert, the loggerhead shrike was observed more often in urban settings than other raptor species occurring there (Knight *et al.* 1999). In the Midwest, the habitat use of the shrike is defined as savannah habitat at the landscape scale but at the fine-scale, sites used by shrikes were characterized by tall, sparse, structurally heterogeneous herbaceous vegetation with high standing dead plant cover and low litter cover (Michaels and Cully 1998). The tree and shrub density did not differ between sites used and not used by shrikes (Michaels and Cully 1998).

There is a moderate potential for the loggerhead shrike to forage on-site within the gently sloping areas of non-native grasslands and disturbed ruderal areas; however, the shrike is not expected to nest on-site due to a lack of suitable habitat.

Northern Harrier (*Circus cyaneus*) - The northern harrier is designated as a CDFW California Species of Special Concern when nesting. The northern harrier occurs as a breeding bird across the northern United States and Canada, throughout most of California and the central portion of the United States south to Texas. It is absent from desert regions as a breeding bird and the southeastern parts of the United States (Bildstein 1988). Specifically, it occurs as a breeding bird

from northern Alaska and Canada south to the northern Baja Peninsula east to southern Nevada, southern Utah, northern New Mexico, northern Texas, southern Kansas, central Iowa, central Wisconsin, southern Michigan, northern Ohio, southern Pennsylvania, southeastern Virginia and probably in northeastern North Carolina (MacWhirter and Bildstein 1996). It appears to be most numerous in the northern great plains from the Dakotas and Montana into southern Canada (Bildstein 1988). During the winter, the northern harrier occurs throughout southern Canada and all of the United States (Bildstein 1988). The usual southern limit for wintering is Panama (MacWhirter and Bildstein 1996).

In California, the northern harrier occurs from annual grassland up to lodgepole pine and alpine meadow habitats, as high as 3,000 meters (10,000 feet) (Garrett and Dunn 1981). It breeds from sea level to 1,700 meters (0-5,700 feet) in the Central Valley and Sierra Nevada, and up to 800 meters (3,600 feet) in northeastern California. It is a permanent resident of the northeastern plateau and coastal areas; it is a less common resident of the Central Valley. It is a widespread winter resident and migrant in suitable habitat. Some individuals migrate into California; others migrate through to Central America or northern South America (Garrett and Dunn 1981).

The northern harrier frequents open wetlands, wet and lightly grazed pastures, old fields, dry uplands, upland prairies, mesic grasslands, drained marshlands, croplands, shrub-steppe, meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands and is seldom found in wooded areas (Bent 1937; MacWhirter and Bildstein 1996). It uses tall grasses and forbs in wetlands, or at wetland/field borders for cover; it roosts on the ground (Bent 1937). The home range usually includes fresh water. It is mostly found in flat, or hummocky, open areas of tall, dense grasses, moist or dry shrubs, and edges for nesting, cover, and feeding (Bent 1937). While it seems to prefer to nest in the vicinity of marshes, rivers, or ponds, it may be found nesting in grassy valleys or on grass and sagebrush flats many miles from the nearest water (Call 1978). In a shrub-steppe habitat, the northern harrier was determined to use riparian and cultivated habitats disproportionately (Martin 1987). In general, it prefers saltwater marshes, wet meadows, sloughs, and bogs for its nesting and foraging habitat and if these are absent, it hunts open fields and is frequently observed hunting over agricultural areas (Call 1978). The California population has decreased in recent decades (Grinnell and Miller 1944, Remsen 1978), but can be locally abundant where suitable habitat remains free of disturbance, especially from intensive agriculture. In both wetland and upland areas, the densest populations typically are associated with large tracts of undisturbed habitats dominated by thick vegetative growth (MacWhirter and Bildstein 1996).

There is moderate potential for the northern harrier to utilize the site for foraging; however, the Project site is not within the bird's nesting range and is not expected to nest on-site.

Yellow-Breasted Chat (*Icteria virens*) - The yellow-breasted chat is designated as a CDFG California Species of Special Concern when nesting. Yellow-breasted chats as a whole summer and nest from British Columbia eastward to New Hampshire, and southward to Baja California and northern, mainland Mexico. The species presumably migrates throughout much of North America and winters primarily from northern Mexico to Panama (AOU 1998).

Zeiner, *et al.* (1990) summarize the distribution, abundance, and seasonality of the yellow-breasted chat within California as follows. The yellow-breasted chat is an uncommon summer resident and migrant in coastal California and in the foothills of the Sierra Nevada. The chat is found up to about 1,450 meters (4,800 ft.) in valley foothill riparian, and up to 2,050 meters (6,500 ft.) east of the Sierra Nevada in desert riparian habitats (Gaines 1977, DeSante and Ainley 1980, Garrett and Dunn 1981). The yellow-breasted chat is uncommon along the coast of northern California and occurs only locally south of Mendocino County (McCaskie, *et al.* 1979). In Southern California, the species breeds locally on the coast and very locally inland and at lower elevations nearly throughout the region (Garrett and Dunn 1981).

In migration, the yellow-breasted chat may be found in lower elevations of mountains in riparian habitat (McCaskie, *et al.* 1979). It usually arrives in April and departs by late September for the wintering grounds in Mexico and Guatemala. The species may also wander upslope during the post-breeding season (Gaines 1977). There are a few late fall and winter records of the yellow-breasted chat, mostly from Southern California. Migrants sometimes pass through lower elevations in mountains. Migrants of the species are encountered only rarely to uncommonly away from breeding centers, and there are no confirmed mid-winter records in the region (Garrett and Dunn 1981).

Yellow-breasted chats as a whole may nest in second-growth, riparian thickets and brush (AOU 1998). By contrast, yellow-breasted chats in Southern California are primarily found in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Grinnell and Miller (1944) suggested that the plant cover in breeding habitat must be dense to provide shade and concealment.

There is moderate potential for this species to occur within the Project site in the riparian habitat associated with Drainage 1 located in the northern portion of the site.

Yellow Warbler (*Dendroica petechia brewsteri*) - The yellow warbler is designated as a CDFG California Species of Special Concern when nesting. Yellow warblers as a whole nest from northern Alaska eastward to Newfoundland and southward to northern Baja California and Georgia. The species migrates throughout much of North America and winters from Southern California, Arizona and the Gulf Coast southward to central South America (AOU 1998).

Zeiner, *et al.* (1990) summarizes the distribution, abundance, and seasonality in California as follows. The yellow warbler is an uncommon to common, summer resident in the north; and locally common in the south. It breeds in riparian woodlands southward from the northern border of the state generally west of the Sierra Nevada to the coastal slopes of Southern California and from coastal and desert lowlands up to 2,500 meters (8,000 feet) in the Sierra Nevada and other montane chaparral and forest habitats (Grinnell and Miller 1944).

Yellow warblers in Southern California breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland (Garrett and Dunn 1981). The yellow warbler is found at elevations from 100 meters to 2,700 meters (330 to 8,900 feet) within riparian habitat and at

higher elevations along watercourses with riparian growth (Lowther *et al.* 1999). It usually arrives in California in April, and generally has migrated out of the area by October.

There is moderate potential for this species to occur within the Project site in the riparian habitat associated with Drainage 1 located in the northern portion of the site.

MAMMALS

San Diego Black-Tailed Jackrabbit (*Lepus californicus bennettii*) – The San Diego black-tailed jackrabbit is designated as a CDFG Species of Special Concern. The black-tailed jackrabbit is widespread throughout the western United States, west from central Missouri and Arkansas, and only is absent from the higher elevations of the Rocky Mountains, the Sierra Nevada, and the Cascades (Hall 1981). It ranges south into central Mexico. The subspecies *L.c. bennettii*, which is one of nine subspecies of black-tailed-jackrabbit (Dunn *et al.* 1982), is confined to coastal Southern California, with marginal records being Mt. Piños, Arroyo Seco, Pasadena, San Felipe Valley, and Jacumba (Hall 1981).

The black-tailed-jackrabbit occupies many diverse habitats, but primarily is found in arid regions supporting short-grass habitats. Jackrabbits typically are not found in high grass or dense brush where it is difficult for them to move, and the openness of open scrub habitat probably is preferred over dense chaparral. Jackrabbits are common in grasslands that are overgrazed by cattle and they are well adapted to using low-intensity agricultural habitats (Lechleitner 1959). In fact, to a point, drought and overgrazing may create better habitat for black-tailed-jackrabbits (Bronson and Tiemeir 1959). The openness of such habitat allows jackrabbits to escape predators and humans by fast, often long-distance sprints. Black-tailed jackrabbits are found in most areas that support annual grassland, Riversidean sage scrub, alluvial fan sage scrub, Great Basin sagebrush, chaparral, disturbed habitat, and agriculture. Jackrabbits also are observed in southern willow scrub and juniper woodland (MWD and RCHCA 1995). Black-tailed-jackrabbits typically do not burrow, but take shelter at the base of shrubs in shallow depressions called forms. However, during the summer in the Mojave Desert, jackrabbits may use desert tortoise (*Gopherus agassizii*) burrows to escape the heat (Costa *et al.* 1976). Smith (1990) observed jackrabbits using burrows in the winter in northern Utah, concluding that it was an anti-predator strategy.

Black-tailed-jackrabbits locations include a broad variety of vegetation and land cover mapping types. The natural habitats with the most frequent occurrences of black-tailed jackrabbits are grassland (including alkali playa), scrubs (including coastal sage scrub, Riversidean sage scrub, alluvial fan sage scrub, disturbed alluvial, big sagebrush scrub, and semi-desert succulent scrub), and chaparral (including red shank chaparral), although it is likely that observations in chaparral were in openings or along trails and roads. Other native vegetation communities with jackrabbit occurrences are oak woodland (coast live oak, Engelmann oak) and southern cottonwood/willow riparian. Many occurrences are in non-natural areas, including agriculture (dairy/livestock, field croplands, and grove/orchard) and residential/urban/exotic.

San Diego Desert Woodrat (*Neotoma lepida intermedia*) – The San Diego desert woodrat is designated as a CDFG Species of Special Concern. The desert woodrat (*N. lepida*) is widespread

throughout central and Southern California and the Great Basin, Mojave, and Colorado deserts. Marginal records for the San Diego desert woodrat (*N. l. intermedia*) in the United States include San Luis Obispo; San Fernando; San Bernardino Mountains; Redlands; and Julian (Hall 1981).

Desert woodrats are found in a variety of shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth (Bleich 1973; Bleich and Schwartz 1975; Brown *et al.* 1972; Cameron and Rainey 1972; Thompson 1982). Bleich and Schwartz (1975) recorded 81 percent of captures of woodrats in rocky areas on the Naval Weapons Station, Fallbrook Annex in northern San Diego County, substantiating other work on habitat selection by this species (Cameron and Rainey 1972; Thompson 1982). Desert woodrats are noted for their flexibility or plasticity in utilizing various materials, such as twigs and other debris (sticks, rocks, dung), to build elaborate dens or "middens," which typically include several chambers for nesting and food, as well as several entrances. Middens may be used by several generations of woodrats (Cameron and Rainey 1972). Woodrats often are associated with cholla cactus which they use for water and dens or boulders and boulder piles (Thompson 1982). Thus, their distribution is a consequence of habitat structure and heterogeneity (*i.e.*, patchiness). Thompson (1982) found that woodrats at Joshua Tree in the Mojave Desert actively avoid open areas. They also inhabit pinyon-juniper hillsides at lower elevations and juniper woodland (MWD and RCHCA 1995). The desert woodrat often is associated with large cactus patches, and within coastal sage scrub communities, it almost is invariably associated with prickly pear (*Opuntia occidentalis*). It also is found in rocky outcroppings and boulder-covered hillsides in chaparral or oak woodlands (MWD and RCHCA 1995). In chaparral, rock dens usually are located near primary food sources to minimize travel time and exposure to predators. In the Mojave Desert, dens comprised of cholla were preferentially inhabited compared to yucca, and were occupied for longer periods (Smith 1995).

The most common natural habitats for records are chaparral, coastal sage scrub (including Riversidean sage scrub and Diegan coastal sage scrub) and grassland. Where substantial patches of these habitats are still intact, desert woodrats should still occur.

4.4 Nesting Birds

The Project Site contains trees, shrubs, and herbaceous vegetation with the potential to support nesting birds. The Migratory Bird Treaty Act (MBTA) and California Fish and Game Code prohibit impacts to nesting birds.⁷

4.5 Raptor Foraging Habitat

The Project site consists mostly of low-sloping disturbed areas comprised of fields with non-native grasses and other low height ruderal forb species, which are suitable foraging habitats for numerous raptor species. No raptors were observed nesting on-site during surveys; however,

⁷ The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R.21). In addition, sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.

trees are present on-site with some potential to support nesting raptors. No special-status raptor species were observed during field visits; however, there is some potential for special-status raptors to utilize the Project site as foraging grounds, including northern harrier (*Circus cyaneus*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), and merlin (*Falco columbarius*). Raptors observed foraging on-site include turkey vulture (*Cathartes aura*) and red-tailed hawk (*Buteo jamaicensis*).

4.6 MSHCP Riparian/Riverine Areas and Vernal Pools

Section 6.1.2 of the MSHCP defines Riparian/Riverine Areas as “lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source, or areas with fresh water flow during all or a portion of the year.”

MSHCP riparian/riverine area for the Project site totals 2.04 acres of which 1.98 acres are riparian and the remainder (0.06 acre) is unvegetated riverine. MSHCP riparian/riverine area on-site is divided among two drainage features, both of which support riparian vegetation. The drainage feature located in the south is dominated by coast live oaks and eucalyptus and is disturbed to a level that would not support special-status species with riparian requirements, such as LBV, SWFL, cuckoo. The northernmost drainage feature on-site, supports a small swath of southern cottonwood willow riparian habitat, which is moderately suitable for occupation by LBV; however, due to its small size and moderate level of disturbance, the area is not suitable for occupation by SWFL or cuckoo.

The third drainage feature associated with the Project, is located off-site and does not support riparian habitat; however it supports approximately 0.02 acres of unvegetated riverine habitat. This feature does not contain habitat suitable for LBV, SWFL, or cuckoo. The on-site drainage located in the south contains the remainder of the total 0.06 acre of unvegetated riverine habitat (0.04 acre). The current CNDDDB's species occurrence data indicates that neither the SWFL or cuckoo have been documented within the USGS quads (Wildomar and Murrieta) containing the Project site.

Section 6.1.2 of the MSHCP defines Vernal Pools as “seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season.”

Areas meeting the MSHCP definition of vernal pools were not detected during surveys; therefore, the Project site does not contain suitable habitat for the federally endangered Riverside fairy shrimp (*Streptocephalus woottoni*) or other special status invertebrates associated with vernal pools.

4.7 Jurisdictional Waters

This section summarizes the findings of the Project site's jurisdictional delineation. For full details, refer to Appendix B.

4.7.1 Corps Jurisdiction

Potential Corps jurisdiction associated with the Project site totals 0.99 acre, of which 0.90 acre consists of jurisdictional wetlands. Potential Corps jurisdiction within the Project site is limited to three drainages, described herein as Drainage 1, Drainage 2, and Drainage 3. The drainages on site are considered ephemeral streambeds that exhibit an ordinary high water mark (OHWM) with several characteristics of stream flow, including destruction of terrestrial vegetation, terracing, change in soil characteristics, debris wracking, and/or water marks. Table 4-5 below outlines the total acreage and linear footage of potential Corps jurisdiction on site. Drainages 1, 2, and 3 are further described below. A graphic depicting the limits of Corps/Regional Board jurisdiction is attached as Exhibit 7A.

Table 4-5: Potential Corps Jurisdiction On Site

Drainage	Corps Non-Wetland Waters (Acres)	Corps Jurisdictional Wetlands (Acres)	Total Corps Waters (Acres)	Total Linear Feet (Feet)
Drainage 1	0	0.90	0.90	669
Drainage 2	0.07	0	0.07	335
Drainage 3	0.02	0	0.02	249
Total	0.09	0.90	0.99	1,253

1. Drainage 1

Potential Corps jurisdiction associated with Drainage 1 totals 0.90 acre, all of which consists of jurisdictional wetlands. A total of 669 linear feet of streambed is present.

Drainage 1 is an ephemeral drainage that enters the west-central portion of the Project site from the north and traverses the Project site from east to southwest for approximately 669 linear feet before discharging into a catch basin that is located just west of the Project limits. Historic aerial imagery suggests that this catch basin was constructed somewhere between 2005 and 2006 in order to capture runoff from the adjacent residential development⁸.

Areas abutting and within Drainage 1 exhibited several seeps as evidenced by the presence of high ground water, a predominance of wetland vegetation, and hydric soils. Although aerial imagery suggests that Drainage 1 is a natural feature, our field investigation indicates that over watering and/or a recently-damaged underground pipeline from the adjacent property has partially contributed to the creation of an approximate 0.90-acre wetland area (along with the seeps).

Drainage 1 is dominated by a canopy of southern willow scrub including arroyo willow (*Salix lasiolepis*, FACW), Gooding's black willow (*Salix gooddingii*, FACW), mulefat (*Baccharis salicifolia*, FAC), Fremont cottonwood (*Populus fremontii*, FAC), and western sycamore

⁸ Historical imagery obtained from Google Earth 2013.

(*Platanus racemosa*, FAC). Non-native species intermixed within the drainage and along the upper banks include acacia (*Acacia longifolia*, FACU), Mexican fan palm (*Washingtonia robusta*, FAC), and eucalyptus (*Eucalyptus* spp., UPL). Dominant emergent riparian species include Mexican rush (*Juncus mexicanus*, FACW), yerba mansa (*Anemopsis californica*, OBL), basket rush (*Juncus textillus*, FACW), water cress (*Nasturtium officinale*, OBL), duck weed (*Lemna minor*, OBL), false carrot (*Yabea microcarpa*, FACU), curly dock (*Rumex crispus*, FAC), common cattail (*Typha latifolia*, OBL), and fringed willow herb (*Epilobium ciliatum*, FACW). Non-native upland species include red brome (*Bromus madritensis* ssp. *rubens*, UPL) and oats (*Avena sativa*, UPL).

Drainage 2

Potential Corps jurisdiction associated with Drainage 2 totals 0.07 acre, none of which consists of jurisdictional wetlands. A total of 335 linear feet of streambed is present.

Drainage 2 is an ephemeral drainage that enters the Project site from the southeast, and traverses the site in a westerly direction for approximately 335 linear feet before discharging offsite.

Drainage 2 is dominated by a canopy of coast live oak and eucalyptus woodland. Vegetation within Drainage 2 includes coast live oak (*Quercus agrifolia*, UPL), eucalyptus (*Eucalyptus* spp., UPL), and scattered stands of mulefat (*Baccharis salicifolia*, FAC). This area exhibits no evidence of hydric soils; however, flowing water from urban runoff and recent rainfall was present during the course of our field delineation

2. Drainage 3

Potential Corps jurisdiction associated with Drainage 3 totals 0.02 acre, none of which consists of jurisdictional wetlands. A total of 249 linear feet of streambed is present.

Drainage 3 is an offsite ephemeral drainage located just east of Stable Lanes Way and adjacent to the southeastern portion of the Project site. Although this drainage is not associated with the onsite portion of the Project, it may be impacted as a result of offsite Project-related road improvements. As a result, this offsite portion of the Project was analyzed during the course of our field investigation. Drainage 3 flows from east to west for approximately 249 linear feet, before dissipating as scattered sheet flow across Stable Lanes Way

Drainage 3 is generally unvegetated with a canopy of eucalyptus (*Eucalyptus* spp., UPL) and non-native grasses and forbs along the upper banks. This area exhibits no evidence of hydrophytic vegetation and was dry during the course of our field investigation.

4.7.2 Regional Water Quality Control Board Jurisdiction

Drainage 1, Drainage 2, and Drainage 3 have been determined to be potential Corps jurisdictional waters subject to regulation pursuant to Section 401 and 404 of the CWA; therefore, these drainages do not need to be addressed separately pursuant to Section 13260 of the CWC, the Porter-Cologne Act.

Potential Regional Board jurisdiction associated with the Project site totals 0.99 acre, of which 0.90 acre consists of jurisdictional wetlands. A total of 1,253 linear feet of streambed is present. Table 4-6 below outlines the total acreage and linear footage of potential Regional Board jurisdiction on site. Descriptions of the drainages and associated vegetation are the same as those described in section 4.7.1 [CORPS] above. A graphic depicting the limits of Corps/Regional Board jurisdiction is attached as Exhibit 7A.

Table 4-6: Potential Regional Board Jurisdiction On Site

Drainage	Regional Board Non-Wetland Waters (Acres)	Regional Board Jurisdictional Wetlands (Acres)	Total Regional Board Waters (Acres)	Total Linear Feet (Feet)
Drainage 1	0	0.90	0.90	669
Drainage 2	0.07	0	0.07	335
Drainage 3	0.02	0	0.02	249
Total	0.09	0.90	0.99	1,253

4.7.3 CDFW Jurisdiction

Potential CDFW jurisdiction associated with the Project site totals 2.04 acres, of which 1.98 acres consist of vegetated riparian habitat. A total of 1,253 linear feet of streambed is present. The drainages on site are considered ephemeral streambeds that exhibit a high water mark (HWM) with several characteristics of stream flow, including destruction of terrestrial vegetation, terracing, debris wracking, water marks, and the presence of a defined bed, bank, and channel. As a result, the drainages exhibit the potential for regulation by the CDFW pursuant to Sections 1600-1616 of the Fish and Game Code. Table 4-7 below outlines the total acreage and linear footage of potential CDFW jurisdiction on site. Drainages 1, 2, and 3 are further described below. Descriptions of the drainages and associated vegetation are the same as those described in section 4.7.1 [CORPS] and 4.7.2 [RWQCB] above. A graphic depicting the limits of CDFW jurisdiction is attached as Exhibit 7B.

Table 4-7: Potential CDFW Jurisdiction On Site

Drainage	Total CDFW Unvegetated Streambed (Acres)	Total CDFW Vegetated Riparian Habitat (Acres)	Total CDFW Jurisdiction (Acres)	Total Linear Feet (Feet)
Drainage 1	0	1.71	1.71	669
Drainage 2	0.04	0.27	0.31	335
Drainage 3	0.02	0	0.02	249
Total	0.06	1.98	2.04	1,253

5.0 IMPACT ANALYSIS

The following discussion examines the potential impacts to plant and wildlife resources that would occur as a result of the proposed Project. Impacts (or effects) can occur in two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of plant communities, which in turn, directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or animals, which may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

Indirect impacts pertain to those impacts that result in a change to the physical environment, but which is not immediately related to a project. Indirect (or secondary) impacts are those that are reasonably foreseeable and caused by a project, but occur at a different time or place. Indirect impacts can occur at the urban/wildland interface of projects, to biological resources located downstream from projects, and other off site areas where the effects of the project may be experienced by plants and wildlife. Examples of indirect impacts include the effects of increases in ambient levels of noise or light; predation by domestic pets; competition with exotic plants and animals; introduction of toxics, including pesticides; and other human disturbances such as hiking, off-road vehicle use, unauthorized dumping, etc. Indirect impacts are often attributed to the subsequent day-to-day activities associated with project build-out, such as increased noise, the use of artificial light sources, and invasive ornamental plantings that may encroach into native areas. Indirect effects may be both short-term and long-term in their duration. These impacts are commonly referred to as “edge effects” and may result in a slow replacement of native plants by non-native invasives, as well as changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites.

Cumulative impacts refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. A cumulative impact can occur from multiple individual effects from the same project, or from several projects. The cumulative impact from several projects is the change in the environment resulting from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

5.1 California Environmental Quality Act (CEQA)

5.1.1 Thresholds of Significance

Environmental impacts to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California:

“Prevent the elimination of fish or wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and

preserve for future generations representations of all plant and animal communities...”

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

“The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species, ...”

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project.

5.1.2 Criteria for Determining Significance Pursuant to CEQA

Appendix G of the 1998 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.2 Impacts to Vegetation/Land Use Types

The overall Project area is comprised of approximately 31.40 on-site acres and 1.68 off-site acres, of which approximately 29.12 acres will be permanently impacted by the Project footprint. Approximately 3.96 acres (12 percent) of the Project site will be avoided. This area was previously evaluated as part of the Previous Project approved by the County as part of EA 40124 prior to the site’s incorporation into the City. Site conditions remain unchanged as compared to the environmental condition of the site evaluated as part of the Previous Project. The preserved areas include portions of native vegetation including coast live oaks and southern cottonwood willow riparian. The proposed Project will include a total of 81 detached single-family residential dwellings and related improvements throughout the site. Site improvements include the construction of landscape slopes, driveways, curb, sidewalk, paseos, and gutter, storm drain improvements, wet and dry utilities, one infiltration basin, one extended detention basin and various open space lots to accommodate existing vegetation, wetlands and riparian preservation. Entrance to the site will be provided at Arnett Road and Stable Lanes Way.

Table 5-1 provides a breakdown of impacts to vegetation/land use types for the Project’s development footprint and Table 5-2 provides a breakdown of impacts to vegetation/land use types for the off-site improvement areas.

Table 5-1. Summary of Impacts to Vegetation/Land Use Types, On Site

Vegetation	Acreage
Alkali Marsh	0.06
Coast live oak woodland	None
Developed/disturbed	14.36
Disturbed RSS	0.32
Non-native grasslands/ruderal	11.03
Riversidean sage scrub	1.42
Southern cottonwood willow riparian	0.36
Total	27.55

Table 5-2. Summary of Impacts to Vegetation/Land Use Types, Off Site

Vegetation	Acreage
Alkali Marsh	None
Coast live oak woodland	None
Developed/disturbed	1.25
Disturbed RSS	0.25
Man-made basin	None
Riversidean sage scrub	0.07
Southern cottonwood willow riparian	0.003
Total	1.57

5.2.1 Impacts to Native Vegetation Types

The proposed Project footprint will have direct impacts to three native vegetation communities, totaling approximately 2.48 acres, including, alkali marsh (AM), Riversidean sage scrub (RSS) and southern cottonwood willow riparian (SCWR). Descriptions of impacts projected to occur to each native vegetation type are discussed below.

In general, impacts to native riparian vegetation types are consistent with the Previous Project analyzed and approved by the County as part of EA 40124 prior to the Project’s incorporation into the City and native upland habitats are covered through participation in the MSHCP. The County’s previous biological documentation concluded that no significant impacts to biological resources would occur and that on site drainages would be avoided. Although the Project will now result in 0.06 acre of impacts to alkali marsh habitat and 0.36 acre of impacts to southern cottonwood willow riparian habitat, such impacts are necessary to provide ingress/egress into the Project site via Stable Lanes Road and Arnett Road, and construct water quality basins required by updated environmental regulations. With mitigation incorporated, impacts to 0.06 acre of alkali marsh and 0.36 acre of southern cottonwood willow riparian habitat would still be considered less than significant impacts to biological resources, which is consistent with the previous conclusions and approvals issued for the Project as part of EA 40124 prior to its incorporation into the City.

Alkali Marsh

The proposed Project would result in direct impacts to 0.06 on-site acres and no off-site acreage of AM. The marsh areas are located in the northern portion of the Project and are associated with Drainage 1. Approximately 0.05 acres of AM will be avoided. Impacts to MSHCP riparian/riverine areas should be avoided as described in *Section 6.1.2* of the MSHCP; however, for unavoidable impacts to MSHCP riparian/riverine areas, *Section 6.1.2* requires that the Permittee prepare a DBESP to ensure the replacement of any lost functions and values of habitat as it relates to Covered Species. With the mitigation and approval of a DBESP, the project will be compliant with *Section 6.1.2* of the MSHCP and impacts to AM habitat would be considered less than significant.

Riversidean Sage Scrub

The proposed Project would result in direct impacts to 2.06 acres of RSS in different areas of the Project site, including 1.49 acres of undisturbed RSS and 0.57 acres of disturbed RSS. Impacts to undisturbed RSS will occur in the south and southeastern portions of the Project site. Impacts to disturbed RSS will occur in various areas scattered throughout the Project site mostly in areas next to dirt road. All of the approximately 2.06 acres of disturbed and undisturbed RSS located within the Project site will be permanently impacted. The undisturbed RSS on-site is patchily distributed in small areas and does not have the potential to support CAGN. Impacts to sage scrub are covered and mitigated for through the MSHCP. Prior to mitigation, Project related impacts to RSS would be significant; however, with coverage/mitigation afforded by the MSHCP and the low quality of the existing on-site scrub habitat, impacts to RSS would be mitigated to below a level of significance.

Southern Cottonwood Willow Riparian

The proposed Project would result in direct impacts to 0.36 acre (0.36 acre on-site and 0.003 acre off-site) of SCWR habitat located in the northern portion of the project in and around Drainage 1. Approximately 1.21 acres of SCWR will be avoided by the Project's footprint. Impacts to MSHCP riparian/riverine areas should be avoided as described in *Section 6.1.2* of the MSHCP; however, for unavoidable impacts to MSHCP riparian/riverine areas, *Section 6.1.2* requires that the Permittee prepare a DBESP to ensure the replacement of any lost functions and values of habitat as it relates to Covered Species. With the mitigation and approval of a DBESP, the project will be compliant with *Section 6.1.2* of the MSHCP and impacts to SCWR habitat would be considered less than significant.

5.3 Impacts to MSHCP Riparian/Riverine Areas and Vernal Pools

As noted above, the Project site contains approximately 2.04 acres of MSHCP riparian/riverine areas, of which 1.98 acres support riparian habitat and 0.06 acre supports unvegetated riverine habitat. The Project will impact approximately 0.42 acres of MSHCP Riparian/Riverine areas, including 0.42 acre of riparian vegetation and 0.002 acre of unvegetated riverine areas. A graphic depicting the riparian/riverine impact area is attached as Exhibit 8A.

The County's previous biological documentation concluded that no significant impacts to biological resources would occur and that on site drainages would be avoided; thus, no impacts to riparian/riverine resources would occur. Although the Project will now result in 0.06 acre of impacts to alkali marsh habitat and 0.36 acre of impacts to southern cottonwood willow riparian habitat, such impacts are necessary to provide ingress/egress into the Project site via Stable Lanes Road and Arnett Road, and construct water quality basins required by updated environmental regulations. As a result, impacts to these riparian/riverine resources are unavoidable and would be considered less than significant with mitigation incorporated. As a result, impacts to riparian/riverine areas would still be considered less than significant, which is consistent with the previous conclusions and approvals issued for the Project as part of EA 40124 prior to its incorporation into the City.

Table 5-1 provides a summary of impacts to MSHCP riparian/riverine areas. An analysis of impacts to MSHCP Riverine/Riparian areas by drainage feature are described further below.

Table 5-3. Impacts to MSHCP Riparian/Riverine Areas

Drainage Feature	Unvegetated Riverine (acres)	Riparian Vegetation (acres)	Total Impact (acres)
1	None	0.42	0.42
2	None	None	None
3	0.002	None	0.002
TOTAL JURISDICTION	0.002	0.42	0.42 (rounded)

Drainage 1

Drainage 1 is located within the northern portion of the Project site and supports the majority of the Riparian habitat associated with the Project site. The 1.98 acres of riparian habitat located within Drainage 1 have potential to support LBV, but not SWFL, or cuckoo. Of the 1.98 acres of Riparian habitat associated with this drainage, approximately 0.42 acre will be permanently impacted and the remainder (1.56 acres) will be avoided.

Drainage 2

Drainage 2 is located within the southern portion of the Project site and supports 0.27 acre of MSHCP riparian habitat and 0.04 acre of MSHCP riverine habitat. MSHCP Riparian/Riverine habitat associated with Drainage 2 will not be impacted, but will be avoided.

Drainage 3

Drainage 3 is located off-site to the southeast of the Project and supports a small MSHCP riverine area, but does not support any riparian habitat. Of the 0.02 acres of riverine habitat associated with Drainage 3, permanent impacts will occur to approximately 0.002 acre.

Although Drainage features 2 and 3 support Riparian/Riverine habitat, the quality (i.e., the size and vegetation composition and structure) of the habitat is not at a level suitable for MSHCP target species with riparian habitat requirements, such as LBV, SWFL, and cuckoo. The potential effects on the hydrological function of the on-site riverine areas relative to the downstream (offsite) receiving waters will be minimized through the Project’s drainage plan and the implementation of Best Management Practices (BMPs) so that impacts to hydrological function will be less than significant.

For unavoidable impacts to MSHCP riparian/riverine areas, *Section 6.1.2* of the MSHCP requires that the Permittee prepare a DBESP to ensure the replacement of any lost functions and values of habitat as it relates to Covered Species. With the mitigation and approval of a DBESP, the

project will be compliant with *Section 6.1.2* of the MSHCP. No vernal or seasonal pools are located within the Project site.

5.4 Impacts to Special-Status Species

5.4.1 Special-Status Plant Species

No special status plant species were detected during general surveys, and none are expected to occur due to a lack of suitable habitat. Implementation of the Project, as proposed, would not result in direct impacts to special-status plant species. As previously noted, the Project is not located within the NEPSSA or CAPSSA; therefore focused surveys for target area plant species were not required.

5.4.2 Special-Status Wildlife Species

Although no special-status animal species were observed on the Project site, the site contains habitat that could potentially support special-status species. The proposed Project would result in the loss of foraging and/or breeding habitat for special-status animals; including birds, reptiles and small mammals. Given, the coverage afforded by the MSHCP and the disturbed quality of the overall habitat on-site, any potential impacts to special-status species would be less than significant pursuant to CEQA thresholds.

The significance of impacts to special status-species having the potential to occur onsite is summarized in Table 5-4 below. All species listed in Table 5-4 are covered under the mitigation afforded by the MSHCP; therefore, direct potential impacts to each of the species will be below a significant level.

Table 5-4. Additional Special-Status Animals with Actual or Potential Direct Impacts

Species	Extent of Impact	Significance of Impact (with mitigation)
Birds		
Burrowing Owl	Loss of foraging and breeding habitat, occurring within the disturbed and NNG areas within the Project site.	Less than significant impact.
California horned lark	Loss of foraging and breeding habitat, occurring within the NNG areas within the Project Site.	Less than significant impact.
Cooper's hawk (wintering)	Loss of foraging habitat occurring throughout the Project Site.	Less than significant impact.
Merlin (wintering)	Loss of winter foraging habitat, representing the majority of the Project Site (ruderal, disturbed areas, grassland).	Less than significant impact.
Ferruginous hawk	Loss of winter foraging habitat,	Less than significant

Species	Extent of Impact	Significance of Impact (with mitigation)
(wintering)	representing the majority of the Project Site (ruderal, disturbed areas, grassland).	impact.
Least Bell's vireo	Loss of breeding habitat within the riparian habitat supported by Drainage 1.	Less than significant impact.
Loggerhead shrike	Loss of foraging habitat throughout site.	Less than significant impact.
Northern harrier (wintering)	Loss of winter foraging habitat, representing the majority of the Project Site (ruderal, disturbed areas, grassland).	Less than significant impact.
Yellow breasted chat	Loss of riparian habitat for breeding.	Less than significant impact.
Yellow warbler	Loss of riparian habitat for breeding.	Less than significant impact.
Mammals		
San Diego black-tailed jackrabbit	Loss of winter habitat, representing the majority of the Project Site (ruderal, disturbed areas, grassland).	Less than significant impact.
San Diego desert woodrat	Loss of nesting habitat within scrub habitat located in small patches within the southern portion of the project site.	Less than significant impact.

5.5 Impacts to Raptor Foraging Habitat

The proposed Project would result in the direct loss of foraging habitat for a number of raptors (including special-status raptors), such as the red-tailed hawk, red-shouldered hawk, American kestrel, Cooper's hawk, merlin, and ferruginous hawk. A large portion of the Project site constitutes moderate quality foraging habitat for these raptor species, in addition to, suitable nesting sites. However, given the current moderately degraded condition of the available habitat, and the coverage afforded by the MSHCP, Project related impacts to raptor foraging habitat would be at a level that is less than significant pursuant to CEQA guidelines.

5.6 Impacts to Nesting Birds

The Project has the potential to impact active nests if vegetation is to be removed or modified during the nesting season (February 1 to August 31).

The previous biological documentation concluded that no significant impacts to biological resources would occur and that impacts to native vegetation would be avoided, if possible, during Project construction; thus, minimal impacts to nesting bird habitat would occur. Although the Project will now result in 0.06 acre of impacts to alkali marsh habitat and 0.36 acre of impacts to southern cottonwood willow riparian habitat, such impacts are necessary to provide ingress/egress into the Project site via Stable Lanes Road and Arnett Road, and construct water quality basins required by updated environmental regulations. As a result, impacts to these

riparian/riverine resources are unavoidable and would be considered less than significant with mitigation incorporated. As impacts to these riparian/riverine areas would occur, nesting bird surveys would be proposed, should construction occur during the bird-nesting season (February 1 through August 31). Mitigation Measure BIO-2 below outlines proposed nesting bird surveys, should construction occur with riparian/riverine areas during the nesting season. With mitigation incorporated, impacts to nesting birds would still be considered less than significant, which is consistent with the previous conclusions and approvals issued for the Project as part of EA 40124 prior to its incorporation into the City.

5.7 Impacts to Jurisdictional Waters

The Project, as proposed, will result in permanent impacts to 0.06 acre of Corps jurisdiction, of which 0.06 acre consists of jurisdictional wetlands (0.002 acre off-site is non-wetland). Permanent impacts will occur to a total of 207 linear feet, of which, 185 linear feet are on-site and 22 linear feet are off-site.

The Project, as proposed, will result in permanent impacts to 0.06 acre of Regional Board jurisdiction, of which 0.06 acre consists of jurisdictional wetlands (0.002 off-site is non-wetland). Permanent impacts will occur to a total of 207 linear feet, of which, 185 linear feet are on-site and 22 linear feet are off-site.

The Project, as proposed will result in permanent impacts to 0.42 acre of CDFW jurisdiction, of which 0.42 acre consists of vegetated riparian habitat and 0.002 acre consists of unvegetated streambed and is located off-site. Permanent impacts will occur to a total of 207 linear feet, of which 185 linear feet are on-site and 22 linear feet are off-site.

The previous biological documentation concluded that no significant impacts to biological resources would occur and that on site drainages would be avoided; thus, no impacts to Corps, Regional Board, or CDFW jurisdiction would occur. Although the Project will now result in 0.06 acre of impacts to alkali marsh habitat and 0.36 acre of impacts to southern cottonwood willow riparian habitat (jurisdictional waters), such impacts are necessary to provide ingress/egress into the Project site via Stable Lanes Road and Arnett Road, and construct water quality basins required by updated environmental regulations. As a result, impacts to these resources are unavoidable and would be considered less than significant with mitigation incorporated. Mitigation Measure BIO-4 below outlines proposed compensatory mitigation for impacts to Corps, Regional Board, and/or CDFW jurisdiction. With mitigation incorporated, impacts to jurisdictional waters would still result in less than significant impacts on biological resources, which is consistent with the previous conclusions and approvals issued for the Project as part of EA 40124 prior to its incorporation into the City.

A graphic depicting impacts to CDFW jurisdiction, as well as riparian/riverine areas, is attached as Exhibit 8A and a graphic depicting impacts to Corps and Regional Board jurisdiction is attached as Exhibit 8B.

5.8 Indirect Impacts to Biological Resources

The Project site is surrounded by residential and commercial development and is not located within close proximity to an MSHCP Conservation Area, as such, the Project is not expected to result in significant indirect impacts to special-status biological resources pursuant to the MSHCP Urban/Wildlands Interface Guidelines (*Volume I, Section 6.1.4* of the MSHCP). These guidelines are intended to address indirect effects associated with locating projects (particularly development) in proximity to the MSHCP Conservation Area.

5.9 Cumulative Impacts

The proposed Project will contribute to regional cumulative impacts as it pertains to the loss of riparian habitat, foraging, and live-in habitat for wildlife, the loss of raptor foraging habitat, and the loss of nesting bird habitat. However, with the Project's participation in the MSHCP, and with additional mitigation measures to be implemented, the cumulative impacts attributed to the Project would be reduced to below a level of significance.

6.0 MITIGATION

The following discussion provides project-specific mitigation measures for actual or potential impacts to special-status resources. In addition to these specific measures, mitigation is also provided by the MSHCP, through participation with the MSHCP and compliance with applicable MSHCP requirements.

6.1 Burrowing Owl

As noted in Section 5 of this report, the Project will result in the loss of potential habitat for the burrowing owl. No burrowing owl or sign of burrowing owl was detected during multiple general and habitat surveys covering areas of suitable burrowing owl habitat, and as such the Project would not currently be subject to MSHCP requirements for avoidance and/or owl relocation. However, since the Project site does contain habitat that could potentially support burrowing owls in the future, the following Project design feature is applicable pursuant to the MSHCP:

- Mitigation Measure BIO-1: The Project applicant shall ensure that a pre-construction presence/absence survey for burrowing owl will be conducted where suitable habitat is present. The survey shall be conducted within 30 days prior to site disturbance. If burrowing owls are determined to be present, a qualified biologist will relocate the burrowing owls in a manner to be approved by the City of Wildomar. The relocation will occur outside of the breeding season (March 1st to August 31st), and will follow accepted protocols.

6.2 Nesting Birds

As noted in Section 5 of this report, the project has the potential to impact nesting birds. The following mitigation measure shall be implemented to ensure that the Project will not result in impacts to nesting birds:

- Mitigation Measure BIO-2: The removal of potential nesting vegetation will be conducted outside of the nesting season (February 1 to August 31) to the extent that this is feasible. If vegetation must be removed during the nesting season, a qualified biologist will conduct a nesting bird survey of potentially suitable nesting vegetation prior to removal. Surveys will be conducted no more than three (3) days prior to scheduled removals. If active nests are identified, the biologist will establish buffers around the vegetation containing the active nest (300 feet for raptors and 100 feet for non raptors). The vegetation containing the active nest will not be removed, and no grading will occur within the established buffer, until a qualified biologist has determined that the nest is no longer active (i.e., the juveniles are surviving independent from the nest). If clearing is not conducted within three days of a negative survey, the nesting survey must be repeated to confirm the absence of nesting birds.

6.3 MSHCP Riparian/Riverine Areas

Project implementation will result in the permanent loss of 0.42 acres of MSHCP riparian/riverine areas. Pursuant to *Section 6.1.2* of the MSHCP, impacts to MSHCP riparian/riverine areas will require the review and approval of a DBESP by the wildlife agencies (USFWS and CDFW). The DBESP document will outline mitigation measures to be implemented to compensate for unavoidable impacts to MSHCP riparian/riverine areas. The mitigation measures outlined in the DBESP will result in an equivalent or biological superior condition than the present conditions onsite.

6.4 Jurisdictional Waters

The following mitigation measures shall be considered for impacts to jurisdictional waters, including Corps waters and wetlands, Regional Water Quality Control Board jurisdiction, CDFW streambed and riparian habitat and MSHCP riparian/riverine Areas:

- Mitigation Measure BIO-3: Prior to the issuance of a grading permit, the Project applicant will obtain the necessary authorizations from the regulatory agencies for proposed impacts to jurisdictional waters. Authorizations may include a Section 404 Permit, Section 1602 Streambed Alteration Agreement from CDFW, and a Section 401 Water Quality Certification/Waste Discharge Requirement from the Regional Board.
- Mitigation Measure BIO-4: Project-specific impacts to jurisdictional waters are proposed to be mitigated at a 2:1 ratio for permanent impacts and will be subject to approval by the appropriate regulatory agencies. The proposed mitigation will occur: 1) through the provision of a one-time fee to an agency-approved off site mitigation bank and/or in-lieu fee program; 2) through the establishment, re-establishment, and/or rehabilitation of

appropriate wetland/riparian habitat at the Yates Road Property (Tract 36437) located within the Community of Winchester/French Valley within the downstream half of the Charlois Channel (see Exhibit 9). The Yates Road Property is within the same watershed as the Project site, and mitigation established at this site would be considered biologically equivalent or superior and would consist of in-kind habitat as described above; or 3) a combination of mitigation options 1 and 2 above.

6.5 Level of Significance After Mitigation

With the Project's participation and compliance with the Western Riverside County MSHCP, with coverage afforded by the MSHCP, and with the mitigation measures as described above, direct, indirect, and cumulative impacts to sensitive biological resources will be less than significant.

7.0 MSHCP CONSISTENCY

The purpose of this section is to provide an analysis of the proposed Project with respect to compliance with biological aspects of the Western Riverside County MSHCP. Specifically, this analysis evaluates the proposed Project with respect to the Project's compliance with MSHCP Reserve assembly requirements, *Section 6.1.2* (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), *Section 6.1.3* (Protection of Narrow Endemic Plant Species), *Section 6.1.4* (Guidelines Pertaining to the Urban/Wildlands Interface), and *Section 6.3.2* (Additional Survey Needs and Procedures).

7.1 Project Relationship to Reserve Assembly

The entire Project is located within the Elsinore Area Plan of the MSHCP. No part of the Project site occurs within a Criteria Cell proposed for conservation under the MSHCP⁹; therefore, the Project is not subject to the HANS or JPR processes, and thus the Project is consistent with the Reserve Assembly requirements of the MSHCP.

7.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (Section 6.1.2)

The Project site contains areas defined by the MSHCP as riparian/riverine areas. The Project site does not support vernal pools or vernal pool associated species. Impacts to MSHCP riparian/riverine areas will require the review and approval of a DBESP by USFWS and CDFW. Upon approval of the DBESP, the Project will be consistent with the MSHCP riparian/riverine policies.

⁹ As noted in Section 1.6.2 of this report, the MSHCP Conservation Summary Generator identifies a small portion of the Project site as occurring within the MSHCP Criteria Area. However, the City of Lake Elsinore has previously noted this as a mapping error, and that the Project site does not occur within the MSHCP Criteria Area.

7.3 Protection of Narrow Endemic Plant Species (Section 6.1.3)

Volume I, Section 6.1.3 of the MSHCP requires that within identified NEPSSA, site-specific focused surveys for Narrow Endemic Plants Species will be required for all public and private projects where appropriate soils and habitat are present. The Project is not located within the MSHCP NEPSSA pursuant to *Section 6.3.2* of the MSHCP. As such, the Project is consistent with requirements for the *Protection of Narrow Endemic Plant Species*.

7.4 Guidelines Pertaining to the Urban/Wildland Interface

The MSHCP Urban/Wildland Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. As the MSHCP Conservation Area is assembled, development is expected to occur adjacent to the Conservation Area. Future development in proximity to the MSHCP Conservation Area may result in edge effects with the potential to adversely affect biological resources within the Conservation Area. To minimize such edge effects, the guidelines shall be implemented in conjunction with review of individual public and private development projects in proximity to the MSHCP Conservation Area and address the following:

- Drainage;
- Toxics;
- Lighting;
- Noise;
- Invasive species;
- Barriers;
- Grading/Land Development.

As discussed in Section 5.0 of this report, the Project is not adjacent to the MSHCP Conservation Area; therefore implementation of mitigation measures for indirect effects, as addressed in the Urban/Wildland Interface Guidelines, is not required for the proposed Project. As such, the proposed Project will be compliant with *Section 6.1.4* of the MSHCP and consistent with the plan.

7.5 Additional Survey Needs and Procedures

The Project site is not located within the MSHCP Criteria Area Plant Species Survey Area (CAPSSA) pursuant to *Section 6.1.3* of the MSHCP. Therefore, the CAPSSA requirements are not applicable to the Project.

The Project site is not located within the MSHCP Additional Survey Areas for Amphibians, Mammals, or any Special Linkage Areas; but is within the Survey Area for the burrowing owl. A burrowing owl habitat assessment and focused surveys were not conducted for the Project site pursuant to the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* as set forth by the MSHCP. Although no burrowing owls were observed during other on-site surveys conducted by GLA biologists, suitable habitat and burrows are present and it is recommended, as indicated in Section 6.1 of this report, that at a minimum,

a pre-construction burrowing owl survey be conducted within 30 days prior to work within the areas of suitable habitat. As such, the proposed Project will be consistent with MSHCP *Volume I, Section 6.3.2*.

Through compliance with the MSHCP and the aforementioned mitigation measure, the Project is consistent with the MSHCP Additional Survey Needs and Procedures policies.

7.6 Conclusion of MSHCP Compliance

As outlined above, the proposed Project will be compliant and consistent with the biological requirements of the MSHCP; specifically pertaining to the Project's relationship to reserve assembly, *Section 6.1.2* (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), *Section 6.1.3* (Protection of Narrow Endemic Plant Species), *Section 6.1.4* (Guidelines Pertaining to the Urban/Wildlands Interface), and *Section 6.3.2* (Additional Survey Needs and Procedures).

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9.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

A handwritten signature in black ink, appearing to read "M. J. C. Lind", is centered within a light gray rectangular box.

Signed: _____

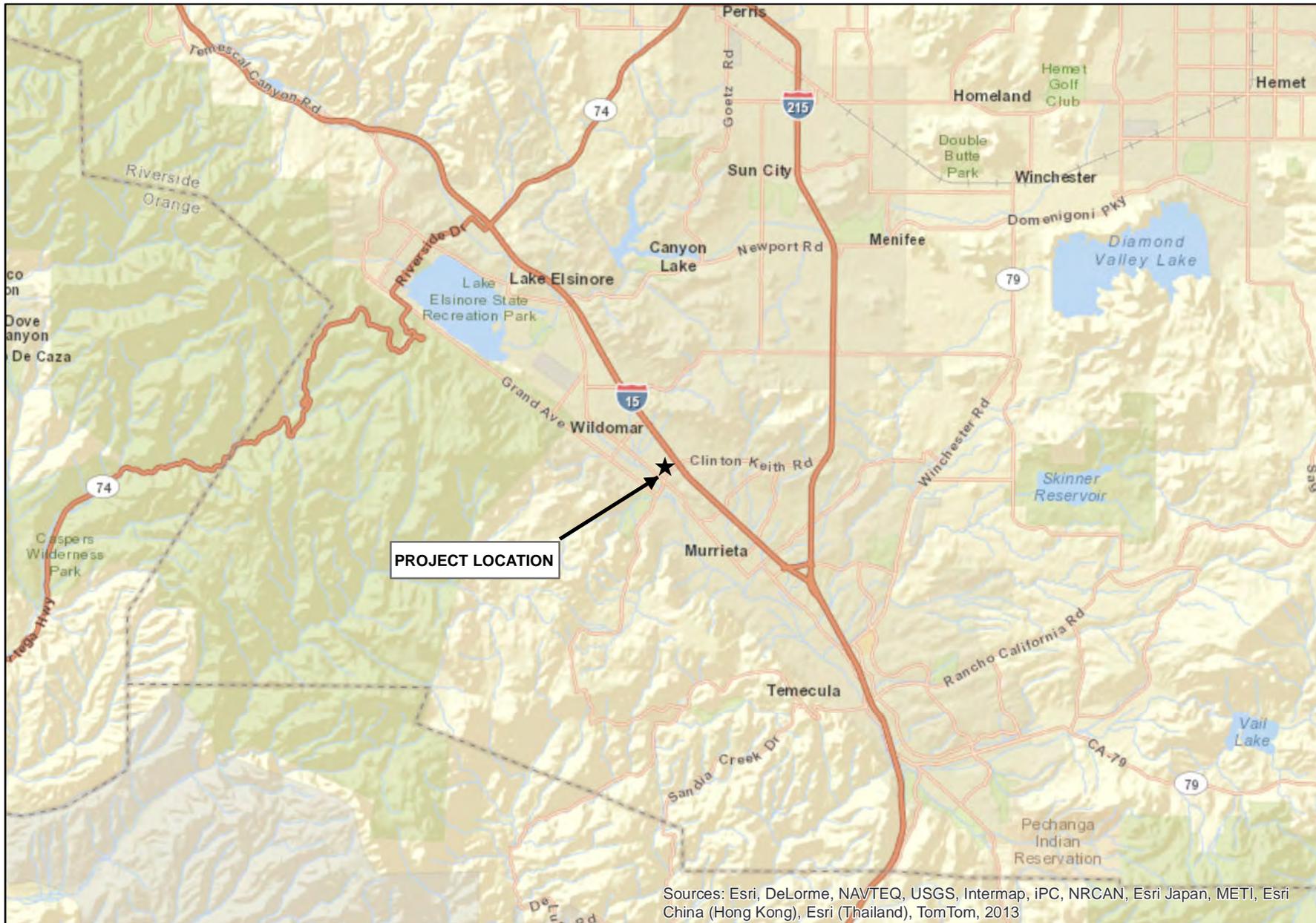
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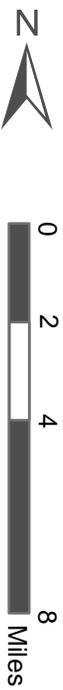
Exhibit 1

Regional Map

Source: ESRI World Street Map



Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013



NORTH RANCH RESIDENTIAL DEVELOPMENT PROPERTY

Regional Map

GLENN LUKOS ASSOCIATES

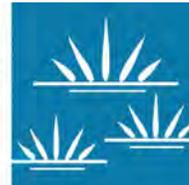
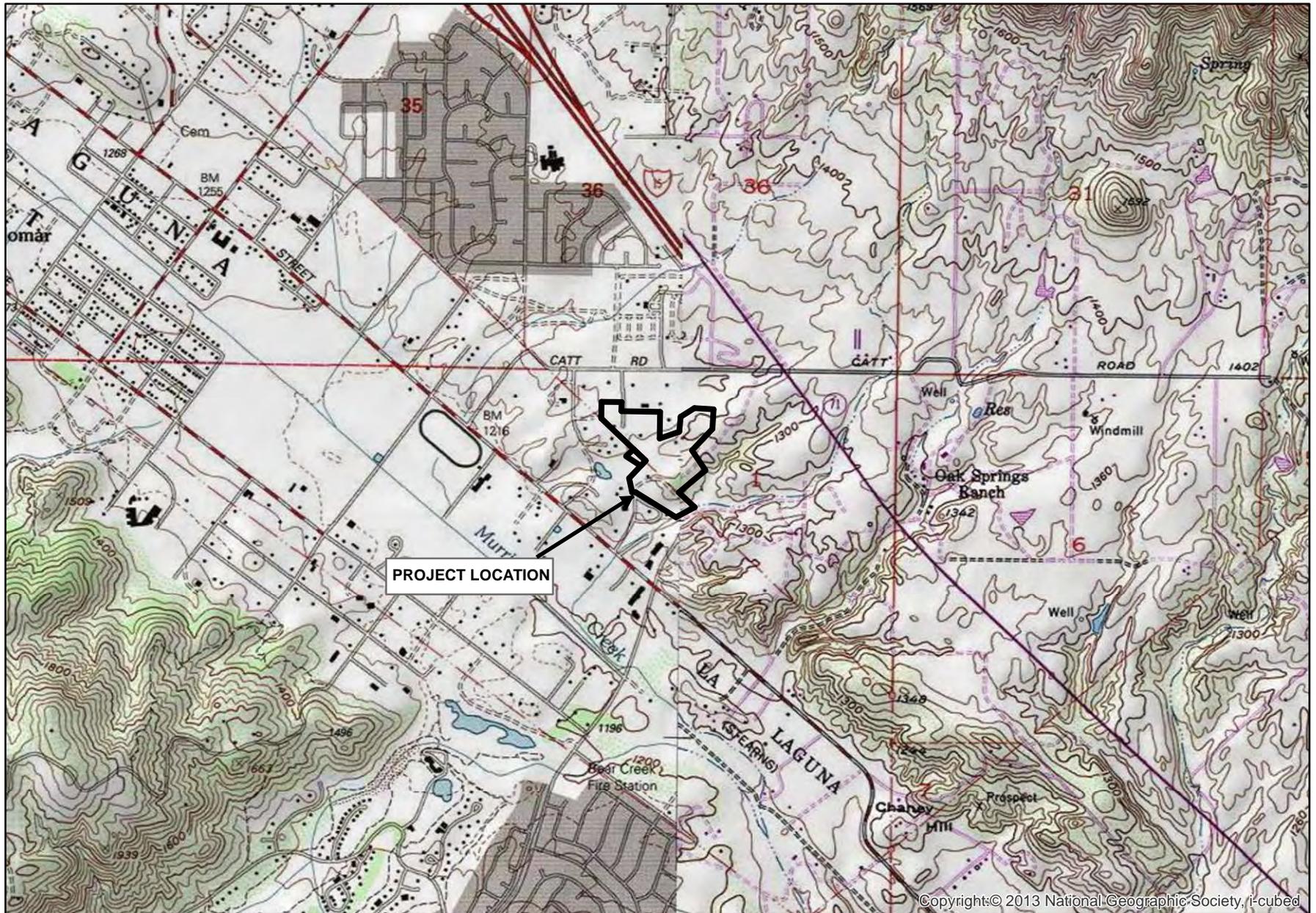
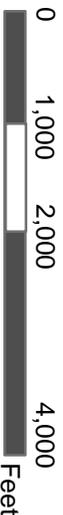


Exhibit 1

Exhibit 2

Vicinity Map

Adapted from USGS Murrleta & Wildomar, CA quadrangles



NORTH RANCH RESIDENTIAL DEVELOPMENT PROJECT

Vicinity Map

GLENN LUKOS ASSOCIATES



Exhibit 2

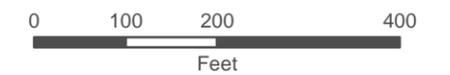
Exhibit 3A

Project Site Plan



Legend

-  Project Boundary
-  Site Development Plan



1 inch = 200 feet

**NORTH RANCH
RESIDENTIAL DEVELOPMENT PROJECT**

Project Site Plan

GLENN LUKOS ASSOCIATES

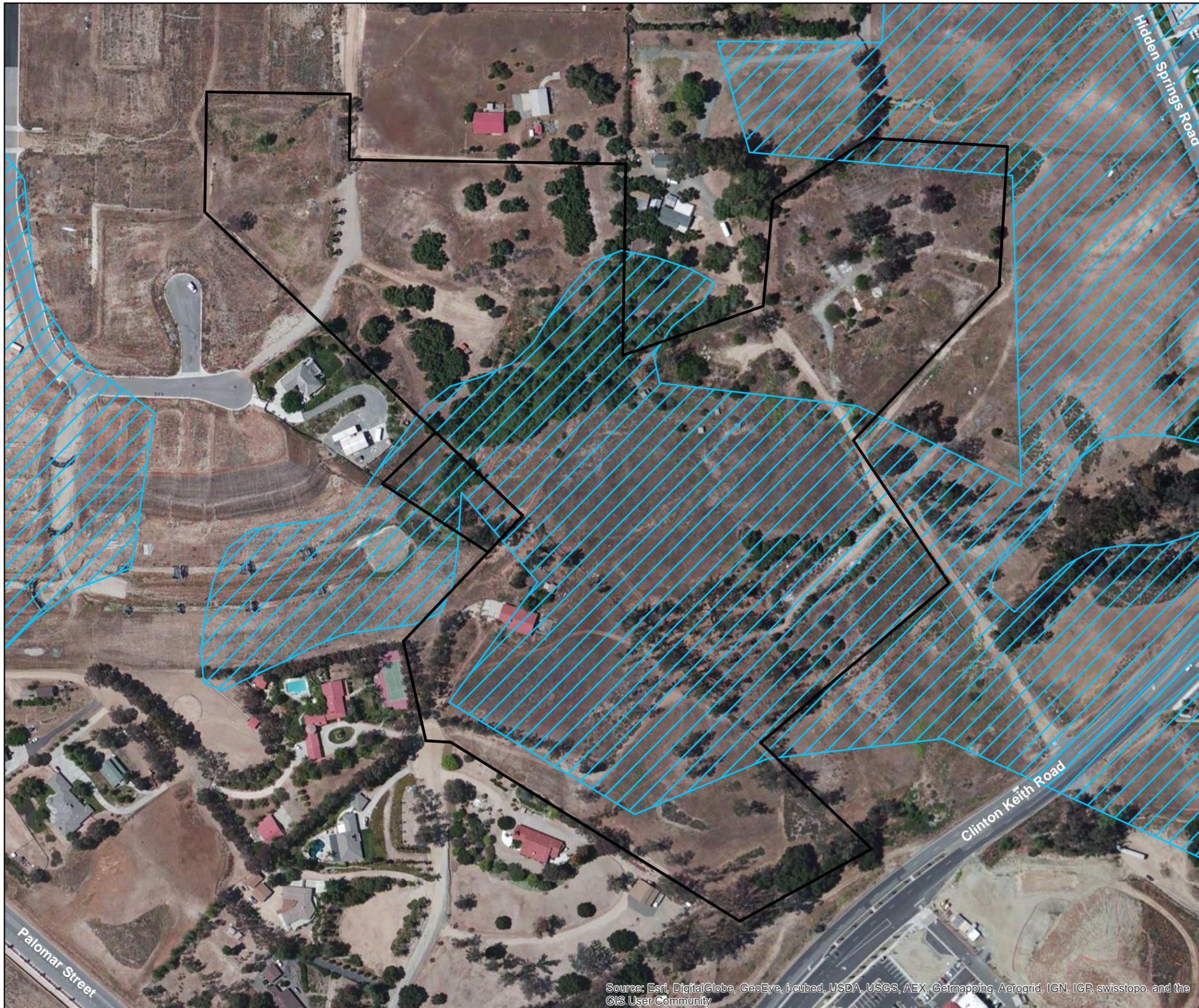


Exhibit 3A

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Exhibit 3B

MSHCP Overlay Map



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

-  Project Boundary
-  Burrowing Owl Survey Area



**NORTH RANCH
RESIDENTIAL DEVELOPMENT PROJECT**

MSHCP Overlay Map

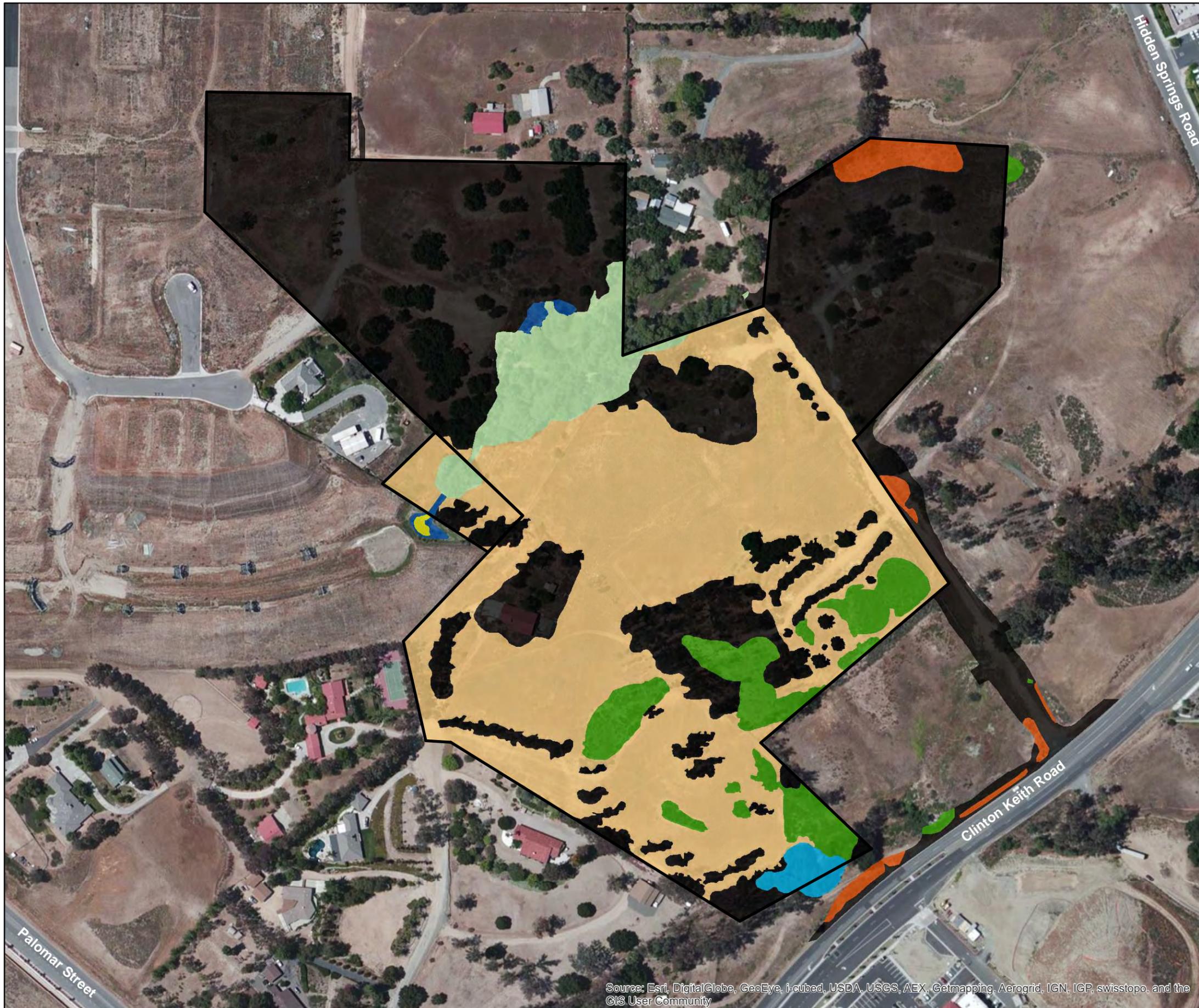
GLENN LUKOS ASSOCIATES



Exhibit 3B

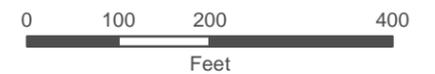
Exhibit 4

Vegetation Map



Legend

-  Project Boundary
-  Alkali Marsh
-  Coast Live Oak Woodland
-  Developed/Disturbed
-  Disturbed Riversidean Sage Scrub
-  Man-made Basin
-  Non-native Grass/Ruderal
-  Riversidean Sage Scrub
-  Southern Cottonwood Willow Riparian



NORTH RANCH RESIDENTIAL DEVELOPMENT PROJECT

Vegetation Map

GLENN LUKOS ASSOCIATES



Exhibit 4

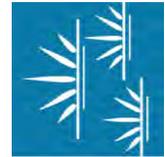
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Exhibit 5

Site Photographs



Photograph 1: Taken February 22, 2013. Upstream view of Drainage 2.



GLENN LUKOS ASSOCIATES

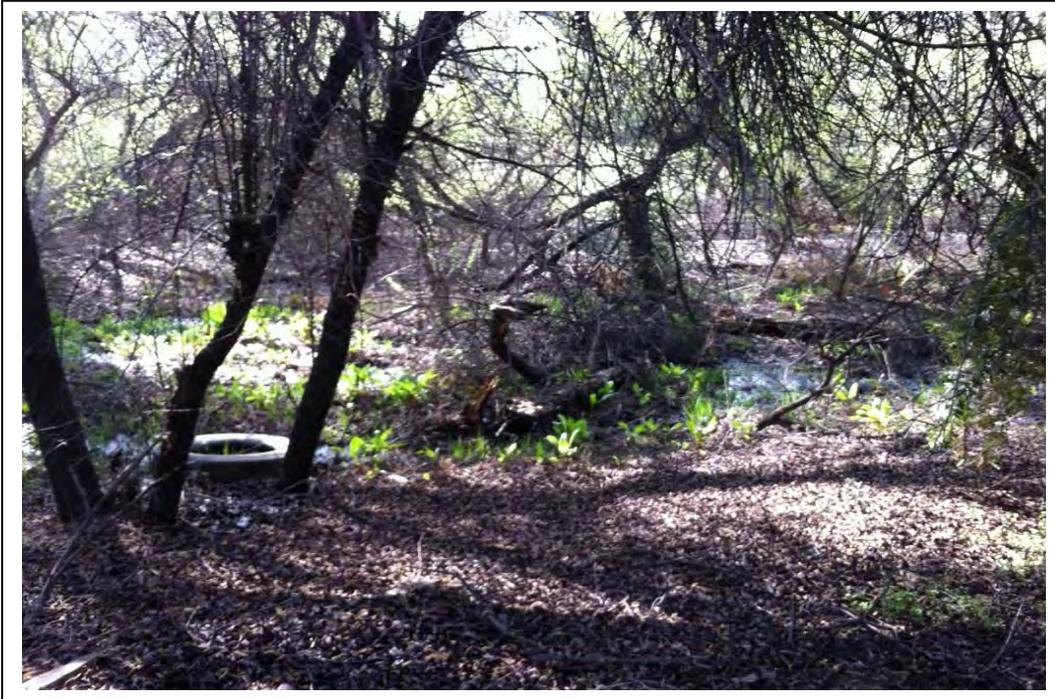
Exhibit 5



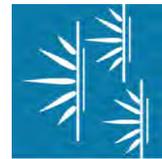
Photograph 2: Taken February 22, 2013. Downstream view of Drainage 2.

PROJECT NAME

Site Photographs



Photograph 3: Taken February 22, 2013. View depicting wetland areas within Drainage 1.



GLENN LUKOS ASSOCIATES

Exhibit 5



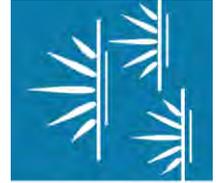
Photograph 4: Taken February 22, 2013. Landscape view depicting riparian canopy associated with Drainage 1.

PROJECT NAME

Site Photographs



Photograph 5: Photograph depicting habitat within project site.

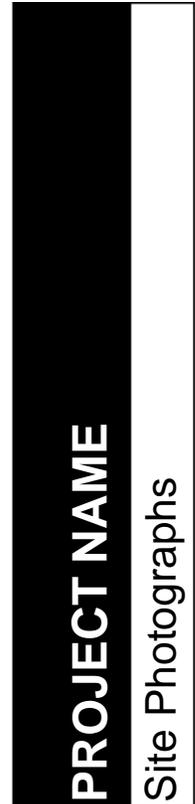


GLENN LUKOS ASSOCIATES

Exhibit 5

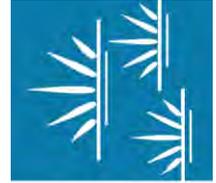


Photograph 6: Photograph depicting riparian habitat on site.





Photograph 7: Photograph depicting abandoned home site within project site.

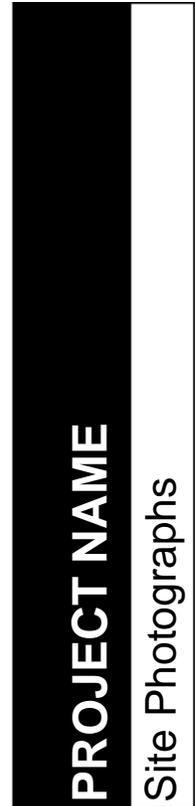


GLENN LUKOS ASSOCIATES

Exhibit 5



Photograph 8: Photograph depicting abandoned home site within project site.



PROJECT NAME

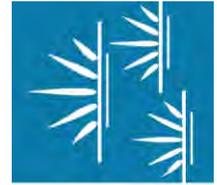
Site Photographs



Photograph 9: Photograph depicting habitat within project site.



Photograph 10: Photograph depicting project site.



GLENN LUKOS ASSOCIATES

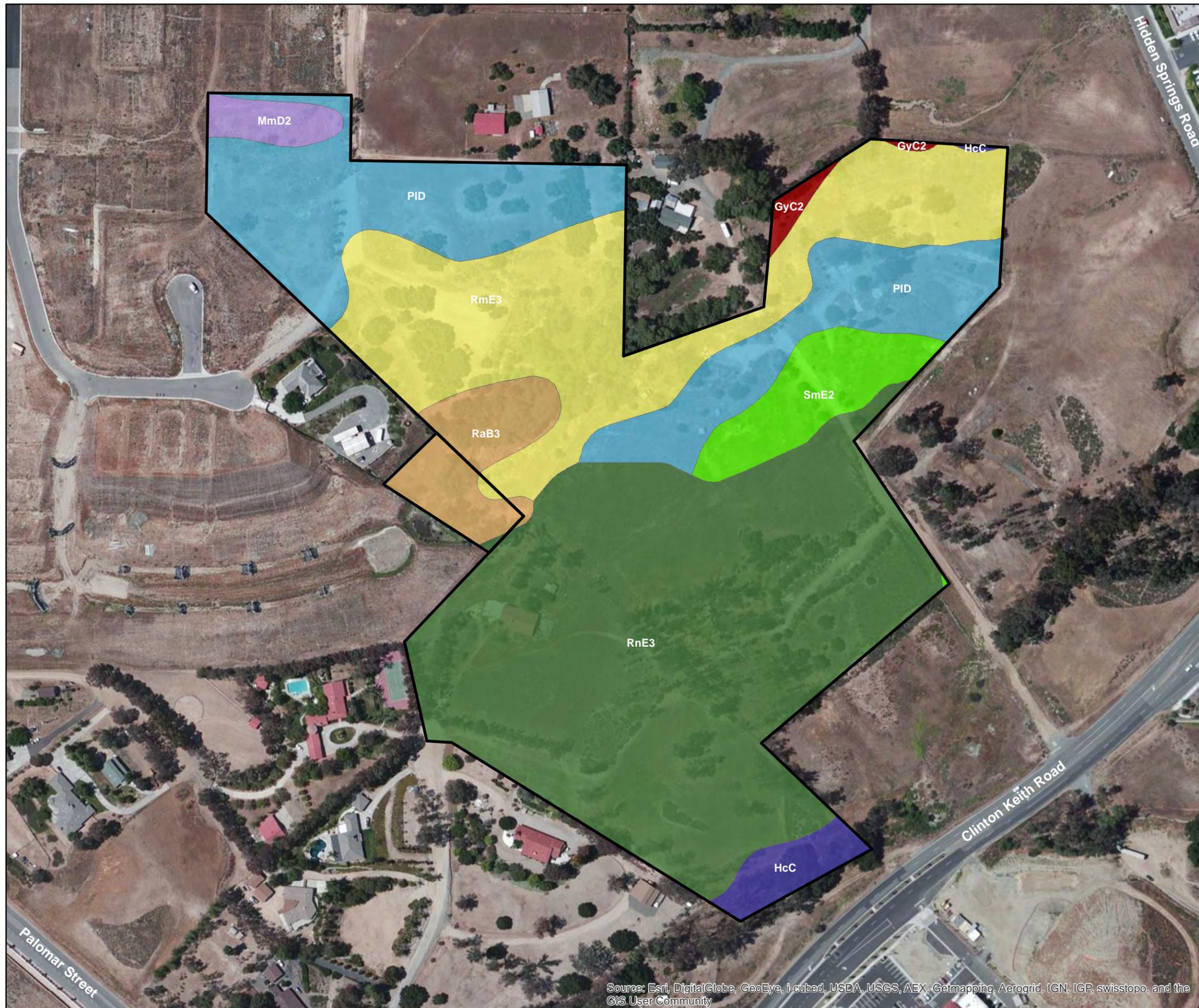
Exhibit 5

PROJECT NAME

Site Photographs

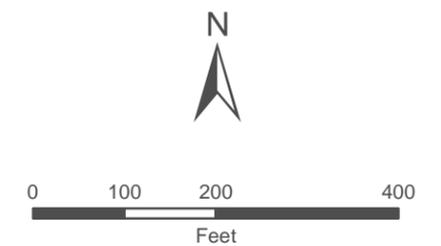
Exhibit 6

Soils Map



Legend

- Project Boundary
- GyC2 - Greenfield sandy loam, 2 to 8 percent slopes, eroded
- HcC - Hanford coarse sandy loam, 2 to 8 percent slopes
- MmD2 - Monserate sandy loam, 8 to 15 percent slopes, eroded
- PID - Placentia fine sandy loam, 5 to 15 percent slopes
- RaB3 - Ramona sandy loam, 0 to 5 percent slopes, severely eroded
- RmE3 - Ramona and Buren sandy loams, 15 to 25 percent slopes, severely eroded
- RnE3 - Ramona and Buren loams, 5 to 25 percent slopes, severely eroded
- SmE2 - San Timoteo loam, 8 to 25 percent slopes, eroded



NORTH RANCH RESIDENTIAL DEVELOPMENT PROJECT

Soils Map

GLENN LUKOS ASSOCIATES

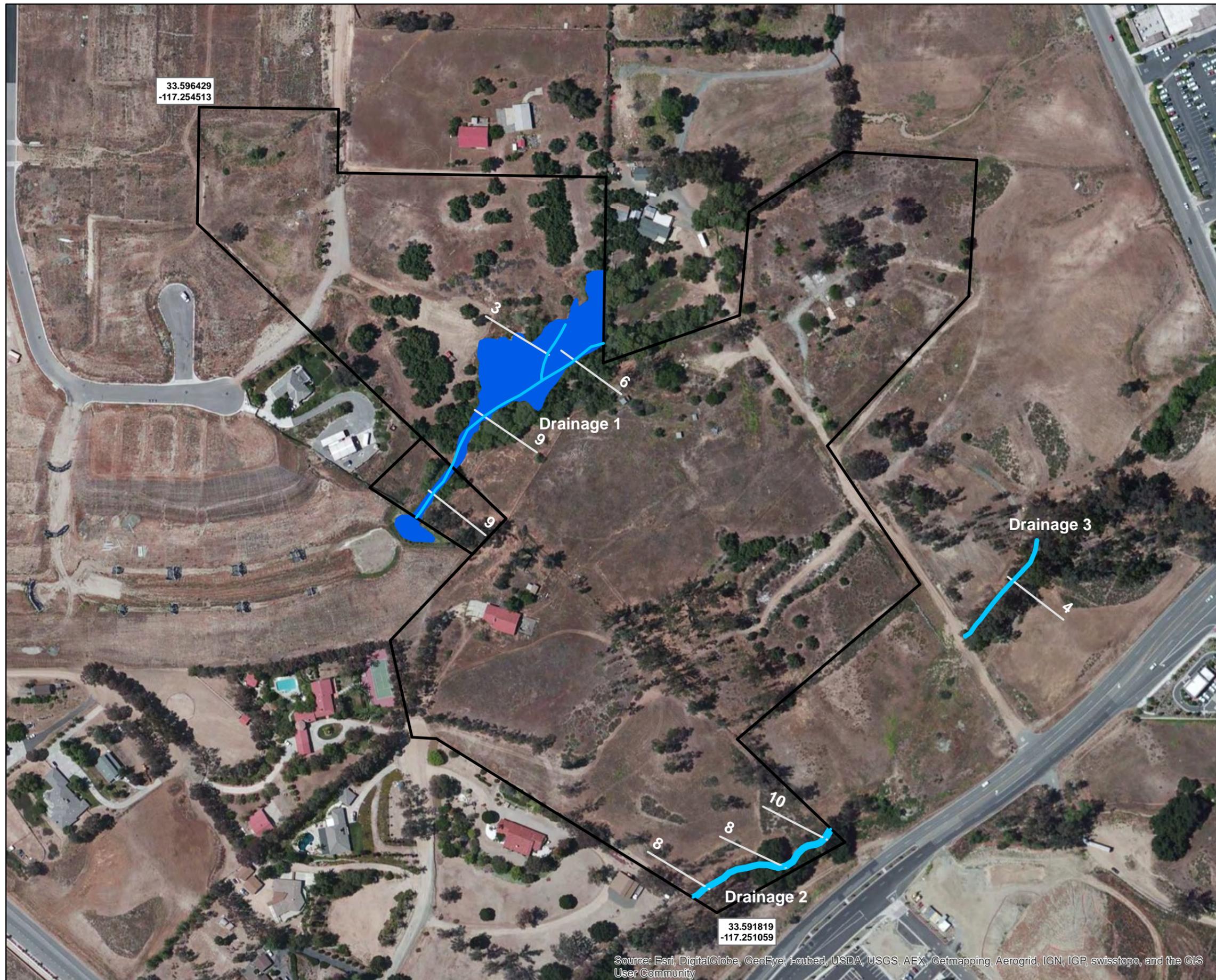


Exhibit 6

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Exhibit 7A

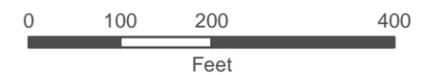
Corps/Regional Board Delineation Map



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

-  Project Boundary
-  Non-Wetland Waters
-  Abutting Wetland/In Stream Wetland
-  Width of OHWM



1 inch = 200 feet

Aerial Photo: ESRI Basemaps Bing Hybrid
 Reference Elevation Datum: State Plane 6 NAD 83
 Map Prepared by: K. Kartunen, GLA
 Date Prepared: March 11, 2013

TRACT 32535
RESIDENTIAL DEVELOPMENT PROJECT
 Corps/RWQCB Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES



Exhibit 7A

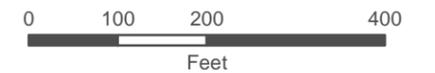
Exhibit 7B

CDFW/MSHCP Riparian Riverine Map



Legend

-  Project Boundary
-  Streambed
-  CDFW Unvegetated Streambed
-  CDFW Riparian



1 inch = 205 feet

Aerial Photo: ESRI Basemaps Bing Hybrid
 Reference Elevation Datum: State Plane 6 NAD 83
 Map Prepared by: K. Kartunen, GLA
 Date Prepared: March 11, 2013

TRACT 32535
RESIDENTIAL DEVELOPMENT PROJECT
 CDFW Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES



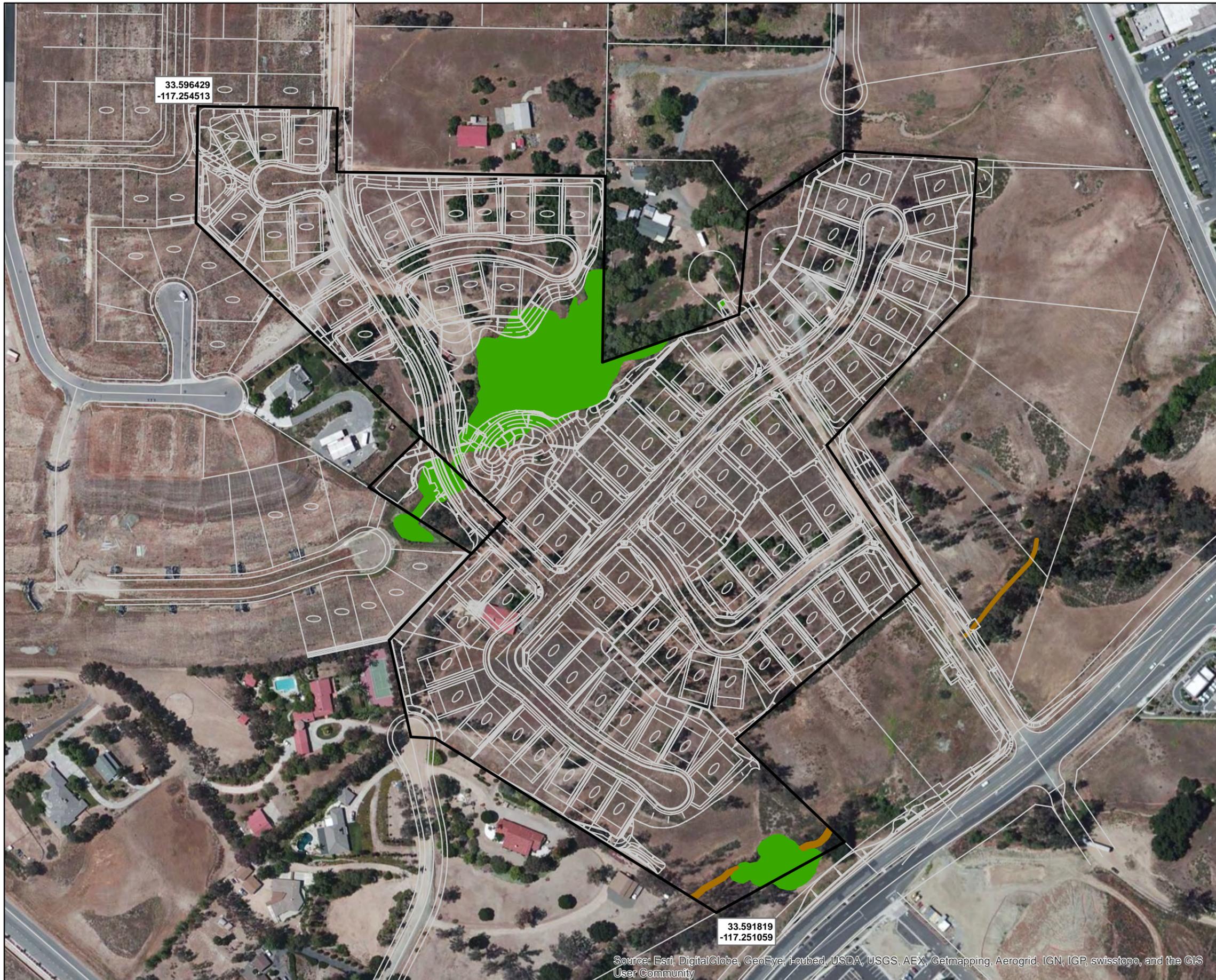
Exhibit 7B

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Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

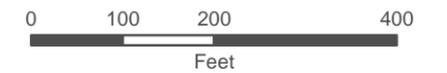
Exhibit 8A

CDFW/MSHCP Riparian Riverine Impact Map



Legend

-  Project Boundary
-  Site Development Plan
-  CDFW Unvegetated Streambed/MSHCP Riverine
-  CDFW Riparian/MSHCP Riparian



1 inch = 200 feet

**NORTH RANCH
RESIDENTIAL DEVELOPMENT PROJECT**
CDFW/MSHCP Riparian/Riverine Impact Map

GLENN LUKOS ASSOCIATES

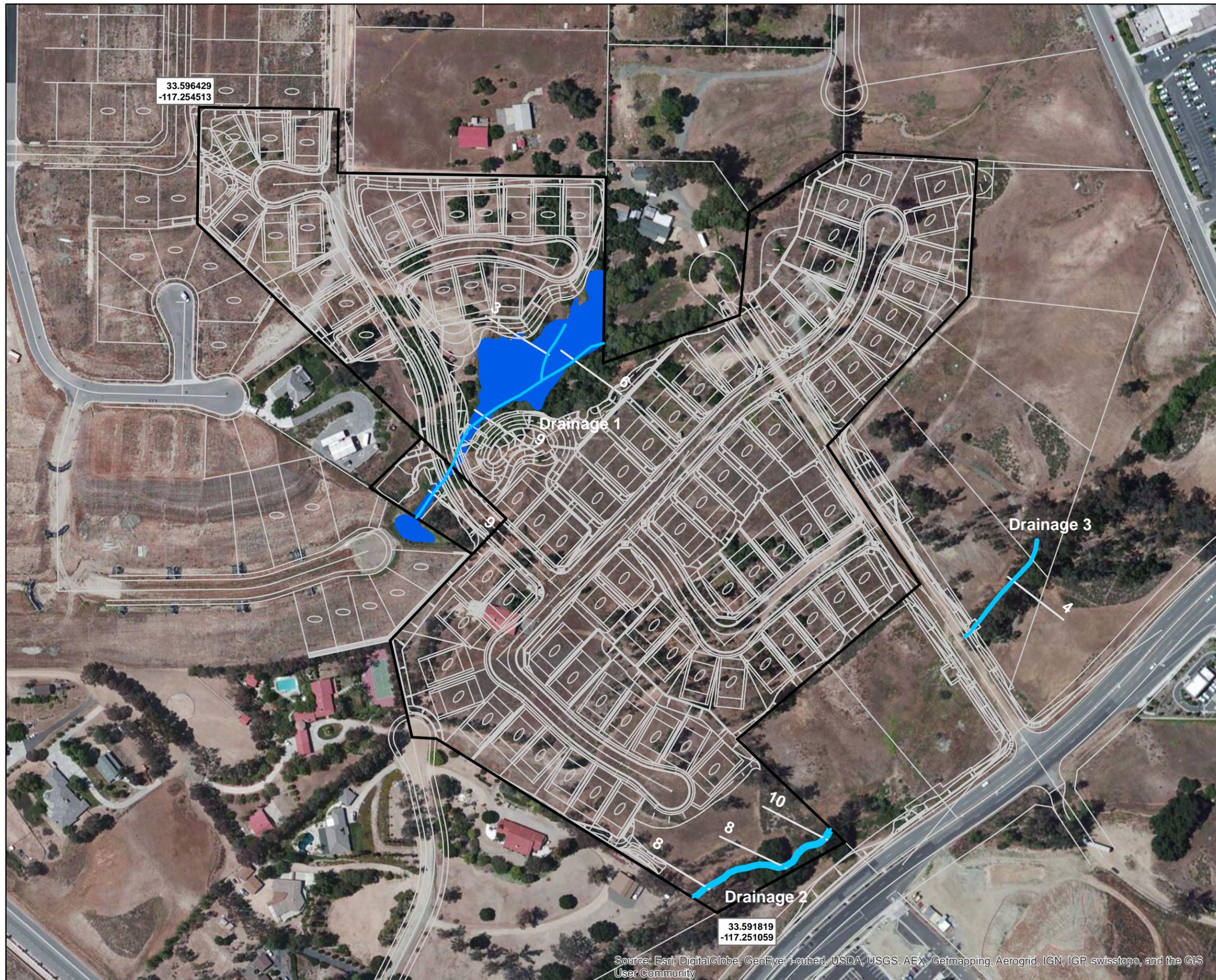


Exhibit 8A

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

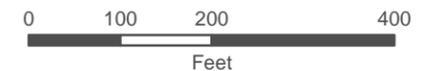
Exhibit 8B

Corps/Regional Board Impact Map



Legend

-  Project Boundary
-  Site Development Plan
-  Non-Wetland Waters
-  Abutting Wetland/In Stream Wetland
-  Width of OHWM



1 inch = 200 feet

Aerial Photo: ESRI Basemaps Bing Hybrid
 Reference Elevation Datum: State Plane 6 NAD 83
 Map Prepared by: K. Kartunen, GLA
 Date Prepared: March 11, 2013

**TRACT 32535
 RESIDENTIAL DEVELOPMENT PROJECT**

Corps/Regional Board Impact Map

GLENN LUKOS ASSOCIATES



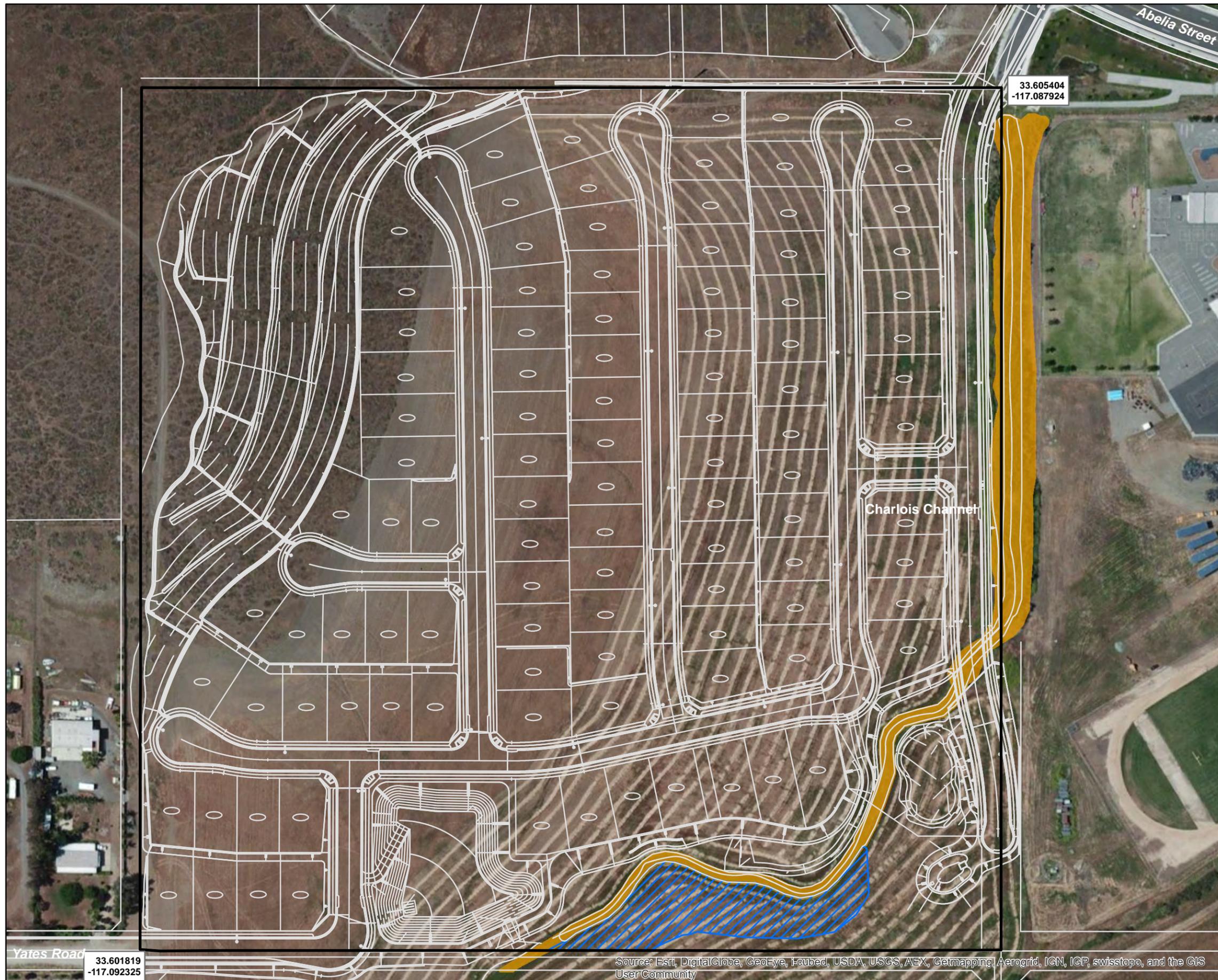
Exhibit 8B

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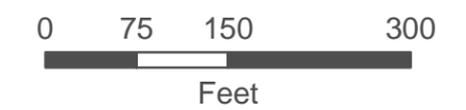
Exhibit 9

Potential Yates Road Property Mitigation Site Map



Legend

-  Study Area
-  Project Site Plan
-  Potential Yates Road Mitigation Area
-  CDFW Riparian



1 inch = 150 feet

**NORTH RANCH
RESIDENTIAL DEVELOPMENT PROPERTY**

Potential Yates Road Mitigation Area

GLENN LUKOS ASSOCIATES



Exhibit 9

Appendix A

RCA Associates, Inc. Biological Resources Report, Dated June 2005

**GENERAL BIOLOGICAL
RESOURCES ASSESSMENT
(Township 7 South, Range 4 West, Section 1)**

TENTATIVE TRACT 32535

Prepared for:

**Pacific Coast Land Consultants, Inc.
41769 Enterprise Circle North, #201
Temecula, CA 92590**

**Project Number: #2005-163
Principal Investigators: Randall Arnold, Biologist
Ryan Young, Biologist
Report Prepared by: Randall Arnold
(760) 261-1575**

**June 17, 2005
Survey Performed June 6, 2005**

Report Summary: No rare, endangered, or threatened species were observed on the site during the field investigations. In addition, no unique or critical habitats occur on the property and development of the site is not expected to generate any significant impacts. No mitigation measures are recommended.

RCA ASSOCIATES, INC

BIOLOGICAL REPORT SUMMARY SHEET

(Submit two copies to the County)

Applicant Name: Pacific Coast Land Consultants, Inc.

Assessor's Parcel Number (APN): Tentative Tract 32535

APN cont.:

Site Location: Section: 1 Township: 7 South Range: 4 West

Site Address:

Related Case Number(s): n/a

PDB Number: n/a

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
		Yes	No	N/A
	Arroyo Southwestern Toad	Yes	No	N/A
✓	Blue-line Stream(s)	Yes	(No)	N/A
	Coachella Valley Fringed-Toed Lizard	Yes	No	N/A
	Coastal California Gnatcatcher	Yes	No	N/A
✓	Coastal Sage Scrub	Yes	(No)	N/A
	Delhi Sands Flower-Loving Fly	Yes	No	N/A
	Desert Pupfish	Yes	No	N/A
	Desert Slender Salamander	Yes	No	N/A
	Desert Tortoise	Yes	No	N/A
	Flat-Tailed Horned Lizard	Yes	No	N/A
✓	Least Bell's Vireo	Yes	(No)	N/A
✓	Oak Woodlands	(Yes)	No	N/A
	Quino Checkerspot Butterfly	Yes	No	N/A
✓	Riverside Fairy Shrimp	Yes	(No)	N/A
	Santa Ana River Woollystar	Yes	No	N/A
	San Bernardino Kangaroo Rat	Yes	No	N/A
	Slender Horned Spineflower	Yes	No	N/A
	Stephen's Kangaroo Rat	Yes	No	N/A
✓	Vernal Pools	Yes	(No)	N/A
✓	Wetlands	Yes	(No)	N/A

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
		Yes	No	N/A
✓	Other Burrowing owl	Yes	(No)	N/A
✓	Other Southwestern willow flycatcher	Yes	(No)	N/A
✓	Other Western yellow-billed cuckoo	Yes	(No)	N/A
✓	Other Santa Rosa Plateau fairy shrimp	Yes	(No)	N/A
✓	Other Vernal pool fairy shrimp	Yes	(No)	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A

Species of concern shall be any unique, rare, endangered, or threatened species. It shall include species used to delineate wetlands and riparian corridors. It shall also include any hosts, perching, or food plants used by any animals listed as rare, endangered, threatened or candidate species by either State, or Federal regulations, or for Riverside County as listed by the California Department of Fish and Game Natural Diversity Data Base (NDDB).

I declare under penalty of perjury that the information provided on this summary sheet is in accordance with the information provided in the biological report.

Ronald A. Smith
Signature and Company Name

RCA Associates, Inc.

6-17-05

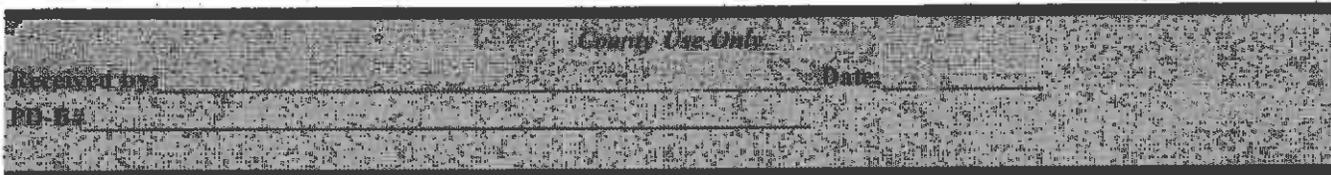
Report Date

789251

7-13-06

10(a) Permit Number (if applicable)

Permit Expiration Date



LEVEL OF SIGNIFICANCE CHECKLIST

For Biological Resources

(Submit Two Copies)

Case Number: 32535 Lot/Parcel No. 32535 EA Number n/a

Wildlife & Vegetation

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
--------------------------------	--	------------------------------	-----------

(Check the level of impact the applies to the following questions)

a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?

b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?

c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Wildlife Service?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?

f) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Source: CGP Fig. VL36-VL40

Findings of Fact: The project will have no adverse or significant impact on any sensitive or listed species, Two small riparian areas may be effected by development activities, and should be avoided if possible.

Proposed Mitigation: None

Monitoring Recommended: None

TABLE OF CONTENTS

	Page
1.0 Summary and Property Description	1
2.0 Methodology	3
2.1 General vegetation and wildlife	3
2.2 Threatened, Endangered, and Species of Special Concern	3
3.0 Results – General Vegetation and Wildlife	4
3.1 General vegetation resources	4
3.2 General wildlife resources	4
4.0 Results – Threatened, Endangered, and Sensitive Species and Sensitive Habitats	6
4.1 Burrowing Owl	6
4.2 Least Bell’s Vireo	6
4.3 Southwestern Willow Flycatcher	7
4.4 Western Yellow-billed Cuckoo	7
4.5 Riverside Fairy Shrimp	7
4.6 Santa Rosa Plateau Shrimp	8
4.7 Vernal Pool Fairy Shrimp	8
5.0 Impacts and Mitgations	9
5.1 General vegetation and wildlife	9
5.2 Threatened, endangered, and Species of Special Concern	9
5.3 Critical and Sensitive Habitat Finding	9
5.4 Application of CEQA guidelines – Section 15370	9
6.0 References	11
7.0 Certification	13

Figures	Appendix A
Figure 1 - Vicinity Map	
Figure 2 – Location of the Site	
Figure 3 – Biological Resources Map (Attachment E-5)	
Figure 4 - Photographs of Site (Attachment E-6)	

Plants and Animals	Appendix B
Table 1 – Plants observed on the property site or in the immediate area.	
Table 2 – Wildlife species observed on the property site and/or known to occur in the region	

1.0 SUMMARY AND PROPERTY DESCRIPTION

Comprehensive biological surveys were conducted on a ~27-acre site located in Riverside County, California south of Catt Road, north of Clinton Keith Road and west of Interstate 215 (Figures 1 and 2). The purpose of the survey was to evaluate the existing biological resources present on the site and to determine if critical habitats existed on the property. In addition, the site was evaluated to determine if any State or Federal listed species may occur on the site, and to survey for the various plant and animal species listed in the MSHCP.

The property site has been disturbed by some past human activities over the last several decades, and the site currently consists of disturbed fields, eucalyptus groves, and two small riparian areas (Southern coast live oak woodland and Southern willow & cottonwood woodland). Various native and non-native plant species were noted including saltbush (*Atriplex* sp.), elderberry (*Sambucus mexicana*), dove weed (*Euphorbia crenulata*), mulefat (*Sambucus glutinosus*), Russian thistle (*Salsola tragus*), mustard (*Brassica* sp.), fiddleneck (*Amsinckia tessellata*), thistle (*Cirsium* sp.), sunflower (*Helianthus* sp.), Erodium (*Erodium* sp.), and brome grasses (*Bromus* sp.). A few eucalyptus trees (*Eucalyptus globulus*) and olive trees (*Olea europaea*) were also scattered throughout the area. A small Southern coast live oak riparian woodland was located on the southern boundary and is dominated by *Quercus agrifolia*. A riparian area in the northern portion of the site was classified as a Southern willow and cottonwood woodland riparian habitat with red willow (*Salix aevigata*) and cottonwood (*Populus fremonti*) the dominant species.

Mammals observed during the surveys included blacktailed jackrabbit (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyi*), and desert cottontail (*Sylvilagus auduboni*). Side blotched lizards and fence lizards (*Sceloporus occidentalis*), which is relatively common in the area, were frequently observed. Some of the birds which occur on the site and in the surrounding area included American crow (*Corvus brachyrhynchos*), western meadowlark (*Sturnella neglecta*), western kingbird (*Tyrannus verticalis*), turkey vulture (*Cathartes aura*), and mourning dove (*Zenaida macroura*). An active red tailed hawk (*Buteo jamaicensis*) was observed in one of the eucalyptus trees.

Based on the MSHCP, several sensitive and planning species were addressed as part of this biological assessment. These species include burrowing owl (*Athene cunicularia*), Least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii*), western yellow-billed cuckoo (*Coccyzus americanus*), Riverside fairy shrimp (*Streptocephalus wootoni*), Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), and vernal pool fairy shrimp (*Branchinecta lynchi*). The site is not located within any MSHCP cell group.

The soils within the boundaries of the site consisted of Placentia fine sandy loam and San Timoteo loam. Placentia soils are found on level to gently rolling slopes on terraces and alluvial fans. Timoteo soils occur on rolling to hilly areas primarily on marine deposits. Neither of these soils are listed as hydric soils (SCS 1987).

The project proponent is proposing to construct a residential development on the property which will result in converting the current land use to residential. Clearing and grading activities associated with the proposed project would result in removal of most of the vegetation present on the property. Removal of the existing vegetation would result in the displacement of several wildlife species given the moderate diversity of habitats present on the site. However, impacts associated with the project are not expected to be significant nor will the project have any impact on any State or Federal listed species. In addition, cumulative impacts to biological resources in the area are not expected to be significant.

2.0 METHODOLOGY

2.1 General Vegetation and Wildlife

Pertinent environmental documents were reviewed prior to initiation of field surveys. Documents reviewed included, but were not limited to, sensitive species occurrence maps, Riverside County MSHCP, data from the California Natural Diversity Data Base, field guides, Soil Conversation maps, and biological assessments prepared for other projects in the general area. Weather conditions during the June 6, 2005 survey consisted of temperatures in the mid 60's (AM) to mid 90's (PM) with about 5 percent cloud cover. No precipitation was recorded during the field investigations.

The surveys were conducted on the property to investigate the existing biological resources occurring on the property, including critical and sensitive habitats (e.g., coastal sage scrub, riparian areas, vernal pools, etc.), and to evaluate potential impacts that may occur during future site development. Plant and animal surveys were conducted throughout the property during which time lists of plants and animals observed were compiled. The biologist conducting the plant survey also surveyed the site for the presence of any sensitive plants and animals which occur in the general region.

The vegetation classification system used during the biological surveys and in this report is based on a classification system described by Holland (1986). Plants were identified primarily in the field. Wildlife species which utilize the area were identified using several methods. Birds were identified by both visual observations and vocalizations. Visual observations of individual animals, as well as tracks, scats, etc. were also used to determine the mammal and reptile populations found on the site and in the surrounding area. Evaluation of habitats and review of existing documentation were also utilized to determine the types of large and small mammals that may occur on the property, either as permanent residents or transitory species.

2.2 Threatened, Endangered, and Species of Special Concern

The site was initially evaluated for the presence of habitats which might be utilized by the sensitive species known to occur in the area (e.g., coastal sage scrub, riparian habitats, etc.). Small areas of riparian habitat were observed on the site (see discussion below); however, both riparian areas were not extensive and the vegetation diversity was relatively low. Therefore, protocol surveys for the Least Bell's Vireo and Southwestern Willow Flycatcher were deemed not necessary. No coastal sage scrub was present on the site, and no burrowing owls were observed during the field investigations. In addition, no occupiable owl burrows were observed on the site.

3.0 RESULTS – GENERAL VEGETATION AND WILDLIFE

A description of the plant and animal communities which occur on the property site are described in the following sections. Plant surveys were conducted during a time of year (i.e. June) when the most plant species are no longer in bloom; however, the majority of plants on the site are invasive and can be readily identified at most times of the year. Wildlife species inhabiting the site and/or occurring in the surrounding region are also discussed below as are various bird species which may utilize the site either as resident species or seasonal species.

3.1 General Vegetation Resources

Much of the site has been disturbed; consequently, many of the plants found on the site are those species typical of disturbed areas (Table 1). Some of the more common species included mustard (*Brassica tourneforti*), fiddleneck (*Amsinckia tessellata*), matchweed (*Gutierrezia sarothrae*), and sunflower (*Helianthus* sp.). Non-native common throughout the area included Russian thistle (*Salsola iberica*), thistle (*Cirsium* sp.), oats (*Avena barbata*), and brome grasses (*Bromus* sp.). Eucalyptus (*Eucalyptus globulus*) and olive trees (*Olea europaea*) were also scattered throughout the area.

A small Southern coast live oak riparian woodland occurs in the southern portion of the site with about 15 oak trees (*Quercus agrifolia*) scattered throughout. The understory was dominated by buckwheat (*Eriogonum fasciculatum*), fiddleneck (*Amsinckia tessellata*), brome grasses (*Bromus* sp.), dove weed (*Euphorbia crenulata*), and mustard (*Brassica* sp.). Mulefat (*Sambucus glutinosus*) and tree tobacco plants (*Nicotiana glauca*) were also present. A Southern willow and cottonwood riparian woodland was located in the central portion of the property dominated by red willow (*Salix laevigata*) and cottonwood (*Populus fremonti*), with buckwheat, fiddleneck and mustard dominating the understory.

3.2 General Wildlife Resources

The site supports a variety of habitats; consequently, several wildlife species utilize the property either as year-round residents or as transitory species. Wildlife observed during the field surveys or those known to inhabit the surrounding area are discussed below. A list of wildlife species observed on the site and in the general region is also provided in Table 2 (Appendix B).

3.2.1 Mammals: The other only mammals observed included blacktailed jackrabbits (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyi*), and desert

cottontails (*Sylvilagus audubonia*). Coyotes (*Canis latrans*) may also traverse the site occasionally, and rodents such the pocket gopher (*Thomomus bottae*), common deer mouse (*Peromyscus maniculatus*), western harvest mouse (*Reithrodontomys megalotis*), and pocket mice (*Chaetodipus sp.*) may inhabit the property.

3.2.2 Birds: Avian species are the most diverse group of wildlife in the region and several species were observed on the property during the field investigations. Some of the species observed included acorn woodpecker (*Melanerpes formicivorus*), Brewer's blackbird (*Euphagus cyanocephalus*), California quail (*Callipepla californica*), American crow (*Corvus brachyrhynchos*), western meadowlark (*Strunella neglecta*), western kingbird (*Tyrannus verticalis*), turkey vulture (*Cathartes aura*), and mourning dove (*Zenaida macroura*). Other birds observed on the site and in the surrounding region are listed in Table 2. (Note: The species listed above are not intended to be a comprehensive list of all birds likely to occur on the site.)

3.2.3 Reptiles and Amphibians: Reptile diversity is not comparable to mammalian or avian fauna; however, a few species are known to occur in the region and are listed in Table 3. Reptiles observed during the field surveys included side-blotched lizards (*Uta stansburian*) and western fence lizard (*Sceloporus occidentalis*). Other species which are common in the region and likely to inhabit the site include granite spiny lizard (*Sceloporus orcuttii*), gopher snake (*Pituophis melanoleucus*), and common garter snake (*Thamnophis sirtalis*). No amphibians were observed on the property; however, the riparian areas may provide habitat for the spadefoot toad (*Scaphiopus hammondi*) and newt (*Taricha torosa*).

4.0 RESULTS – THREATENED, ENDANGERED, AND SENSITIVE SPECIES AND SENSITIVE HABITATS

Sensitive species and other MCHCP planning species which may occur in the area, include the burrowing owl (*Athene cunicularia*), Least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii*), western yellow-billed cuckoo (*Coccyzus americanus*), Riverside fairy shrimp (*Streptocephalus wootoni*), Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), and vernal pool fairy shrimp (*Branchinecta lynchi*). The distribution of these species is based on the Riverside County Multiple Species Habitat Conservation Plan (MSHCP), as well as other data sources, and are discussed below.

4.1 Burrowing Owl

Background Information: The burrowing owl is a yearlong resident of open, dry grassland and desert habitats. The species was formerly common throughout central and southern California; however, the species has seen a significantly reduction over the last few decades due to development activities; farming activities, predation by dogs and cats, and habitat destruction. Conversion of grassland and desert habitats to agricultural fields and residential developments have apparently contributed to the greatest amount of habitat destruction in recent decades. The reduction in population levels was noted as early as the 1940s. Burrowing owls primarily prey upon insects; although, small mammals, lizards, birds, and carrion make up a portion of the owls diet. Burrowing owls typically utilize abandoned rodent and canine burrows for roosting and nesting.

Occurrence on the Site: No owls or potential owl burrows were observed on the site or in the surrounding area during the field surveys. The property site is located in an area where owls are known to occur, and owls could potentially occupy the site if suitable burrows were to become available. However, given the level of disturbance and development activities in the immediate area, there is a low probability of the species inhabiting the property in the future.

4.2 Least Bell's Vireo

Background Information: The Least Bell's vireo occurs primarily in undisturbed riverine riparian habitats that support dense cover within 1-2 meters of the ground and a dense-stratified tree canopy. The species has been observed in low, dense riparian habitats along permanent and intermittent streams where it is typically associated with southern willow scrub, cottonwood forest, mule fat scrub, and woodland habitats. It is found along watercourses in Southern California below 1,500 feet.

Occurrence on the Site: Although, some riparian habitat is present on the site in the southern and central portions, these two areas do not appear to provide suitable habitat for the vireo. The tree canopies are not densely stratified and the understories' within 1-2 meters of the ground are relatively open. The species is not expected to occur on the property.

4.3 Southwestern Willow Flycatcher

Background Information: The Southwestern willow flycatcher has a relatively narrow distribution in Riverside County. It is restricted to riparian woodland habitats along streams and rivers with mature, dense stands of willows and cottonwoods. It may also occur adjacent to springs or bogs which supports dense stands of willows or alders. There are only a few recorded sightings of the species in Riverside County with most of these occurring along the Santa Ana River and along a few other streams (e.g., Temescal Wash).

Occurrence on the Site: A Southern willow and cottonwood riparian woodland occurs in the central part of the site. Numerous willows and about 40 cottonwoods were present; however, the riparian vegetation is not very dense and does not appear to provide the habitat that the species typically requires (e.g., dense stands of mature vegetation). Based on the existing conditions of the riparian habitat and the level of disturbance which has occurred on the site and in the surrounding area, the species is not expected to occur on the property.

4.4 Western Yellow-billed Cuckoo

Background Information: The cuckoo is found in riparian scrub and forested riparian habitats. It typically requires large un-disturbed tracks of riparian habitats where willow trees are the dominant species. A few low density populations have been documented in Riverside County, primarily along the Santa Ana River, Temescal Wash, Murrieta Creek, Temescal canyon, Temecula Creek, and San Timoteo Canyon.

Occurrence on the Site: The Western Yellow-billed Cuckoo was not observed in either riparian habitats; although, there is a remote possibility that the species may move onto the site in the future based on the presence of suitable habitat.

4.5 Riverside Fairy Shrimp

Background Information: The Riverside fairy shrimp has a narrow distribution and is restricted to deep seasonal vernal pools, ephemeral ponds, and some stock ponds. The

species requires warm-water pools that have low to moderate dissolved solids. The majority of the vernal pools where the species has been found are located in annual grasslands, which may be interspersed through chaparral and coastal age scrub communities.

Occurrence on the Site: No vernal pools or other ponds were observed on the site during the field investigations. Based on the absence of suitable habitat, the Riverside Fairy Shrimp is not expected to occur on the site.

4.6 Santa Rosa Plateau Fairy Shrimp

Background Information: This species is restricted to cool-water vernal pools which are formed on Southern Basalt Flows. These vernal pools were typically remain filled for extended time periods and the cool waters are clear to milky. This narrow habitat requirement is found only on the Santa Rosa Plateau; consequently, there is only one recorded populations of the species on the Plateau.

Occurrence on the Site: No vernal pools were noted on the site; consequently, the Santa Rosa Fairy shrimp is not expected to occur on the property.

4.7 Vernal Pool Fairy Shrimp

Background Information: The fairy shrimp is found in seasonal cool water vernal pools with low to moderate dissolved solids. There are four documented populations of the species including the Skunk Hollow area, Santa Rosa Plateau, Salt Creek, and near the Pechanga Indian Reservation.

Occurrence on the Site: Vernal pools do not occur on the site; consequently, the Vernal Pool Fairy Shrimp is not expected to inhabit the property.

5.0 IMPACTS AND MITIGATIONS

5.1 General Vegetations and Wildlife

Grading and construction activities would generate minimal impacts to the general biological resources which occur on the site. Development of the site would result in the conversion of the property to a residential development. Loss of the vegetation on the site would affect several wildlife species; although, the number of species that would be impacted is probably moderate. Direct impacts would include an increase in mortality for less mobile species (e.g., rodents, etc.), and displacement of mobile species (primarily birds) into adjacent habitats. The ability of displaced wildlife species to survive in adjacent habitats would be dependent upon the existing carrying capacity of adjacent habitats at the time of displacement; however, the number of species that would be displaced is very low and a significant increase in mortality is unlikely. Indirect impacts would include an increase in disturbance of daily and seasonal behavior of some species due to increased noise levels.

Impacts to the vegetation and wildlife communities are not expected to be significant. In addition, the proposed project will not generate significant cumulative impacts to the biological resources in the region.

5.2 Threatened, Endangered, and Species of Special Concern

The site does not support any populations of listed or sensitive plant or animal species. Although there are riparian areas which could potentially provide habitat for the Least Bell's vireo and Southwestern willow flycatcher, neither of these riparian habitats appear to provide prime habitat for these species. The project will not generate any adverse cumulative impacts to any listed or sensitive species which occur in the region. No protocol surveys are recommended for the property site.

5.3 Critical and Sensitive Habitat Finding

An oak woodland riparian habitat was observed along the southern boundary, and a Southern willow and cottonwood riparian area was present in the central portion of the site. No sensitive species were observed in either area. Both of these areas are considered important habitats and should be avoided, if possible, during development activities.

5.4 Application of CEQA Guidelines – Section 15370

Avoidance of Impacts: The project is not expected to generate any significant impacts, and the majority of vegetation on the site consists of agricultural species and invasive species.

Minimization of Impacts: Development of the site will have minimal impacts on native plant communities.

Rectifying Impacts: No mitigations are recommended for the project based on the existing conditions on the site; although, the two riparian areas should be avoided, if possible, during development of the site.

Impacts: Where possible, native vegetation will be utilized for on-site landscaping during development of the site.

Compensation for Impacts: No compensation for impacts are recommended based on the absence of any listed or sensitive species.

Monitoring Program: No monitoring programs are recommended for this project.

6.0 REFERENCES

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7.0 CERTIFICATION

I hereby certify that the statements furnished in this report present data and information required for this biological assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date

6-17-05

Signed:



Randall Arnold
Principal and Senior Biologist
RCA & Associates
15555 Main Street, #D4-235
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APPENDIX A
FIGURES AND TABLES

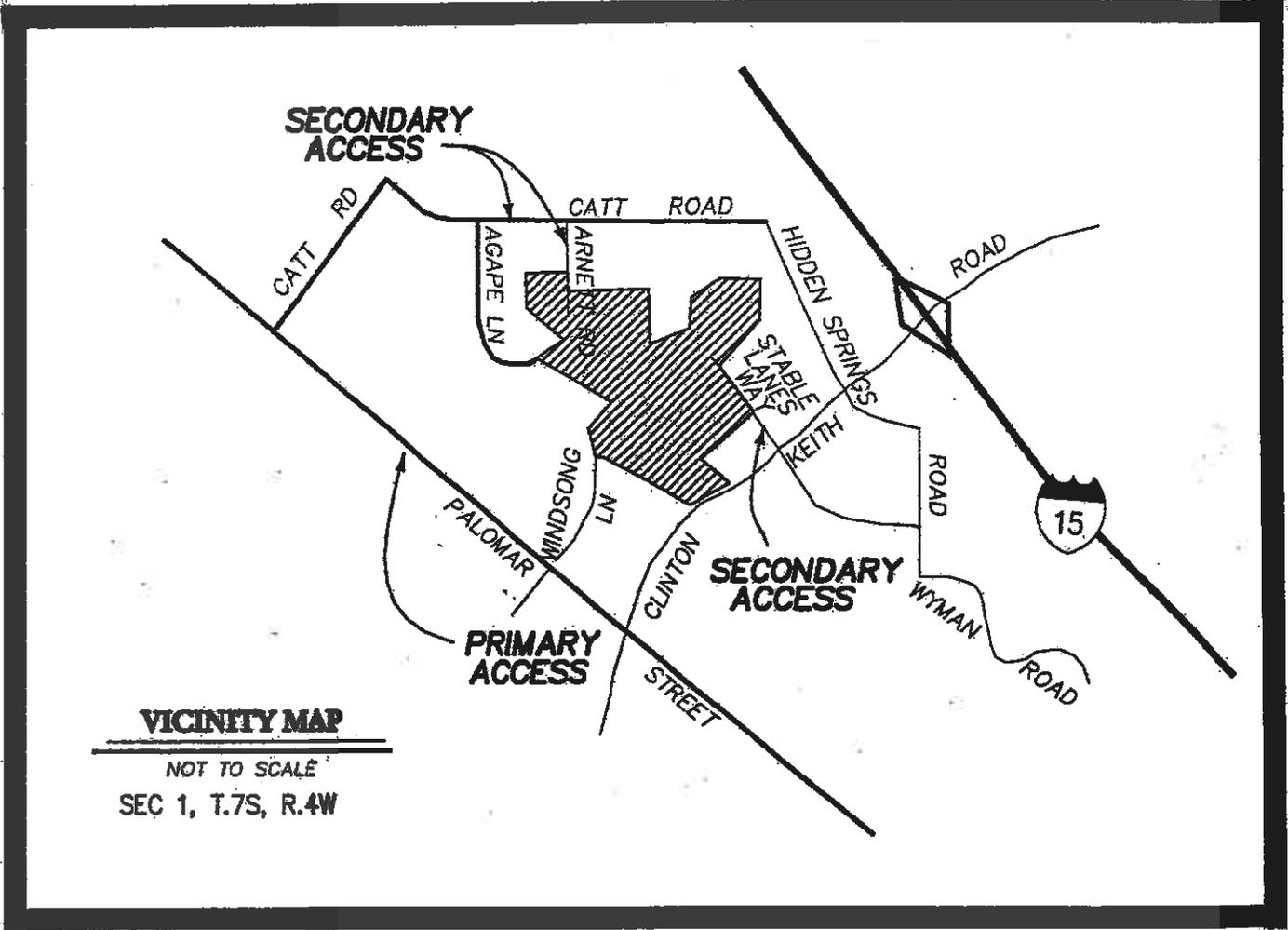


FIGURE 1

VICINITY MAP
N.T.S.

(Source: Thomas Bros. Maps, 2004)

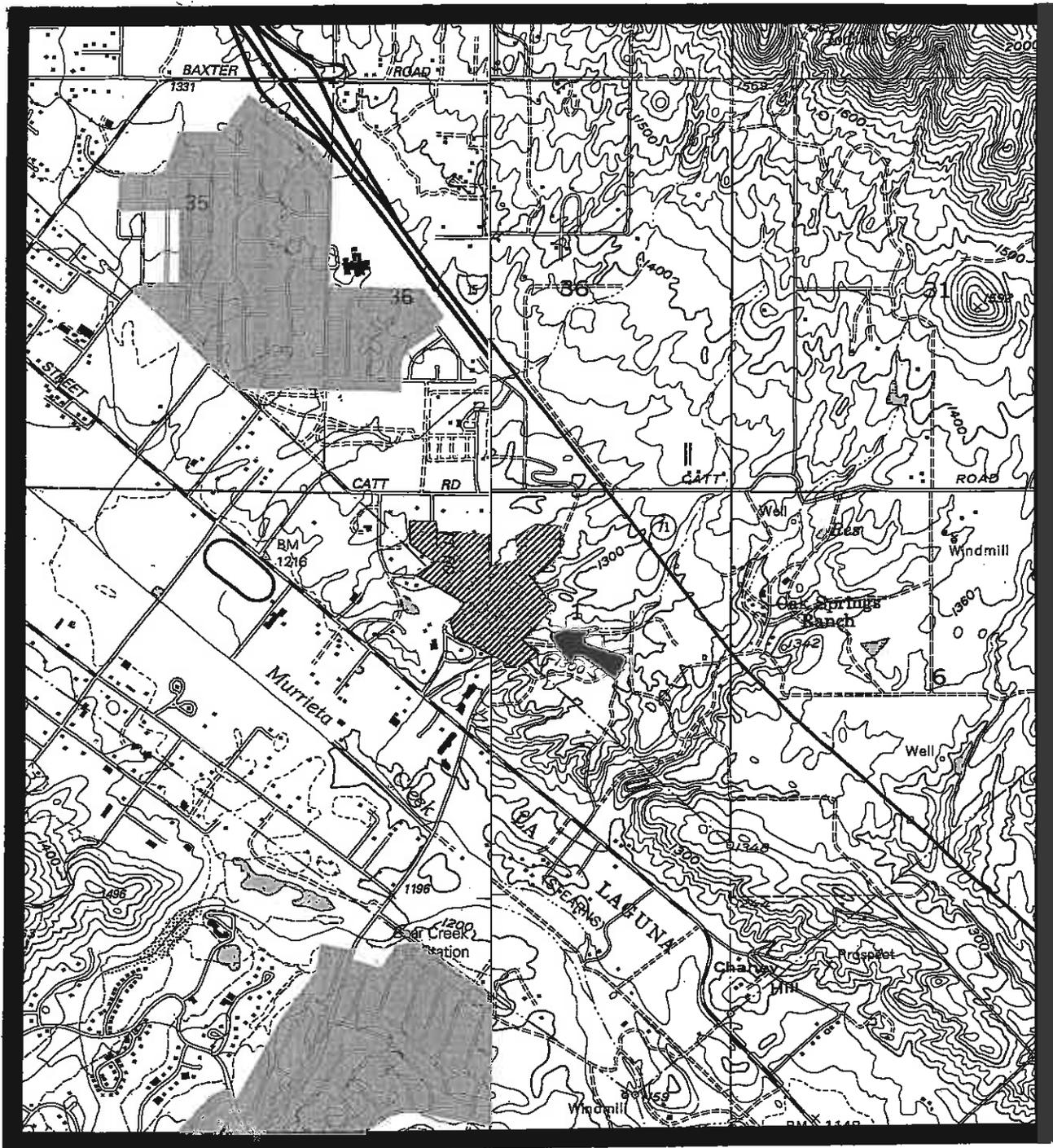


FIGURE 2

**LOCATION OF THE SITE
N.T.S.**

(Source: USGS Murrieta and Wildomar, CA Quads.)

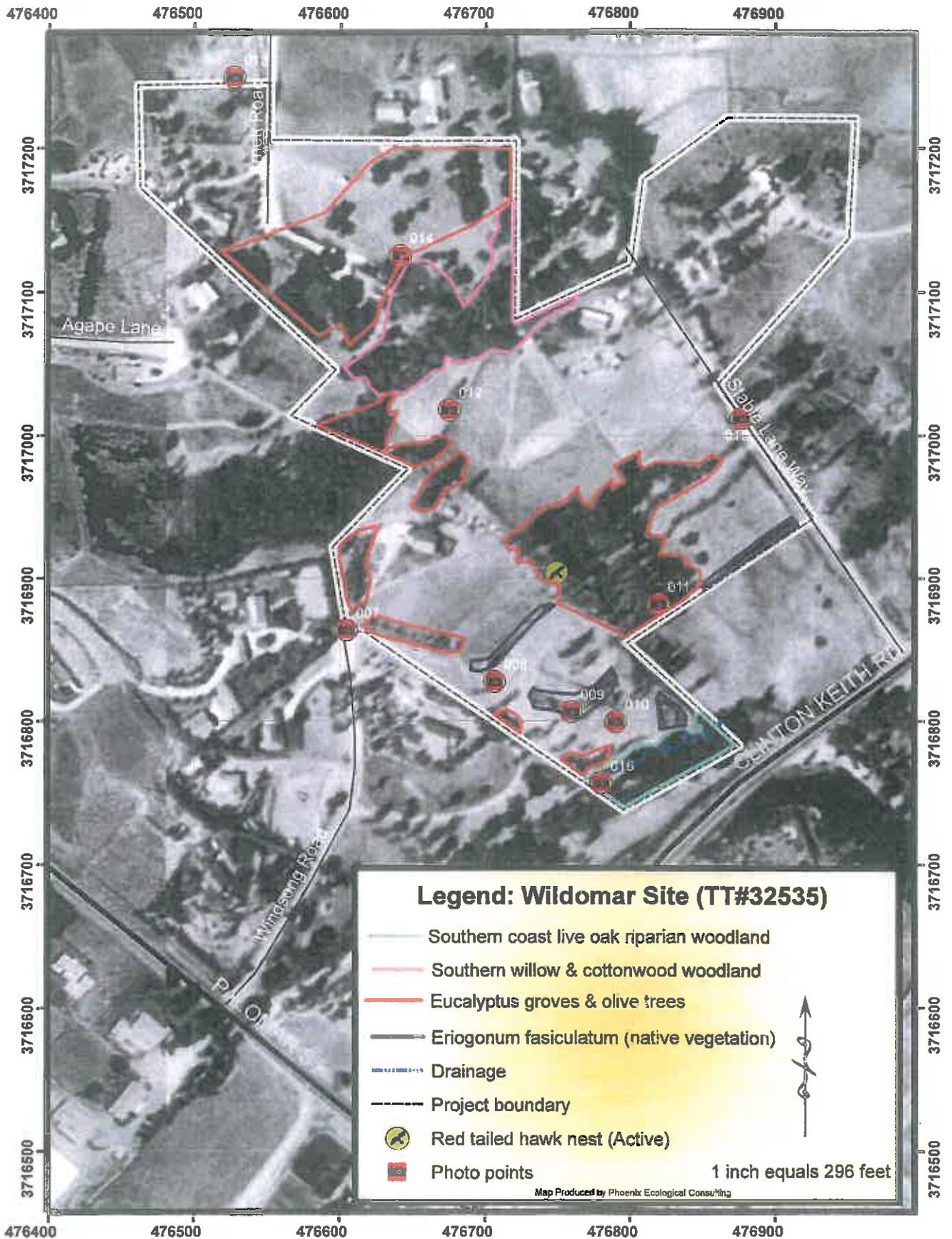


FIGURE 3



FIGURE 4

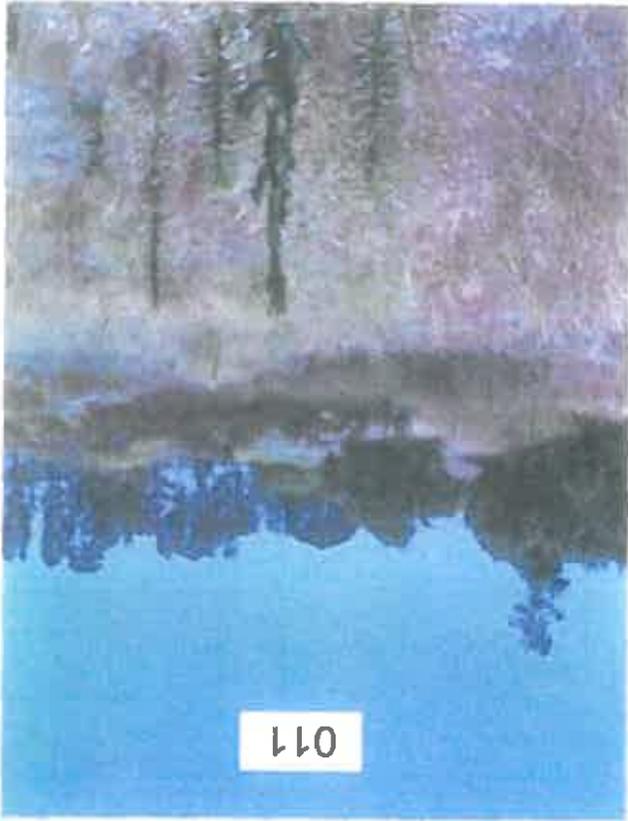


FIGURE 4, cont.



013



012.1



01A

FIGURE 4, cont.

TABLE 1

PLANT SPECIES OBSERVED ON THE PROPERTY SITE OR IN THE
IMMEDIATE AREA

<u>Scientific Name</u>	<u>Common Name</u>
<u>Herbaceous Species</u>	
<i>Amsinckia tessellate</i>	Fiddleneck
<i>Gutierrezia sarothrae</i>	Matchweed
<i>Helianthus</i> sp.	Sunflower
<i>Cirsium</i> sp.	Thistle
<i>Avena barbata</i>	Oats
<i>Bromus</i> sp.	Brome grasses
<i>Triticum aestivum</i>	Wheat
<i>Brassica tourneforti</i>	Mustard
<i>Salsola iberica</i>	Russian thistle
<i>Cynara cardunculus</i>	Artichoke thistle
<i>Atriplex</i> sp.	Saltbush
<i>Datura</i> sp.	Datura
<i>Euphorbia crenulata</i>	Dove weed
<i>Sambucus mexicana</i>	Elderberry
<i>Sisymbrium officinale</i>	Hedge mustard
<i>Marrubium vulgare</i>	Horehound
<i>Calystegia macrostegia</i>	Morning glory
<i>Sambucus glutinosa</i>	Mulefat
<i>Salix laevigata</i>	Red willow
<i>Nicotiana glauca</i>	Tree tobacco
<i>Melilotus alba</i>	White sweetclover
<i>Eriogonum fasciculatum</i>	Buckwheat
<i>Eucalyptus globulus</i>	Eucalyptus
<i>Quercus agrifolia</i>	Coast live oak
<i>Populus fremontii</i>	Cottonwood

Source: Munz, P.A. 1974. A Flora of Southern California. University of California Press. Berkeley, California. 1086 pp.

TABLE 2
WILDLIFE SPECIES OBSERVED ON THE PROPERTY SITE AND/OR
KNOWN TO OCCUR IN THE IMMEDIATE AREA

(Note: The following list is not intended to be a comprehensive list of every species which may occur in the region, but a list of some of the more common species in the general area.)

<u>Scientific Name</u>	<u>Common Name</u>
<u>Mammals</u>	
<i>*Spermophilus beecheyi</i>	California ground squirrel
<i>*Sylvilagus auduboni</i>	Desert cottontail
<i>Canis latrans</i>	Coyote
<i>Neotoma lepida</i>	Desert woodrat
<i>Mephitis mephitis</i>	Striped skunk
<i>Lynx rufus</i>	Bobcat
<i>Urocyon cinereoargenteus</i>	Gray fox
<i>Procyon lotor</i>	Raccoon
<i>Peromyscus maniculatus</i>	Deer mouse
<i>Peromyscus californicus</i>	California mouse
<i>Reithrodontomys megalotis</i>	Pocket mouse
<i>Thomomys bottae</i>	Botta's pocket gopher
<i>*Lepus californicus</i>	Blacktailed jackrabbit
<u>Birds</u>	
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Calypte costae</i>	Costa's hummingbird
<i>Calypte amna</i>	Anna's hummingbird
<i>*Sturnella neglecta</i>	Western meadowlark
<i>Mimus polyglottus</i>	Northern mockingbird
<i>*Callipepla Californica</i>	California quail
<i>*Zenaida macroura</i>	Mourning dove
<i>*Tyrannus verticalis</i>	Western kingbird
<i>Myiarchus cinerascens</i>	Ash-throated flycatcher
<i>*Aphelocoma coerulescens</i>	Scrub jay
<i>Spizella atrogularis</i>	Black-chinned sparrow
<i>*Passer domesticus</i>	House sparrow
<i>Amphispiza belli</i>	Sage sparrow
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Carpodacus mexicanis</i>	House finch
<i>Icterus bullockii</i>	Bullock's oriole

TABLE 2, continued

<u>Scientific Name</u>	<u>Common Name</u>
<i>*Buteo jamaicensis</i>	Red-tailed hawk
<i>Falco sparverius</i>	American kestrel
<i>Bufo virginianus</i>	Great horned owl
<i>Circus cyaneus</i>	Northern harrier
<i>Corvus corax</i>	Common raven
<i>Turdus migratorius</i>	American robin
<i>Sturnus vulgaris</i>	European starling
<i>*Corvus brachyrhynchos</i>	American crow
<i>*Sturnella neglecta</i>	Western meadowlark
<i>*Cathartes aura</i>	Turkey vulture
<i>Melanerpes formicivorus</i>	Acorn woodpecker

Reptiles and Amphibians

<i>*Sceloporus occidentalis</i>	Western fence lizard
<i>*Uta stansburiana</i>	Side-blotched lizard
<i>Sceloporus orcuttii</i>	Granite spiny lizard
<i>Pituophis melanoleucus</i>	Gopher snake
<i>Thamnophis sirtalis</i>	Common garter snake
<i>Crotalus viridis</i>	Western rattlesnake
<i>Lampropeltis getulus</i>	Common kingsnake
<i>Scaphiopus hammondi</i>	Spadefoot toad
<i>Taricha torosa</i>	Newt

* = Indicates species was observed during the survey.

SOURCES:

- (1) Blair, W.F. 1968. Vertebrates of the United States. McGraw-Hill, Inc. New York. 616 pp.
- (2) Whitaker, J. O. 1980. The Audubon Society Field Guide to North American Mammals. A. A. Knopf, New York. 745 pp.
- (3) NGS. 1987. Field Guide to the Birds of North America. The National Geographic Society. 464 pp.

Appendix B

GLA Delineation Report

GLENN LUKOS ASSOCIATES

Regulatory Services



August 12, 2013

Mr. Adam Smith
CV Inland Investments 1, LP
1900 Quail Street
Newport Beach, California 92660

SUBJECT: Jurisdictional Delineation of the Tract 32535 Residential Development Project, a 31.17-Acre Property Located in the City of Wildomar, Riverside County, California.

Dear Mr. Smith:

This letter report summarizes our preliminary findings of U.S. Army Corps of Engineers (Corps), San Diego Regional Water Quality Control Board (Regional Board), and California Department of Fish and Wildlife (CDFW) jurisdiction for the above-referenced property.¹

The Tract 32535 Residential Development Project (Project) comprises approximately 31.17 acres of land, and is located within Assessor's Parcel Numbers 380-100-004, 380-100-005, 380-100-006, 380-110-005, 380-110-006, 380-120-001, 380-120-002, 380-130-002, and 380-130-018. The Project site is located at Latitude 33.594419 and Longitude -117.251191 within Section 1, Township 7 South, and Range 4 West. The Project is bounded by Catt Road to the north, Clinton Keith Road to the south, Hidden Springs Road to the east, and rural residential development to the west, within the City of Wildomar, Riverside County, California [Exhibit 1]. The Project site contains one blue-line drainage (as depicted on the U.S. Geological Survey (USGS) topographic maps Wildomar, California (dated 1953 and photorevised in 1988) and Murrieta, California (dated 1953 and photorevised in 1979) [Exhibit 2].

On February 22, 2013 and March 6, 2013, regulatory specialists from Glenn Lukos Associates, Inc. (GLA) examined the Project site to determine the limits of Corps jurisdiction pursuant to

¹ This report presents our best effort at estimating the subject jurisdictional boundaries using the most up-to-date regulations and written policy and guidance from the regulatory agencies. Only the regulatory agencies can make a final determination of jurisdictional boundaries. If a final jurisdictional determination is required, GLA can assist in getting written confirmation of jurisdictional boundaries from the agencies.

Mr. Adam Smith
CV Inland Investments 1, LP
August 12, 2013
Page 2

Section 404 of the Clean Water Act (CWA), Regional Board jurisdiction pursuant to Section 401 of the CWA and Section 13260 of the California Water Code (CWC) [the Porter-Cologne Act], and CDFW jurisdiction pursuant to Division 2, Chapter 6, Sections 1600-1616 of the Fish and Game Code. Enclosed are two 300-scale maps [Exhibits 3A, and 3B], which depict the limits of Corps, Regional Board, and CDFW jurisdiction. Photographs to document the topography, vegetative communities, and general widths of each of the waters are provided as Exhibit 4 and a soils map is included as Exhibit 5. Wetland data sheets are attached as Appendix A.

Potential Corps and Regional Board jurisdiction associated with the Project site totals 0.99 acre, of which 0.90 acre consists of jurisdictional wetlands. A total of 1,253 linear feet of streambed is present.

Potential CDFW jurisdiction associated with the Project site totals 2.04 acres, of which 1.98 acres consist of vegetated riparian habitat. A total of 1,253 linear feet of streambed is present.

I. METHODOLOGY

Prior to beginning the field delineation a 200-scale color aerial photograph, a 200-scale topographic base map of the property, and the previously cited USGS topographic maps were examined to determine the locations of potential areas of Corps/Regional Board/CDFW jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats on the site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual² (Wetland Manual) and the Corps' 2008 Arid West Supplement to the 1987 Wetland Manual. While in the field, the jurisdictional areas were recorded onto a 200-scale color aerial photograph using visible landmarks. Other data were recorded onto wetland data sheets.

The Soil Conservation Service (SCS)³ has mapped the following soil types as occurring within the general vicinity of the project site:

Greenfield sandy loam, 2 to 8 percent slopes, eroded 9GyC2)

Soils of the Greenfield series consist of well-drained soils on terraces and alluvial fans. These soils developed in alluvium consisting mainly of granitic materials. The upper 14 inches consist

² Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

³ SCS is now known as the National Resource Conservation Service or NRCS.

of brown (10YR 5/3) sandy loam when dry and dark brown (10YR 3/3) when moist. Permeability of this soil is moderate. Runoff is slow to medium and the hazard of erosion is slight to moderate. This soil is used for dry land grain and pasture, for irrigated potatoes, peaches, citrus, alfalfa, truck crops, and for home sites.

Hanford coarse sandy loam, 2 to 8 percent slopes (HcC)

Soils of the Hanford series consist of well-drained and somewhat excessively-drained soils on alluvial fans. These soils developed in alluvium consisting of granitic materials. The upper eight inches consist of grayish-brown (10YR 5/2) coarse sandy loam when dry and very dark grayish-brown (10YR 3/2) when moist. Permeability of this soil is moderately rapid. Runoff is slow to medium and the hazard of erosion is slight to moderate. This soil is used for dry land grain and pasture, for irrigated citrus, alfalfa, potatoes, and for home sites.

Monserate sandy loam, 8 to 15 percent slopes, eroded (MmD2)

Soils of the Monserate series consist of well-drained soils that developed in alluvium consisting of granitic materials. These soils occur on terraces and on old alluvial fans. Included with this soil are small areas that are 36 to 54 inches deep to the silica-cemented pan. The surface layer is often fine sandy loam. Permeability of this soil is moderately rapid. Runoff is medium and the hazard of erosion moderate. This soil is used for dry land grain and pasture, for irrigated citrus, and nonfarm purposes.

Placentia fine sandy loam, 5 to 15 percent slopes (PID)

Soils of the Placentia series consist of moderately well-drained soils on alluvial fans and terraces. These soils developed in alluvium consisting of granitic materials. In a typical profile, the surface layer is brown and pale-brown fine sandy loam and loam. Elevations range from 600 to 2,200 feet. Runoff is medium and the hazard of erosion is moderate. Natural fertility is low. This soil is used for dry land grain and pasture and for nonfarm purposes.

Ramona sandy loam, 0 to 5 percent slopes, severely eroded (RaB3)

Soils of the Ramona series consist of well-drained soils on alluvial fans and terraces. These soils developed in alluvium consisting of granitic materials. Elevations range from 500 to 3,500 feet. In a typical profile, the surface layer is brown sandy loam about 6 to 10 inches thick. Runoff is medium and the hazard of erosion is moderate. Natural fertility is moderate. This soil is used for dry land grain and pasture, for irrigated citrus, alfalfa, potatoes, and for home sites.

Ramona and Buren sandy loams, 15 to 25 percent slopes, severely eroded (RmE3)

These soils occupy convex, dissected, old terraces. About 45 percent of the total acreage is Ramona sandy loam and about 40 percent is Buren sandy loam. The remaining profile generally consists of less eroded soils having a sandy loam surface layer 10 to 16 inches thick. Runoff is rapid and the erosion hazard is high. The soils in this unit are used for dry land pasture and, where the climate is favorable, for irrigated citrus.

Ramona and Buren loams, 5 to 25 percent slopes, severely eroded (RnE3)

These soils occur on convex, dissected terraces. Ramona loam makes up approximately 55 percent of the total acreage and Buren loam makes up approximately 35 percent. The remaining 10 percent consists of small areas of less eroded Ramona and Buren soils. Runoff is rapid and erosion is high. Vegetation primarily consists of annual grasses, forbs, chamise, salvia, and flat-top buckwheat. These soils are used for dry land pasture and, in areas of favorable climate, for irrigated citrus.

San Timoteo loam, 8 to 25 percent slopes, eroded (SmE2)

This rolling to hilly soil occurs on dissected marine deposits. Elevations typically range from 1,200 to 2,500 feet. In a typical profile, the surface layer is pale-brown and light-gray loam about 14 inches thick. Permeability of this soil is moderate. Runoff is medium and the hazard of erosion is moderate. Natural fertility is moderate. The San Timoteo soil is used for dry land pasture and grain, as well as a source of water.

None of these soil units are identified as hydric in the SCS's publication, Hydric Soils of the United States⁴. None of these soil units are identified as hydric in the SCS's Hydric Soils Lists for Western Riverside County; however the Hydric Soils List for Western Riverside County does identify Placentia fine sandy loam, 5 to 15 percent slopes (PID) as hydric when occurring in hydric depressions if the area is frequently ponded for long durations or very long durations during the growing season.

⁴ United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

JURISDICTION

A. Corps Jurisdiction

Pursuant to Section 404 of the CWA, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters, which are subject to the ebb and flow of the tide;*
- (2) All interstate waters including interstate wetlands;*
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
 - (ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
 - (iii) Which are used or could be used for industrial purpose by industries in interstate commerce...**
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition;*
- (5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
- (6) The territorial seas;*
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

- (8) Waters of the United States do not include prior converted cropland.⁵ Notwithstanding the determination of an area's status as prior converted cropland by any*

⁵ The term "prior converted cropland" is defined in the Corps' Regulatory Guidance Letter 90-7 (dated September 26, 1990) as "wetlands which were both manipulated (drained or otherwise physically altered to remove excess

other federal agency, for the purposes of the Clean Water Act, the final authority regarding CWA jurisdiction remains with the U.S. Environmental Protection Agency (EPA).

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark (OHWM) which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

1. Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, EPA asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of “waters of the United States” in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the CWA.

The written opinion notes that the court’s previous support of the Corps’ expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc.*) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season....” [Emphasis added.]

In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the CWA (regardless of any interstate commerce connection). However, the Corps and U.S. Environmental Protection Agency (EPA) have issued a joint memorandum, which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

2. **Rapanos v. United States and Carabell v. United States**

On June 5, 2007, the EPA and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the CWA in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For project sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands as set forth in the chart below, the Corps must apply the significant nexus standard, that includes the data set forth in the *Approved Jurisdictional Determination Form*.

For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps. The information pertaining to isolated waters is also included on the *Approved Jurisdictional Determination Form*.

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters
- 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 (e.g., typically three months)
- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors

3. Corps Preliminary Jurisdictional Determination

A *Corps Preliminary Jurisdictional Determination Form* may be used to concede Corps jurisdiction where all streambeds within the project area are considered Corps jurisdictional waters. The project would be able to move forward pursuant to Corps Regulatory Guidance Letter (RGL) 08-02, issued on June 26, 2008, which allows the Corps to issue preliminary jurisdictional determinations (Preliminary JD) for a project. A Preliminary JD allows a project to move forward by setting aside/voluntarily waiving questions regarding CWA jurisdiction over drainages onsite in the interest of allowing expeditiously obtaining a Section 404 Permit.

As stated in RGL 08-02:

While a landowner, permit applicant, or other affected party can elect to request and obtain an approved JD, he or she can also decline to request an approved JD, and instead obtain a Corps individual or general permit authorization based on either a preliminary JD, or, in appropriate circumstances (such as authorizations by non-reporting nationwide general permits), no JD whatsoever. The Corps will determine what form of JD is appropriate for any particular circumstance based on all the relevant factors, to include, but not limited to, the applicant's preference, what kind of permit authorization is being used (individual permit versus general permit), and the nature of the proposed activity needing authorization.

The Corps typically completes Preliminary JDs within 60 days of receipt of the request for such a determination. If the Corps project manager cannot complete the Preliminary JD within the 60-day timeframe, they must provide their supervisor, who would also provide the applicant, with a schedule to complete the determination (i.e., unlike the Rapanos significant nexus guidelines, there is a specific timeframe to complete the Preliminary JD and move forward with the jurisdictional determination, without uncertainty, and the EPA will not be involved with the Preliminary JD process as the Corps is not required to coordinate with the EPA to review Preliminary JDs).

4. Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “waters of the United States”) is defined at 33 CFR 328.3(b) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions.” In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual and Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands⁶);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with “problematic hydrophytic vegetation”, which require a minimum of 14 days of ponding to be considered a wetland.

⁶ Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

Mr. Adam Smith
CV Inland Investments 1, LP
August 12, 2013
Page 10

B. Regional Water Quality Control Board

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.⁷ The memorandum states:

California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certification will be required...

The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states....

Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." (Water Code § 13260(a)(1) (emphasis added).) The term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code § 13050(e).) The U.S. Supreme Court's ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the COE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing WDRs (or waivers of WDRs) in the absence of a request for 401 certification....

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to "waste" and therefore subject to the authority of the Porter Cologne Water Quality Act. However, while providing a recounting of the Act's definition of waters of the United States, this memorandum fails to also reference the Act's own definition of waste:

⁷ Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

"Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

The lack of inclusion of a reference to "fill material," "dirt," "earth" or other similar terms in the Act's definition of "waste," or elsewhere in the Act, suggests that no such association was intended. Thus, the Chief Counsel's memorandum signals that the SWRCB is attempting to retain jurisdiction over discharge of fill material into isolated waters of the United States by administratively expanding the definition of "waste" to include "fill material" without actually seeking amendment of the Act's definition of waste (an amendment would require action by the state legislature). Consequently, discharge of fill material into waters of the State not subject to the jurisdiction of the Corps pursuant to Section 404 of the Clean Water Act may require authorization pursuant to the Porter Cologne Act through application for waste discharge requirements (WDRs) or through waiver of WDRs, despite the lack of a clear regulatory imperative.

C. California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1616 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFW's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFW jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. The CDFW Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways...
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by [CDFW] as natural waterways...

- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions...

Thus, CDFW jurisdictional limits closely mirror those of the Corps. Exceptions are CDFW's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status.

III. RESULTS

A. Corps Jurisdiction

Potential Corps jurisdiction associated with the Project site totals 0.99 acre, of which 0.90 acre consists of jurisdictional wetlands. A total of 1,253 linear feet of streambed is present. Potential Corps jurisdiction within the Project site is limited to three drainages, described herein as Drainage 1, Drainage 2, and Drainage 3. The drainages on site are considered ephemeral streambeds that exhibit an OHWM with several characteristics of stream flow, including destruction of terrestrial vegetation, terracing, change in soil characteristics, debris wracking, and/or water marks. As a result, the drainages exhibit the potential for regulation by the Corps pursuant to Section 404 of the CWA. The boundaries of Corps waters are depicted in Exhibit 3A. Table One below outlines the total acreage and linear footage of potential Corps jurisdiction on site. Drainage 1, Drainage 2, and Drainage 3 are further described below.

Table One: Potential Corps Jurisdiction On Site

Drainage	Corps Non-Wetland Waters (Acres)	Corps Jurisdictional Wetlands (Acres)	Total Corps Waters (Acres)	Total Linear Feet (Feet)
Drainage 1	0	0.90	0.90	669
Drainage 2	0.07	0	0.07	335
Drainage 3	0.02	0	0.02	249
Total	0.09	0.90	0.99	1,253

1. Drainage 1

Potential Corps jurisdiction associated with Drainage 1 totals 0.90 acre, all of which consists of jurisdictional wetlands. A total of 669 linear feet of streambed is present.

Drainage 1 is an ephemeral drainage that enters the west-central portion of the Project site from the north and traverses the Project site from east to southwest for approximately 669 linear feet before discharging into a catch basin that is located just west of the Project limits. Historic aerial imagery suggests that this catch basin was constructed somewhere between 2005 and 2006 in order to capture runoff from the adjacent residential development⁸. Flows leaving the catch basin are tributary to Murrieta Creek, an RPW, which is tributary to the Santa Margarita River, an RPW, which is tributary to the Pacific Ocean, a TNW. Drainage 1 carries storm water flows and surface runoff from adjacent residential and commercial development located east of the Project site. Drainage 1 supports an OHWM ranging from three to nine feet in width as evidenced by the presence of litter, debris wracks, changes in soil characteristics, and shelving.

Areas abutting and within Drainage 1 exhibited several seeps as evidenced by the presence of high ground water, a predominance of wetland vegetation, and hydric soils. Although aerial imagery suggests that Drainage 1 is a natural feature, our field investigation indicates that over watering and/or a recently-damaged underground pipeline from the adjacent property has partially contributed to the creation of an approximate 0.90-acre wetland area (along with the seeps).

Drainage 1 is dominated by a canopy of southern willow scrub including arroyo willow (*Salix lasiolepis*, FACW), Gooding's black willow (*Salix gooddingii*, FACW), mulefat (*Baccharis salicifolia*, FAC), Fremont cottonwood (*Populus fremontii*, FAC), and western sycamore (*Platanus racemosa*, FAC). Non-native species intermixed within the drainage and along the upper banks include acacia (*Acacia longifolia*, FACU), Mexican fan palm (*Washingtonia robusta*, FAC), and eucalyptus (*Eucalyptus* ssp., UPL). Dominant emergent riparian species include Mexican rush (*Juncus mexicanus*, FACW), yerba mansa (*Anemopsis californica*, OBL), basket rush (*Juncus textillus*, FACW), water cress (*Nasturtium officinale*, OBL), duck weed (*Lemna minor*, OBL), false carrot (*Yabea microcarpa*, FACU), curly dock (*Rumex crispus*, FAC), common cattail (*Typha latifolia*, OBL), and fringed willow herb (*Epilobium ciliatum*, FACW). Non-native upland species include red brome (*Bromus madritensis* ssp. *rubens*, UPL) and oats (*Avena sativa*, UPL). Drainage 1 exhibited saturation within 12 inches of the soil surface as well as hydric soil characteristics including low chroma colors with common, faint mottles and a sulfidic odor in the lower horizon. Wetland data sheets are attached as Appendix A.

⁸ Historical imagery obtained from Google Earth 2013.

2. Drainage 2

Potential Corps jurisdiction associated with Drainage 2 totals 0.07 acre, none of which consists of jurisdictional wetlands. A total of 335 linear feet of streambed is present.

Drainage 2 is an ephemeral drainage that enters the Project site from the southeast, and traverses the site in a westerly direction for approximately 335 linear feet before discharging offsite. Ultimately, Drainage 2 is tributary to Murrieta Creek, an RPW, which is tributary to the Santa Margarita River, an RPW, which is tributary to the Pacific Ocean, a TNW. Drainage 2 supports storm water flows and surface runoff from adjacent residential and commercial development located east of the Project site. Drainage 2 supports an OHWM ranging from eight to ten (10) feet in width as evidenced by the presence of litter, debris wracks, changes in soil characteristics, and shelving.

Drainage 2 is dominated by a canopy of coast live oak and eucalyptus woodland. Vegetation within Drainage 2 includes coast live oak (*Quercus agrifolia*, UPL), eucalyptus (*Eucalyptus* ssp., UPL), and scattered stands of mulefat (*Baccharis salicifolia*, FAC). This area exhibits no evidence of hydric soils; however, flowing water from urban runoff and recent rainfall was present during the course of our field delineation.

3. Drainage 3

Potential Corps jurisdiction associated with Drainage 3 totals 0.02 acre, none of which consists of jurisdictional wetlands. A total of 249 linear feet of streambed is present.

Drainage 3 is an offsite ephemeral drainage located just east of Stable Lanes Way and adjacent to the southeastern portion of the Project site. Although this drainage is not associated with the onsite portion of the Project, it may be impacted as a result of offsite Project-related road improvements. As a result, this offsite portion of the Project was analyzed during the course of our field investigation. Drainage 3 flows from east to west for approximately 249 linear feet, before dissipating as scattered sheet flow across Stable Lanes Way. At this point, signs of an OHWM are no longer discernible. Ultimately, Drainage 3 is tributary to Drainage 2, which is tributary to Murrieta Creek, an RPW, which is tributary to the Santa Margarita River, an RPW, which is tributary to the Pacific Ocean, a TNW. Drainage 3 supports storm water flows and surface runoff from the adjacent residential and commercial development located east of the Project site. The drainage supports an OHWM averaging four feet in width as evidenced by the presence of litter, debris wracks, changes in soil characteristics, and shelving.

Drainage 3 is generally unvegetated with a canopy of eucalyptus (*Eucalyptus* spp., UPL) and non-native grasses and forbes along the upper banks. This area exhibits no evidence of hydrophytic vegetation and was dry during the course of our field investigation.

B. Regional Water Quality Control Board Jurisdiction

Drainage 1, Drainage 2, and Drainage 3 have been determined to be potential Corps jurisdictional waters subject to regulation pursuant to Section 401 and 404 of the CWA; therefore, these drainages do not need to be addressed separately pursuant to Section 13260 of the CWC, the Porter-Cologne Act.

Potential Regional Board jurisdiction associated with the Project site totals 0.99 acre, of which 0.90 acre consists of jurisdictional wetlands. A total of 1,253 linear feet of streambed is present. A graphic depicting the limits of potential Regional Board jurisdiction is attached as Exhibit 3A. Table Two below outlines the total acreage and linear footage of potential Regional Board jurisdiction on site.

Table Two: Potential Regional Board Jurisdiction On Site

Drainage	Regional Board Non-Wetland Waters (Acres)	Regional Board Jurisdictional Wetlands (Acres)	Total Regional Board Waters (Acres)	Total Linear Feet (Feet)
Drainage 1	0	0.90	0.90	669
Drainage 2	0.07	0	0.07	335
Drainage 3	0.02	0	0.02	249
Total	0.09	0.90	0.99	1,253

C. CDFW Jurisdiction

Potential CDFW jurisdiction associated with the Project site totals 2.04 acres, of which 1.98 acres consist of vegetated riparian habitat. A total of 1,253 linear feet of streambed is present. Potential CDFW jurisdiction within the Project site is limited to three drainages, described herein as Drainages 1, 2, and 3. The drainages on site are considered ephemeral streambeds that exhibit a high water mark (HWM) with several characteristics of stream flow, including destruction of terrestrial vegetation, terracing, debris wracking, water marks, and the presence of a defined bed, bank, and channel. As a result, the drainages exhibit the potential for regulation by the CDFW

pursuant to Sections 1600-1616 of the Fish and Game Code. The boundaries of CDFW waters are depicted in Exhibit 3B. Table Three below outlines the total acreage and linear footage of potential CDFW jurisdiction on site. Drainages 1, 2, and 3 are further described below.

Table Three: Potential CDFW Jurisdiction On Site

Drainage	Total CDFW Unvegetated Streambed (Acres)	Total CDFW Vegetated Riparian Habitat (Acres)	Total CDFW Jurisdiction (Acres)	Total Linear Feet (Feet)
Drainage 1	0	1.71	1.71	669
Drainage 2	0.04	0.27	0.31	335
Drainage 3	0.02	0	0.02	249
Total	0.06	1.98	2.04	1,253

1. Drainage 1

Potential CDFW jurisdiction associated with Drainage 1 totals 1.71 acres, all of which consists of vegetated riparian habitat. A total of 669 linear feet of streambed is present.

Drainage 1 is an ephemeral drainage that enters the west-central portion of the Project site from the north and traverses the Project site from east to southwest for approximately 669 linear feet before discharging into a catch basin that is located just west of the Project limits. Historic aerial imagery suggests that this catch basin was constructed somewhere between 2005 and 2006 in order to capture runoff from the adjacent residential development⁹. Flows leaving the catch basin are tributary to Murrieta Creek, which is tributary to the Santa Margarita River, which is tributary to the Pacific Ocean. Drainage 1 carries storm water flows and surface runoff from adjacent residential and commercial development located east of the Project site. Drainage 1 supports a HWM as evidenced by the presence of bed, bank, and channel.

Areas adjacent to and within Drainage 1 exhibited several seeps as evidenced by the presence of high ground water, a predominance of wetland vegetation, and hydric soils. Although aerial imagery suggests that Drainage 1 is a natural feature, our field investigation indicates that over watering and/or a recently-damaged underground pipeline from the adjacent property has partially contributed to the creation of an approximate 1.71-acre riparian area.

Drainage 1 is dominated by a canopy of southern willow scrub including arroyo willow (*Salix lasiolepis*, FACW), Gooding's black willow (*Salix goodingii*, FACW), mulefat (*Baccharis*

⁹ Historical imagery obtained from Google Earth 2013.

salicifolia, FAC), Fremont cottonwood (*Populus fremontii*, FAC), and western sycamore (*Platanus racemosa*, FAC). Non-native species intermixed within the drainage and along the upper banks include acacia (*Acacia longifolia*, FACU), Mexican fan palm (*Washingtonia robusta*, FAC), and eucalyptus (*Eucalyptus* ssp., UPL). Dominant emergent riparian species include Mexican rush (*Juncus mexicanus*, FACW), yerba mansa (*Anemopsis californica*, OBL), basket rush (*Juncus textillus*, FACW), water cress (*Nasturtium officinale*, OBL), duck weed (*Lemna minor*, OBL), false carrot (*Yabea microcarpa*, FACU), curly dock (*Rumex crispus*, FAC), common cattail (*Typha latifolia*, OBL), and fringed willow herb (*Epilobium ciliatum*, FACW). Non-native upland species include red brome (*Bromus madritensis* ssp. *rubens*, UPL) and oats (*Avena sativa*, UPL).

2. Drainage 2

Potential CDFW jurisdiction associated with Drainage 2 totals 0.31 acre, of which 0.27 acre consists of vegetated riparian habitat. A total of 335 linear feet of streambed is present.

Drainage 2 is an ephemeral drainage that enters the Project site from the southeast, and traverses the site in a westerly direction for approximately 335 linear feet before discharging offsite. Ultimately, Drainage 2 is tributary to Murrieta Creek, which is tributary to the Santa Margarita River, which is tributary to the Pacific Ocean. Drainage 2 supports storm water flows and surface runoff from adjacent residential and commercial development located east of the Project site. Drainage 2 supports a HWM as evidenced by the presence of bed, bank, and channel.

Drainage 2 is dominated by a canopy of coast live oak and eucalyptus woodland. Vegetation within Drainage 2 includes coast live oak (*Quercus agrifolia*, UPL), eucalyptus (*Eucalyptus* ssp., UPL), and scattered stands of mulefat (*Baccharis salicifolia*, FAC). This area exhibited flowing water during the course of our field delineation.

3. Drainage 3

Potential CDFW jurisdiction associated with Drainage 3 totals 0.02 acre, none of which consists of vegetated riparian habitat. A total of 249 linear feet of streambed is present.

Drainage 3 is an offsite ephemeral drainage located just east of Stable Lanes Way and adjacent to the southeastern portion of the Project site. Although this drainage is not associated with the onsite portion of the Project, it may be impacted as a result of offsite Project-related road improvements. As a result, this offsite portion of the Project was analyzed during the course of our field investigation. Drainage 3 flows from east to west for approximately 249 linear feet, before dissipating as scattered sheet flow across Stable Lanes Way. At this point, signs of a HWM are no longer discernible. Ultimately, Drainage 3 is tributary to Drainage 2, which is

Mr. Adam Smith
CV Inland Investments 1, LP
August 12, 2013
Page 18

tributary to Murrieta Creek, which is tributary to the Santa Margarita River, which is tributary to the Pacific Ocean. Drainage 3 supports storm water flows and surface runoff from the adjacent residential and commercial development located east of the Project site. The drainage supports a HWM averaging four feet in width as evidenced by the presence of bed, bank, and channel.

Drainage 3 is generally unvegetated with a canopy of eucalyptus (*Eucalyptus* spp., UPL) and non-native grasses and forbes along the upper banks. This area was dry during the course of our field delineation.

DISCUSSION

A. Impact Analysis

An analysis of impacts will be performed, based upon this delineation and the current project design (or design alternative) upon the client's request. This analysis will be provided as a separate memo and accompanying map.

If you have any questions about this letter report, please contact Lesley Lokovic at (949) 837-0404 Ext 44.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.



Lesley Lokovic
Regulatory Specialist

Exhibit 1

Regional Map

Source: ESRI World Street Map



**TRACT 32535
RESIDENTIAL DEVELOPMENT PROJECT**

Regional Map

GLENN LUKOS ASSOCIATES

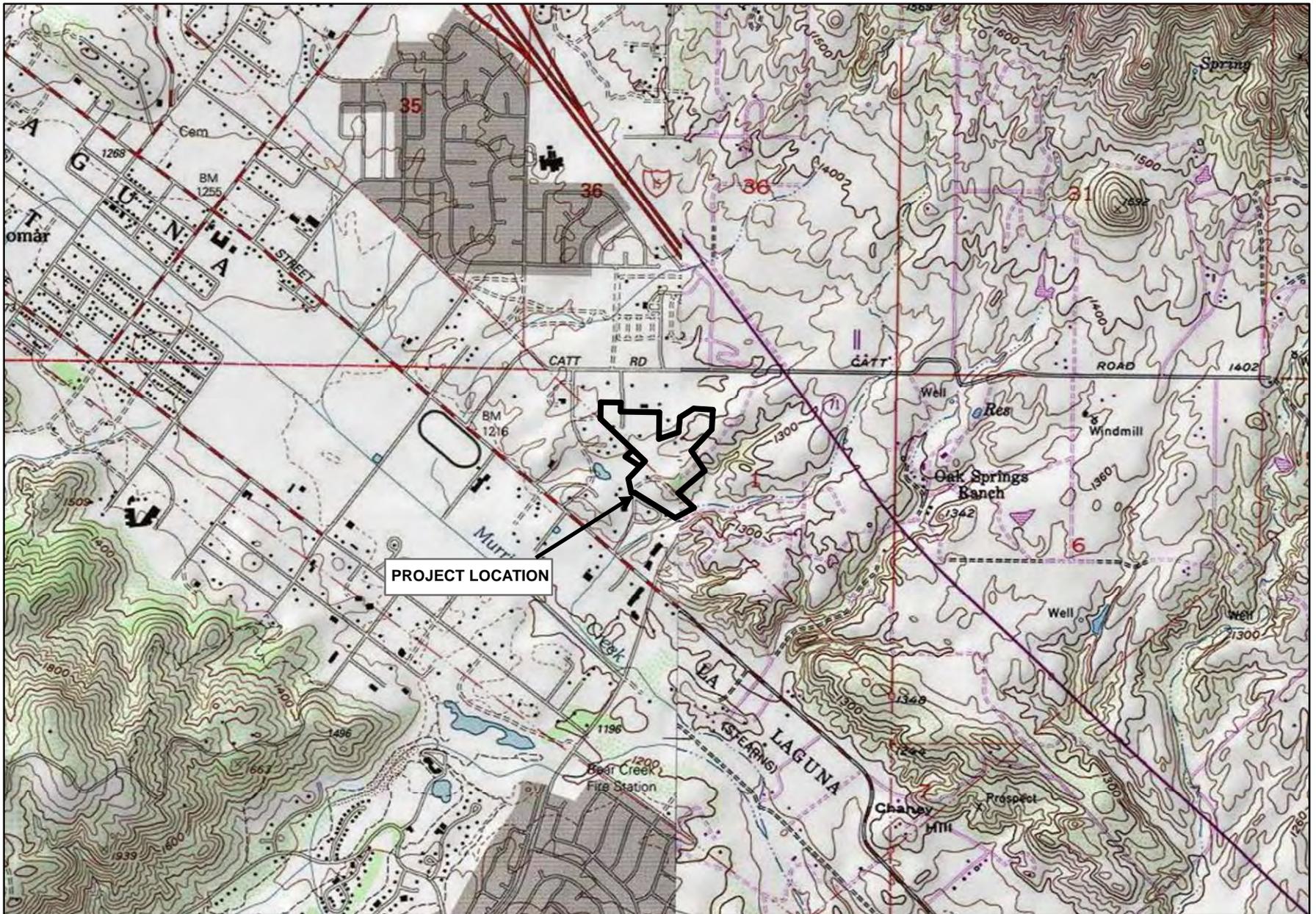


Exhibit 1

Exhibit 2

Vicinity Map

Adapted from USGS Murrieta & Wildomar, CA quadrangles



TRACT 32535
RESIDENTIAL DEVELOPMENT PROJECT
Vicinity Map

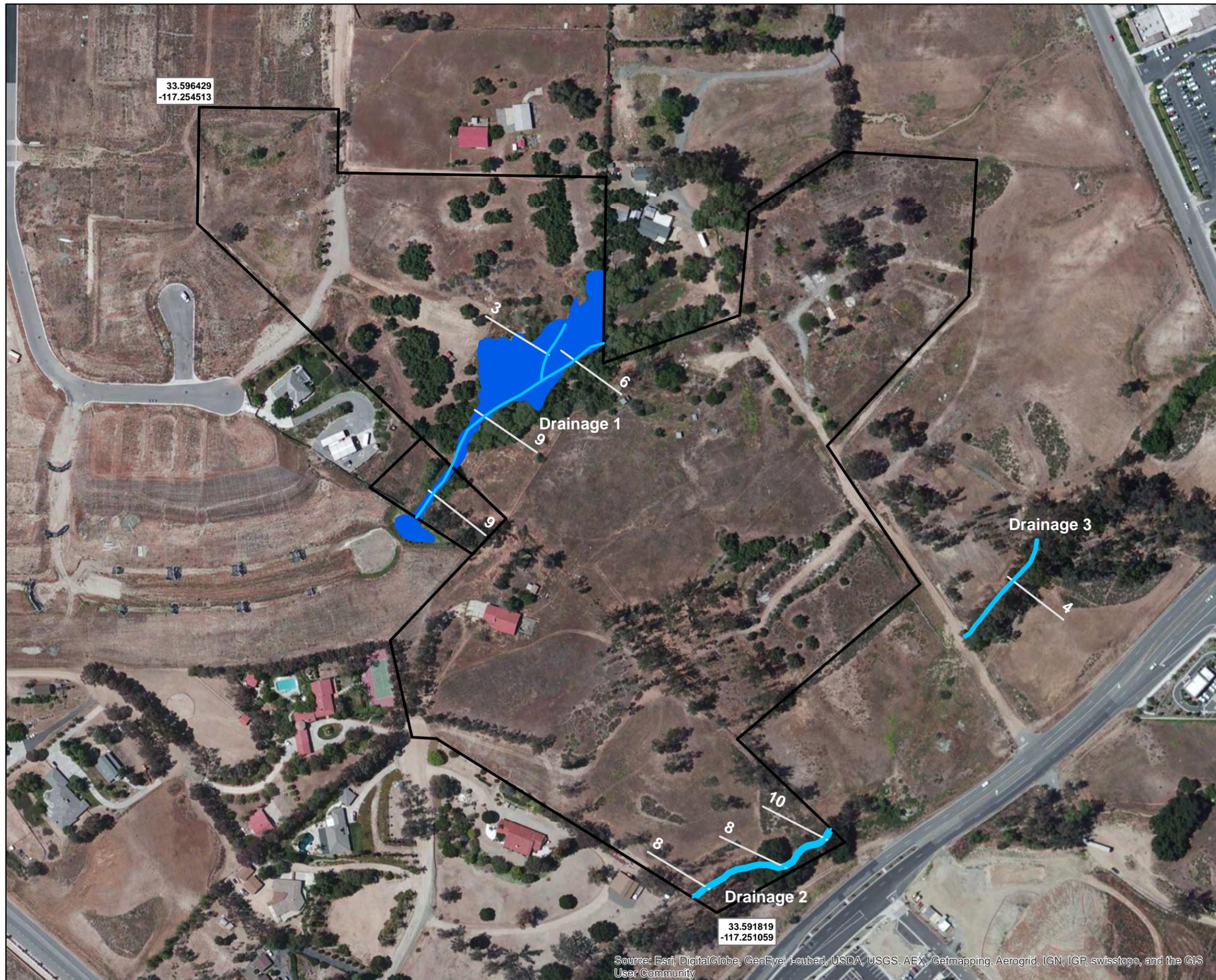
GLENN LUKOS ASSOCIATES



Exhibit 2

Exhibit 3A

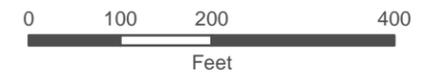
Corps/Regional Board Jurisdictional Delineation Map



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

-  Project Boundary
-  Non-Wetland Waters
-  Abutting Wetland/In Stream Wetland
-  Width of OHWM



1 inch = 200 feet

Aerial Photo: ESRI Basemaps Bing Hybrid
 Reference Elevation Datum: State Plane 6 NAD 83
 Map Prepared by: K. Kartunen, GLA
 Date Prepared: March 11, 2013

TRACT 32535
RESIDENTIAL DEVELOPMENT PROJECT
 Corps/RWQCB Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES



Exhibit 3A

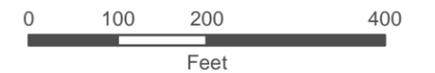
Exhibit 3B

CDFW Jurisdictional Delineation Map



Legend

-  Project Boundary
-  Streambed
-  CDFW Unvegetated Streambed
-  CDFW Riparian



1 inch = 205 feet

Aerial Photo: ESRI Basemaps Bing Hybrid
 Reference Elevation Datum: State Plane 6 NAD 83
 Map Prepared by: K. Kartunen, GLA
 Date Prepared: March 11, 2013

**TRACT 32535
 RESIDENTIAL DEVELOPMENT PROJECT**
 CDFW Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES



Exhibit 3B

X:\100 - 0362 ONLY\0300-33CLIN\300-33_GIS\Delineation\GIS\300-33 CDFW.mxd

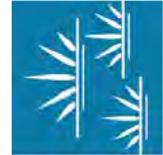
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Exhibit 4

Site Photographs



Photograph 1: Taken February 22, 2013. Upstream view of Drainage 2.



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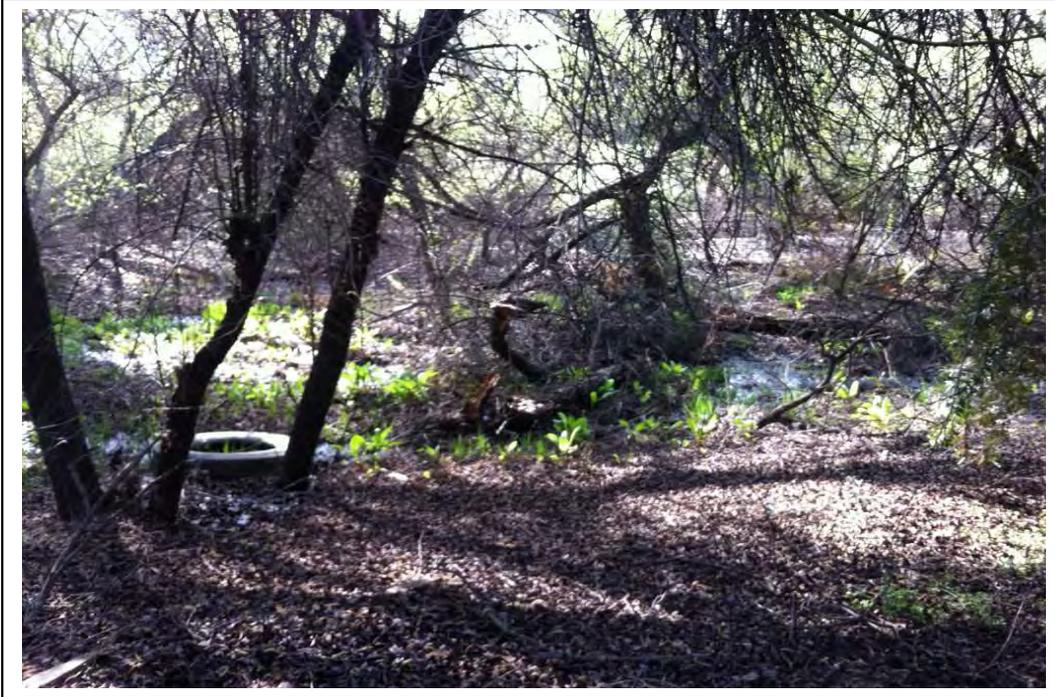
Exhibit 4a



Photograph 2: Taken February 22, 2013. Downstream view of Drainage 2.

PROJECT NAME

Site Photographs

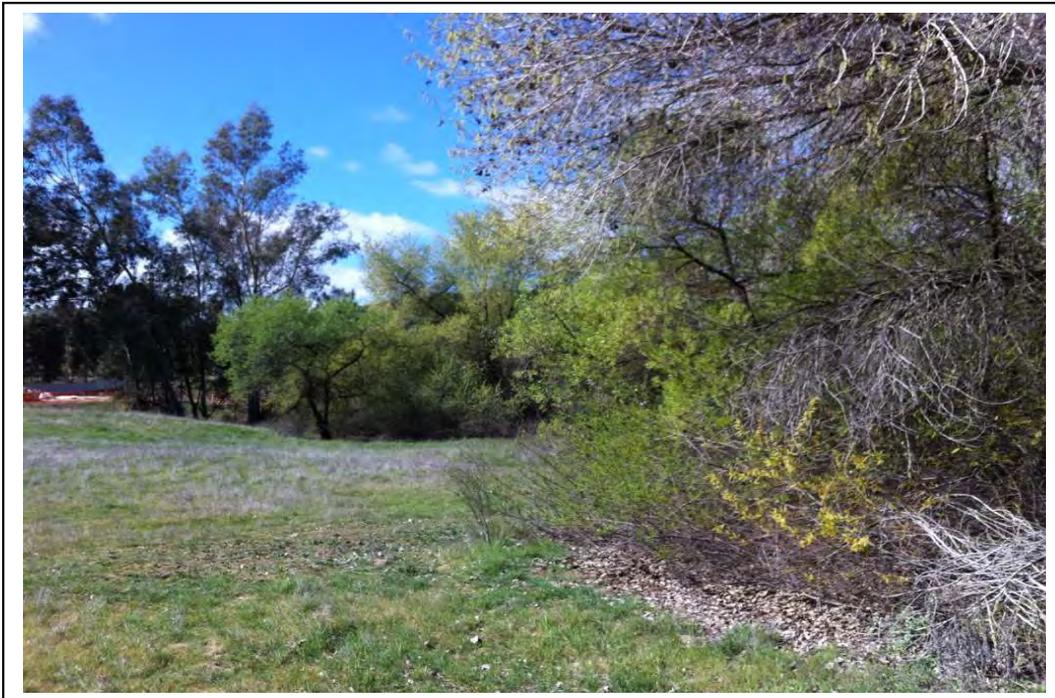


Photograph 3: Taken February 22, 2013. View depicting wetland areas within Drainage 1.



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Exhibit 4b



Photograph 4: Taken February 22, 2013. Landscape view depicting riparian canopy associated with Drainage 1.

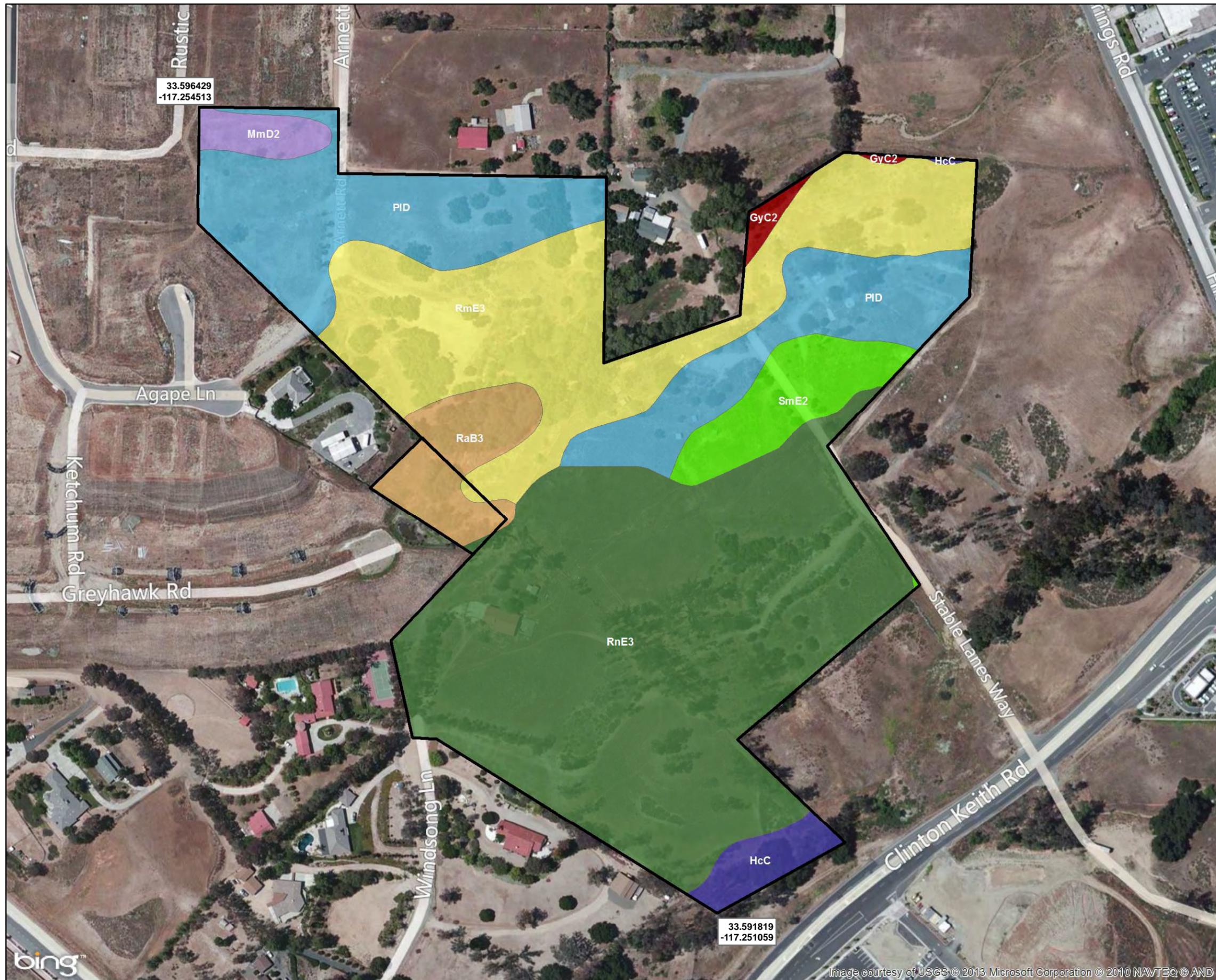


PROJECT NAME

Site Photographs

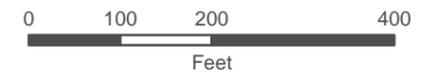
Exhibit 5

Soils Map



Legend

- Project Boundary
- GyC2 - Greenfield sandy loam, 2 to 8 percent slopes, eroded
- HcC - Hanford coarse sandy loam, 2 to 8 percent slopes
- MmD2 - Monserate sandy loam, 8 to 15 percent slopes, eroded
- PID - Placentia fine sandy loam, 5 to 15 percent slopes
- RaB3 - Ramona sandy loam, 0 to 5 percent slopes, severely eroded
- RmE3 - Ramona and Buren sandy loams, 15 to 25 percent slopes, severely eroded
- RnE3 - Ramona and Buren loams, 5 to 25 percent slopes, severely eroded
- SmE2 - San Timoteo loam, 8 to 25 percent slopes, eroded



1 inch = 200 feet

Aerial Photo: ESRI Basemaps Bing Hybrid
 Reference Elevation Datum: State Plane 6 NAD 83
 Map Prepared by: K. Kartunen, GLA
 Date Prepared: March 11, 2013

**TRACT 32535
 RESIDENTIAL DEVELOPMENT PROJECT**
 Soils Map

GLENN LUKOS ASSOCIATES



Exhibit 5

Appendix A

Corps Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Tract 32515 Residential Development Project City/County: Wildomar/Riverside Sampling Date: 03/06/2013
 Applicant/Owner: Mike White/CV Communities State: CA Sampling Point: 1
 Investigator(s): L. Lokovic, J. Fitzgibbon Section, Township, Range: S 1, T 7 South, and R 4 West
 Landform (hillslope, terrace, etc.): Streambed Local relief (concave, convex, none): none Slope (%): _____
 Subregion (LRR): LRR C Lat: 33.594419 Long: -117.251191 Datum: NAD 83
 Soil Map Unit Name: RmE3, RaB3 NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix goodingii</u>	20	Y	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Fremont cottonwood</u>	30	Y	FAC	
3. _____				Prevalence Index worksheet: _____ Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
4. _____				
	50	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
<u>Herb Stratum</u> (Plot size: _____)				
1. <u>Yerba mansa</u>	20	Y	OBL	
2. <u>Epilobium ciliatum</u>	5	N	FACW	
3. <u>Yabea microcarpa</u>	3	N	FACU	
4. <u>Juncus textillus</u>	70	Y	FACW	
5. <u>Juncus mexicanus</u>	2	N	FACW	
6. _____				
7. _____				
8. _____				
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
	100	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____				
2. _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		
Remarks:				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Tract 32515 Residential Development Project City/County: Wildomar/Riverside Sampling Date: 03/06/2013
 Applicant/Owner: Mike White/CV Communities State: CA Sampling Point: 2
 Investigator(s): L. Lokovic, J. Fitzgibbon Section, Township, Range: S 1, T 7 South, and R 4 West
 Landform (hillslope, terrace, etc.): Streambed Local relief (concave, convex, none): none Slope (%): _____
 Subregion (LRR): LRR C Lat: 33.594419 Long: -117.251191 Datum: NAD 83
 Soil Map Unit Name: RmE3, RaB3 NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix goodingii</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
2. <u>Acacia longifolia</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>	
3. _____				
4. _____				
	<u>75</u>	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>5</u> x 1 = <u>5</u> FACW species <u>70</u> x 2 = <u>140</u> FAC species _____ x 3 = _____ FACU species <u>80</u> x 4 = <u>320</u> UPL species _____ x 5 = _____ Column Totals: <u>155</u> (A) <u>465</u> (B) Prevalence Index = B/A = <u>3.0</u>
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Yerba mansa</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
2. <u>Juncus textillus</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Juncus mexicanus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
	<u>70</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				

Remarks:

GENERAL INFORMATION	
Project Name:	
Client:	
Address:	
City:	
State:	
Zip:	
Phone:	
Fax:	
E-mail:	
Website:	
Project No.:	
Revision No.:	
Revision Date:	
Revision Description:	
Revision 1:	
Revision 2:	
Revision 3:	
Revision 4:	
Revision 5:	
Revision 6:	
Revision 7:	
Revision 8:	
Revision 9:	
Revision 10:	
Revision 11:	
Revision 12:	
Revision 13:	
Revision 14:	
Revision 15:	
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Revision 83:	
Revision 84:	
Revision 85:	
Revision 86:	
Revision 87:	
Revision 88:	
Revision 89:	
Revision 90:	
Revision 91:	
Revision 92:	
Revision 93:	
Revision 94:	
Revision 95:	
Revision 96:	
Revision 97:	
Revision 98:	
Revision 99:	
Revision 100:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Tract 32515 Residential Development Project City/County: Wildomar/Riverside Sampling Date: 03/06/2013
 Applicant/Owner: Mike White/CV Communities State: CA Sampling Point: 3
 Investigator(s): L. Lokovic, J. Fitzgibbon Section, Township, Range: S 1, T 7 South, and R 4 West
 Landform (hillslope, terrace, etc.): Streambed Local relief (concave, convex, none): none Slope (%): _____
 Subregion (LRR): LRR C Lat: 33.594419 Long: -117.251191 Datum: NAD 83
 Soil Map Unit Name: RmE3, RaB3 NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fremont cottonwood</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>10</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>Sapling/Shrub Stratum (Plot size: _____)</u>				
1. <u>Baccharis salicifolia</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
<u>5</u> = Total Cover				
<u>Herb Stratum (Plot size: _____)</u>				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. <u>Juncus mexicanus</u>	<u>70</u>	<u>Y</u>	<u>FACW</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>70</u> = Total Cover				
<u>Woody Vine Stratum (Plot size: _____)</u>				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>30</u> % Cover of Biotic Crust <u>85</u>				
Remarks:				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Tract 32515 Residential Development Project City/County: Wildomar/Riverside Sampling Date: 03/06/2013
 Applicant/Owner: Mike White/CV Communities State: CA Sampling Point: 4
 Investigator(s): L. Lokovic, J. Fitzgibbon Section, Township, Range: S 1, T 7 South, and R 4 West
 Landform (hillslope, terrace, etc.): Streambed Local relief (concave, convex, none): none Slope (%): _____
 Subregion (LRR): LRR C Lat: 33.594419 Long: -117.251191 Datum: NAD 83
 Soil Map Unit Name: RmE3, RaB3 NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix goodingii</u>	80	Y	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>80</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>3</u> x 1 = <u>3</u> FACW species <u>80</u> x 2 = <u>160</u> FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species <u>60</u> x 5 = <u>300</u> Column Totals: <u>143</u> (A) <u>463</u> (B) Prevalence Index = B/A = <u>3.23</u>
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Juncus mexicanus</u>	3	N	FACW	
2. <u>Anemopsis californica</u>	3	N	OBL	
3. <u>Avena sativa</u>	10	N	UPL	
4. <u>Bromus rubens</u>	50	Y	UPL	
5. _____				
6. _____				
7. _____				
8. _____				
<u>66</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>34</u> % Cover of Biotic Crust <u>146</u>				
Remarks: _____ _____ _____				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Tract 32515 Residential Development Project City/County: Wildomar/Riverside Sampling Date: 03/06/2013
 Applicant/Owner: Mike White/CV Communities State: CA Sampling Point: 5
 Investigator(s): L. Lokovic, J. Fitzgibbon Section, Township, Range: S 1, T 7 South, and R 4 West
 Landform (hillslope, terrace, etc.): Streambed Local relief (concave, convex, none): none Slope (%): _____
 Subregion (LRR): LRR C Lat: 33.594419 Long: -117.251191 Datum: NAD 83
 Soil Map Unit Name: RmE3, RaB3 NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Wet meadow	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Juncus mexicanus</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Rumex crispus</u>	<u>90</u>	<u>Y</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>92</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>8</u>		% Cover of Biotic Crust <u>92</u>		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Remarks:				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Tract 32515 Residential Development Project City/County: Wildomar/Riverside Sampling Date: 03/06/2013
 Applicant/Owner: Mike White/CV Communities State: CA Sampling Point: 6
 Investigator(s): L. Lokovic, J. Fitzgibbon Section, Township, Range: S 1, T 7 South, and R 4 West
 Landform (hillslope, terrace, etc.): Streambed Local relief (concave, convex, none): none Slope (%): _____
 Subregion (LRR): LRR C Lat: 33.594419 Long: -117.251191 Datum: NAD 83
 Soil Map Unit Name: RmE3, RaB3 NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Limit of wetland/wet meadow edge	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fremont cottonwood</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>80</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Juncus mexicanus</u>	<u>90</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Juncus texillius</u>	<u>20</u>	<u>N</u>	<u>FACW</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>110</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust <u>190</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Remarks:				

