BIOLOGICAL TECHNICAL REPORT

FOR

RENAISSANCE RANCH DEVELOPMENT PROJECT (SP00333A01, GPA 200004, and CZ 2000016)

LOCATED IN UNINCORPORATED RIVERSIDE COUNTY, CALIFORNIA

Prepared For:

Richland Communities
3161 Michelson Drive, Suite 425
Irvine, California 92612
Contact: Brian Hardy
Phone: 949-698-2191

Prepared By:

Glenn Lukos Associates, Inc.
1940 E. Deere Avenue, Suite 250
Santa Ana, California 92705
Phone: (949) 340-0256
Report Preparer: David Smith, Martin Rasnick

September 29, 2021

INFORMATION SUMMARY

A. Report Date: September 29, 2021

B. Report Title: Biological Technical Report for the Renaissance Ranch Development Project (SP 00333A01, GPA 200004, and CZ 2000016)

C. Project Site Location: Riverside County
Latitude 33.730737, Longitude -117.420580

D. Owner/Applicant:
Brian Hardy
Vice President Land Entitlement
3161 Michelson Drive, Suite 425
Irvine, California 92705
Phone: 949-698-2191
Email: bhardy@richlandcommunities.com

E. Principal Investigator:
Glenn Lukos Associates, Inc.
1940 E. Deere Avenue, Suite 250
Santa Ana, California 92705
Phone: (949) 837-0404
Report Preparer: David Smith

F. Report Summary:

This report describes the current biological conditions for the Renaissance Ranch Development Project [Project] (SP 00333A01, GPA 200004, and CZ 2000016) (SP 00333A01, GPA 200004, and CZ 2000016) and evaluates impacts to biological resources from development of the Project.

The proposed 120.29-acre Project site (116.52 acre onsite, and 3.77 acre offsite) is located on 157.11 acres of land within the Western Riverside County Multiple Species Habitat Conservation Plan [MSHCP] (Dudek 2003) Estelle Mountain/Indian Canyon Subunit of the Elsinore Area Plan. It is located within Criteria Cells 3647, 3648, and 3748, which are part of Cell Groups E and F of the MSHCP Criteria Area/Conservation Area. The proposed Project is located within the Burrowing Owl Survey area and both the Narrow Endemic Plant Species Survey Area (NEPSSA) and the Criteria Area Plant Species Survey Areas (CAPSSA). Eastern portions of the Project site are located within Proposed Constrained Linkage 6.

Glenn Lukos Associates, Inc. (GLA) conducted a general biological and habitat assessment survey on May 29, 2020 for the Project site and conducted focused burrowing owl (*Athene cunicularia*) surveys on August 5, 14, 17, 19, 24, and 26, 2020. Focused least Bell's vireo surveys were performed by GLA on May 16 and 29, June 8, 18, and 29, and July 9, 20, and 30, 2020. GLA performed focused plant surveys for the Project site on July 9 and 20, 2020.

Pursuant to MSHCP policies, biological surveys included habitat assessments for special status plant and animal species. In addition, GLA conducted vegetation mapping.

The proposed Project would result in the loss of potential habitat for special-status species, including MSHCP Covered Species; however, impacts to special-status species would be less than significant and impacts to Covered Species would be offset through consistency and participation with the MSHCP (including a per acre fee payment).

The proposed Project would impact approximately 4.00 acres of MSHCP riparian areas and approximately 0.95 acre of MSHCP riverine areas. The Project would permanently impact approximately 1.95 acres of waters subject to the jurisdictions of the U.S. Army Corps of Engineers (Corps), approximately 1.95 acres of Santa Ana Regional Water Quality Control Board (Regional Board) jurisdictional waters, and approximately 4.95 acres of waters subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW). The Project would also result in temporary impact to 0.25 acre of CDFW jurisdiction.

The proposed Project would be consistent with all applicable MSHCP policies, 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). Through compliance with the MSHCP, the Plan would fully mitigate for potentially significant impacts under CEQA that would occur as a result of the Project, including potential cumulative impacts.

G. Individuals Conducting Fieldwork: David Smith, April Nakagawa

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1.0 INTRODUCTION

1.1 Background and Scope of Work

This document provides the results of general biological surveys and focused biological surveys performed by GLA in 2020 and summarizes prior studies performed for the approximately 157.11-acre Renaissance Ranch Development Project (the Project) [SP 00333A01, GPA 200004, and CZ 2000016] located east of Horsethief Canyon Road and south of, and adjacent to, Interstate 15 in an unincorporated area of Riverside County, California. This report identifies and evaluates impacts to biological resources associated with the proposed Project in the context of 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.

Prior studies were performed for the Project site from 2003-2005 by both L&L Environmental, Inc. and GLA. Studies performed by L&L Environmental included:

- Habitat Assessment (November 2002),
- Site Assessment (March 2003),
- Oak Tree Survey (May 2003),
- Jurisdictional Wetland Delineation (May 2003, Revised Dec. 2003, Attached as Appendix C),
- Focused Gnatcatcher Survey and Spring Botanical Surveys (May 2003),
- Focused Survey for the Least Bell's Vireo (May – June 2003),
- Focused Gnatcatcher Survey (April 2004),
- Focused Spring Botanical Study (April 2004),
- Determination of Biological Equivalent or Superior Preservation (January 2005),
- Evaluation of Urban/Wildland Interface (January 2005),
- Revised Jurisdictional Wetland Delineation (May 2005),
- Focused California Gnatcatcher & Narrow Endemic Plant Surveys (May-June 2005),
- Nesting Season Burrowing Owl Survey (May – June 2005), and
- Focused Survey for the Least Bell's Vireo and Southwestern Willow Flycatcher and Habitat for the Western Yellow-Billed Cuckoo (May – June 2005).

Additionally, L&L submitted a Habitat Evaluation and Acquisition Negotiation Strategy (HANS) application in 2003 which was approved in 2004.

Prior studies were also performed for the Project by GLA in 2006, which included:

- Offsite jurisdictional delineation (March 2006, attached as Appendix D)
- Burrowing Owl Surveys (May 2006)
- Focused Gnatcatcher Surveys (April – May 2006)

Additionally, a Section 7 Consultation pursuant to the federal ESA was concluded on July 11, 2006. Site jurisdictional permit approvals included a 401 Water Quality Certification in 2005 [with amendments in 2005 and 2006, and a reissued certification in May 2019], a CWA Section 404 permit in 2005 (extended in 2010 and 2015), and a 1602 Streambed Alteration Agreement in 2004 (amended in 2013, reissued in 2015, and extended in 2019).

The Project site was approved for clearing and grubbing in late 2005, with impacts occurring from January to March 2007. While the entirety of the Project footprint was cleared of vegetation, grading did not occur. This report updates the focused surveys for least Bell's vireo and burrowing owl, in addition to a general biological update.

For this report, the term *Project site* is defined as lands proposed for direct impact by the Project, equaling approximately 120.29 acres (116.52 acre onsite, and 3.77 acre offsite). The term *Study Area* includes the proposed development (including onsite and offsite impact areas) and avoided open space conservation. The Study Area equals approximately 160.77 acres.

The scope of this report includes a discussion of existing conditions for the approximately 120.29-acre Project site, all methods employed regarding the general biological surveys and focused biological surveys, the documentation of botanical and wildlife resources identified (including special-status species), and an analysis of impacts to biological resources. Methods of the study include a review of relevant literature, field surveys, and a Geographical Information System (GIS)-based analysis of vegetation communities. As appropriate, 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 other applicable agencies/organizations.

The field study focused on a number of primary objectives that would comply with CEQA and MSHCP requirements, including (1) general biological survey; (2) vegetation mapping; (3) habitat assessments for special-status plant species (including species with applicable MSHCP survey requirements); (4) habitat assessments for special-status wildlife species (including species with applicable MSHCP survey requirements); (5) assessment for the presence of wildlife migration and colonial nursery sites; (6) assessments for MSHCP riparian/riverine areas and vernal pools; and (7) 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, State Water Quality Control Board pursuant to Section 401 of the Clean Water Act, and CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600–1617 of the California Fish and Game Code. Observations of all plant and wildlife species were recorded during the biological studies and are included as Appendix A: Floral Compendium and Appendix B: Faunal Compendium.

1.2 Project Location

The Project site comprises approximately 157.11 acres in unincorporated Riverside County, California [Exhibit 1 – Regional Map] and is located within Section 17 of Township 5 South, Range 5 West, of the U.S. Geological Survey (USGS) 7.5" quadrangle map Alberhill (dated 1954 and photorevised in 1988) Exhibit 2 – Vicinity Map]. The Project site is bordered by

Horsethief Canyon Road and residential development to the west, disturbed open space adjacent to Interstate Freeway 15 to the north, existing residential housing to the south, and disturbed lands and an isolated residential unit to the east [Exhibit 3 – Site Plan].

1.3 Project Description

The proposed Project consists of the future development of a 120.29-acre Project site (116.52 acre onsite, and 3.77 acre offsite) out of a 157.11-acre site with "Business Park" land uses, "Light Industrial" land uses, and major circulation facilities. As proposed by SP00333A01, areas designated for "Light Industrial" and "Business Park" uses may be developed with a Floor Area Ratio (FAR) up to 0.50. The Project will also construct roads, parking lots, and docking bays, and other infrastructure associated with the buildings. Onsite improvements, including the creation of the warehouses, office buildings, and associated infrastructure would total approximately 116.52 acres, and offsite improvements associated primarily with slope modifications would include approximately 3.77 acres. The Project site consists of approximately 120.29 acres of development on and off site.

Business Park land uses are proposed in Planning Area 1 of the proposed Project. Business Park land uses would include small-scale light industrial, incubator industrial, merchant wholesalers, professional services, hospitality, professional office, small-scale warehousing/ storage, and research and development uses. The Business Park building area is assumed to consist of "Industrial Park" uses and "Warehouse" uses. The proposed Light Industrial buildings are anticipated to accommodate users such as industrial incubators, light manufacturing, parcel hub, warehouse/storage, fulfillment center, and e-commerce operations. The Light Industrial building area is assumed to consist of "High-Cube Cold Storage" uses, "High-Cube Fulfillment Center" uses, "High Cube Warehouse" uses, and "Manufacturing" uses.

Approximately 40.52 acres of the subject property will be avoided and not undergo impacts. Of the 40.52 acres to be avoided, Open Space – Conservation Habitat land uses are proposed on approximately 27.06 acres. These areas are intended to be preserved as natural open space and conveyed to the Western Riverside County Regional Conservation Authority (RCA) to be included in the MSHCP reserve.

1.4 Relationship of the Project Site to the MSHCP

1.4.1 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 occurrence 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 located within the Criteria Area are subject to the HANS process to determine if lands are targeted for inclusion in the MSHCP Reserve. In addition, all Projects located within the Criteria Area are subject to the Joint Project Review (JPR) process, where the Project is reviewed by the RCA to determine overall compliance/consistency with the biological requirements of the MSHCP.

1.4.2 Relationship of the Project Site to the MSHCP

The Project site is located within the Elsinore Area Plan of the MSHCP and is located within the MSHCP Survey Area for Burrowing Owl [Exhibit 4 – MSHCP Overlay Map]. The Project site is also located within the MSHCP Area within Criteria Cell Groups E and F, within Cells 3647 and Cell 3648, respectively. The lands targeted for conservation are associated with the assembly of Proposed Constrained Linkage 6. The Project site is also located within Criteria Call 3748, which is not within a Cell Group. The Project site is also located within the NEPSSA and the CAPSSA. The Project site is not located within a Mammal Survey Area or Amphibian Survey Area.

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.

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.

The Project site has previously undergone MSHCP coordination. As previously stated in Section 1.1, a HANS application was submitted in 2003 and was resolved in 2006 (HANS Number 00206). The JPR process was initiated in 2004 and was resolved in 2006 JPR Number 04-11-30-01) via RCA coordination where it was concluded that conservation of approximately 27.1 acres on the eastern boundary of the Project site would be consistent with the MSHCP reserve assembly goals. This land would be dedicated for conservation in coordination with the RCA, either via fee title or conservation easement. Portions of this approximate 27.1 acres of land have been disturbed by adjacent landowners. This situation is currently being rectified through coordination with the RCA; however, the area must be restored prior to formal dedication to the RCA. Additionally, the following surveys were performed by L&L in compliance with the MSHCP:

- Habitat Assessment (November 2002),
- Site Assessment (March 2003),
- Focused Gnatcatcher Survey and Spring Botanical Surveys (May 2003),
- Focused Survey for the Least Bell's Vireo (May – June 2003),
- Focused Gnatcatcher Survey (April 2004),
- Focused Spring Botanical Study (April 2004),
- Determination of Biological Equivalent or Superior Preservation (January 2005),
- Evaluation of Urban/Wildland Interface (January 2005),
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- Nesting Season Burrowing Owl Survey (May – June 2005), and
- Focused Survey for the Least Bell's Vireo and Southwestern Willow Flycatcher and Habitat for the Western Yellow-Billed Cuckoo (May – June 2005).

Additional studies were also performed for the Project by GLA in 2006, which included:

- Offsite jurisdictional delineation (March 2006, attached as Appendix D)
- Burrowing Owl Surveys (May 2006)
- Focused Gnatcatcher Surveys (April – May 2006)

2.0 METHODOLOGY

2.1 Summary of Surveys

In order to adequately identify biological resources in accordance with the requirements of CEQA, Glenn Lukos Associates (GLA) assembled biological data consisting of following main components:

- Performance of vegetation mapping for the Project site;
- Performance of habitat assessments, and site-specific biological surveys, to evaluate the presence/absence of special-status species in accordance with the requirements of CEQA and the MSHCP;
- Performance of surveys for rare plants; and
- Performance of focused surveys for burrowing owl.
- Performance of focused surveys for least Bell's vireo.

The focus of the biological surveys was determined through initial site reconnaissance, a review of the CNDDB [CDFW 2020], CNPS 8th edition online inventory (CNPS 2020), Natural Resource Conservation Service soil data (NRCS 2020), MSHCP species and habitat maps and sensitive soil maps (Dudek 2003), other pertinent literature, and knowledge of the region. Site-specific general surveys within the Study Area were conducted on foot in the proposed development areas for each target plant or animal species identified below as well as in the avoided areas on the property. Table 2-1 provides a summary list of survey dates, survey types and personnel.

Table 2-1. Summary of Biological Surveys for the Study Area

Survey Type	2020 Survey Dates	Biologist(s)
General Biological Survey	5/29	DS
Focused Least Bell's Vireo Surveys	5/16, 5/29, 6/8, 6/18, 6/29, 7/9, 7/20, 7/30	DS
Focused Burrowing Owl Surveys	8/5, 8/14, 8/17, 8/19, 8/24, 8/26	AN, DS
Focused Plant Surveys	7/9, 7/20	DS

AN = April Nakagawa, DS = David Smith

Individual plants and wildlife species were evaluated in this report based on their "special-status." For this report, plants were considered "special-status" based on one or more of the following criteria:

- Listing through the Federal and/or State Endangered Species Act (ESA); and/or
- CNPS Rare Plant Inventory Rank 1A, 1B, 2A, 2B, 3, or 4).

Wildlife species were considered "special-status" based on one or more of the following criteria:

- Listing through the Federal and/or State ESA; and
- Designation by the State as a Species of Special Concern (SSC) or California Fully Protected (CFP) species.

Vegetation communities and habitats were considered "special-status" based on one or more of the following criteria:

- Global (G) and/or State (S) ranking of category 3 or less based on CDFW (see Section 3.2.2 below for further explanation); and
- Riparian/riverine habitat.

2.2 Botanical Resources

A site-specific survey program was designed to accurately document the botanical resources within the Project site and consisted of five components: (1) a literature search; (2) preparation of a list of target special-status plant species and sensitive vegetation communities that could occur within the Project site; (3) general field reconnaissance survey(s); (4) vegetation mapping; and (5) habitat assessments and surveys for special-status plants (including those with MSHCP requirements).

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 the following:

- California Native Plant Society, Rare Plant Program. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39) (CNPS 2020); and

- CNDDB for the USGS 7.5' quadrangle(s): Alberhill and the surrounding quadrangles (CDFW 2020).

2.2.2 Vegetation Mapping

Vegetation communities within the Project site were mapped according to the List of Vegetation Alliances and Associations (or Natural Communities List). The list is based on A Manual of California Vegetation, Second Edition or MCVII, which is the California expression of the National Vegetation Classification. Where necessary, deviations were made when areas did not fit into exact vegetation descriptions. These vegetation communities were named based on the dominant plant species present. Plant communities were mapped in the field directly onto a 200-scale (1"=200') aerial photograph.

2.2.3 Special-Status Plant Species and Habitats Evaluated for the Project Site

A literature search was conducted to obtain a list of special-status plants with the potential to occur within the Project site. The CNDDB was initially consulted to determine well-known occurrences of plants and habitats of special concern in the region. Other sources used to develop a list of target species for the survey program included the CNPS online inventory (2020) and the MSHCP (Dudek 2003).

The Project is located within NEPSSA and CAPSSA. Pursuant to the MSHCP, the following target species must be evaluated through habitat assessments and focused surveys (if suitable habitat is present). Targeted species under NEPSSA include Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), Slender-horned spineflower (*Dodecahema leptocerus*), many-stemmed dudleya (*Dudleya multicaulis*), spreading navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), San Miguel savory (*Satureja chandleri*), Hammitt's clay-cress (*Sibaropsis hammittii*), and wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*). Targeted species under CAPSSA include thread-leaved brodiaea (*Brodiaea filifolia*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), Parish's brittlescale (*Atriplex parishii*), smooth tarplant (*Centromadia pungens*), round-leaved filaree (*Erodium macrophyllum*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), and little mousetail (*Myosurus minimus*).

Based on this information, vegetation profiles and a list of target sensitive plant species and habitats that could occur within the Project site were developed and incorporated into a mapping and survey program to achieve the following goals: (1) characterize the vegetation associations and land use; (2) prepare a detailed floristic compendium; (3) identify the potential for any special-status plants that may occur within the Project site; and (4) prepare a map showing the distribution of any sensitive botanical resources associated with the Project site, if applicable.

2.2.4 Botanical Surveys

GLA biologist David Smith visited the site on July 9, 2020 and July 20, 2020 to conduct general plant surveys and habitat assessments for special status plants. Surveys were conducted in accordance with accepted botanical survey guidelines (CDFG 2009, CNPS 2001, USFWS 2000). As applicable, surveys were conducted at appropriate times based on precipitation and flowering periods. An aerial photograph, a soil map, and/or a topographic map were used to determine the community types and other physical features that may support sensitive and uncommon taxa or communities within the Project site. Surveys were conducted by following meandering transects within target areas of suitable habitat. All plant species encountered during the field surveys were identified and recorded following the above-referenced guidelines adopted by CNPS (2010) and CDFW by Nelson (1984). A complete list of the plant species observed is provided in Appendix A. Scientific nomenclature and common names used in this report follow Baldwin et al (2012), and Munz (1974).

2.3 Wildlife Resources

Wildlife species were evaluated and detected during the 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. Observations of physical evidence and direct sightings of wildlife were recorded in field notes during the visits. A complete list of wildlife species observed within the Project site is provided in Appendix B. Scientific nomenclature and common names for vertebrate species referred to in this report follow the Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFG 2008), Standard Common and Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians 6th Edition, Collins and Taggert (2009) for amphibians and

reptiles, and the American Ornithologists' Union Checklist 7th Edition (2009) for birds. The methodology (including any applicable survey protocols) utilized to conduct general survey(s), habitat assessment(s), and/or focused surveys for special-status animals are included below.

2.3.1 General Surveys

Birds

During the general biological and reconnaissance survey within the Project site, birds were identified incidentally within each habitat type. Birds were detected by both direct observation and by vocalizations and were recorded in field notes.

Mammals

During general biological and reconnaissance survey within the Project site, mammals were identified incidentally within each habitat type. Mammals were detected both by direct observations and by the presence of diagnostic sign (i.e. tracks, burrows, scat, etc.).

Reptiles and Amphibians

During general biological and reconnaissance surveys within the Project site, reptiles and amphibians were identified incidentally during surveys within each habitat type. Habitats were examined for diagnostic reptile sign, which include shed skins, scat, tracks, snake prints, and lizard tail drag marks. All reptiles and amphibian species observed, as well as diagnostic sign, were recorded in field notes.

2.3.2 Special-Status Animal Species Evaluated for the Project Site

A literature search was conducted to obtain a list of special-status wildlife species with the potential to occur within the Project site. Species were evaluated based on three factors, including: 1) species identified by the CNDDB as occurring (either currently or historically) on or in vicinity of the Project site, (2) species survey areas as identified by the MSHCP for the Project site; and 3) any other special-status animals that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs on the Project site.

2.3.3 Habitat Assessment for Special-Status Animal Species

GLA biologist David Smith conducted habitat assessments for special-status animal species on May 29, 2020. An aerial photograph, soil map and/or topographic map were used to determine the community types and other physical features that may support special-status and uncommon taxa within the Project site.

2.3.4 Focused Surveys for Special-Status Animals Species

Burrowing Owl

Portions of the Project site are located within the MSHCP survey area for the burrowing owl (*Athene cunicularia*). GLA biologists April Nakagawa and David Smith conducted focused surveys for the burrowing owl for all suitable habitat areas within the Project site. Surveys were conducted in accordance with survey guidelines described in the 2006 MSHCP Burrowing Owl Survey Instructions. The guidelines stipulate that four focused survey visits be conducted on separate dates between March 1 and August 31. Within areas of suitable habitat, the MSHCP first requires a focused burrow survey to map all potentially suitable burrows. The focused burrow survey was conducted on August 5, 2020. Focused burrowing owl surveys were conducted on August 5, 14, 17, 19, 24, and 26, 2020. The burrowing owl survey visits need to be conducted from one hour prior to sunrise to two hours after sunrise or two hours before sunset to one hour after sunset. The Burrowing Owl Survey Instructions identify a maximum survey area of 100 acres for one visit performed by a single biologist. The total Study Area comprises approximately 157.11 acres. As such, the site was divided into two polygons of approximately 79 acres each: Polygon A in the western half of the Study Area, and Polygon B in the eastern half. Four focused surveys were conducted on each polygon.

Both the burrow and owl surveys were conducted during weather that was conducive to observing owls outside their burrows and detecting burrowing owl sign and not during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Additionally, all work was performed more than 5 days after a rain event. Refer to Table 2-2 below for survey condition details.

Table 2-2. Summary of Burrowing Owl Surveys

Survey Date	Biologist(s)	Polygon(s)	Start/End Time	Start/End Temperature (°F)	Start/End Wind Speed (mph)	Cloud Cover
08/05/2020	DS	A	0630/0830	63/67	0/1	Overcast
08/14/2020	DS	B	0630/0830	73/82	1/1	Clear
08/17/2020	DS	A	0615/0815	77/84	1/2	Partly Cloudy
08/19/2020	AN/DS	A/B	0555/0815	75/83	0/1	Clear
08/24/2020	DS	B	0615/0815	75/79	0/0	Clear
08/26/2020	AN/DS	A/B	0605/0815	71/79	1/1	Clear

AN = April Nakagawa, DS = David Smith

Surveys were conducted by walking meandering transects throughout areas of suitable habitat. Exhibit 5 identifies the burrowing owl survey areas at the Project site. Transects were spaced between 22 feet and 65 feet apart, adjusting for vegetation height and density, in order to provide adequate visual coverage of the survey areas. At the start of each transect, and at least every 320 feet along transects, the survey area was scanned for burrowing owls using binoculars. All suitable burrows were inspected for diagnostic owl sign (e.g., pellets, prey remains, whitewash, feathers, bones, and/or decoration) in order to identify potentially occupied burrows. Transect

locations are provided on Exhibit 5, along with the 500-foot buffer area. The results of the burrowing owl surveys are documented in Section 4.0 of this report.

Least Bell's Vireo

GLA biologist David Smith conducted focused surveys for the least Bell's vireo (*Vireo bellii pusillus*) for all suitable habitat areas within the Project site. Surveys were conducted in accordance with the 2001 USFWS survey guidelines, which stipulate that eight surveys should be conducted between April 10 and July 31, with a minimum of ten days separating each survey visit.

Focused surveys were conducted on May 18 and 29, June 8, 18, and 29, and July 9, 20, and 30, 2020. Pursuant to the survey guidelines, the surveys were conducted between sunrise and 11:00 a.m. Weather conditions during the surveys were conducive to a high level of bird activity. Table 2-3 summarizes the vireo survey visits. The results of the vireo surveys are documented in Section 4.0 of this report.

Table 2-3. Summary of Least Bell's Vireo Surveys

Survey Date	Biologist(s)	Start/End Time	Start/End Temperature (°F)	Start/End Wind Speed (mph)	Cloud Cover
5/18/2020	DS	0600/1000	57/77	0/0	Clear
5/29/2020	DS	0605/1005	61/72	0/1	Cloudy
6/8/2020	DS	0700/1100	66/79	2/5	Clear
6/18/2020	DS	0630/1030	57/62	0/0	Cloudy
6/29/2020	DS	0615/1015	57/69	0/2	Cloudy
7/9/2020	DS	0640/1040	64/84	0/0	Partly Cloudy
7/20/2020	DS	0620/1020	68/82	0/0	Clear
7/30/2020	DS	0700/1100	70/90	0/2	Clear

DS = David Smith

2.4 MSHCP Riparian/Riverine Areas and Vernal Pools

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 MSHCP 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 MSHCP Conservation Area are maintained. The MSHCP requires that as projects are proposed within the overall Plan Area, the effect 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 indictors 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.

On May 29, 2020, the Project site was evaluated for the presence of riparian/riverine areas and vernal pools. This involved looking for signs of water transport, riparian vegetation as well as low-lying depressions that may hold water after rainfall events. Refer to Section 4.11 for results of this review.

3.0 REGULATORY SETTING

The proposed Project is subject to state and federal laws and 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; special-status species which are not listed as threatened or endangered by the state or federal governments; and special-status vegetation communities.

3.1 Endangered Species Acts

3.1.1 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

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 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 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 pursuant to Section 10(a) of the FESA.

Through agreements with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (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 the Narrow Endemic Plant Species Survey Areas (NEPSSA); Criteria Area Plant Species identified by the Criteria Area Species Survey Areas (CASSA); animals 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).

For projects that have a federal nexus such as through federal Clean Water Act Section 404 permitting, take authorization for federally listed covered species would occur under Section 7 (not Section 10) of FESA and that USFWS would provide a MSHCP consistency review of the proposed project, resulting in a biological opinion. The biological opinion would require no more compensation than what is required to be consistent with the MSHCP.

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 on Lists 1A, 1B, or 2 of the CNPS *Inventory of Rare and Endangered Plants in California* 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 CNPS Ranked 3 or 4.

3.2.2 Special-Status Plants, Wildlife and Vegetation Communities 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. 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)

State-Designated Special-Status Species

Some mammals and birds are protected by the state as Fully Protected (SFP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California SSC are 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 CNDDB project. Informally listed taxa are not protected but warrant

consideration in the preparation of biotic assessments. For some species, the CNDDB 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
- SFP State Fully Protected
- SP State Protected
- SSC State Species of Special Concern

CNDDB Global/State Rankings

The CNDDB provides global and state rankings for species and communities based on a system developed by The Nature Conservancy to measure rarity of a species. The ranking provides a shorthand formula about how rare a species/community is and is based on the best information available from multiple sources, including state and federal listings, and other groups that recognize species as sensitive (e.g., Bureau of Land Management, Audubon Society, etc.). State and global rankings are used to prioritize conservation and protection efforts so that the rarest species/communities receive immediate attention. In both cases, the lower ranking (i.e., G1 or S1) indicates extreme rarity. Rare species are given a ranking from 1 to 3. Species with a ranking of 4 or 5 is considered to be common. If the exact global/state ranking is undetermined, a range is generally provided. For example, a global ranking of "G1G3" indicates that a species/community global rarity is between G1 and G3. If the animal being considered is a subspecies of a broader species, a "T" ranking is attached to the global ranking. The following are descriptions of global and state rankings:

Global Rankings

- G1 – Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or because of some factor(s) making it especially vulnerable to extinction.
- G2 – Imperiled globally because of rarity (6-20 occurrences), or because of some other factor(s) making it very vulnerable to extinction throughout its range.
- G3 – Either very rare and local throughout its range (21 to 100 occurrences) or found locally (even abundantly at some of its locations) in a restricted range (e.g., a physiographic region), or because of some other factor(s) making it vulnerable to extinction throughout its range.
- G4 – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- G5 – Common, widespread and abundant.

State Rankings

- S1 – Extremely rare; typically, 5 or fewer known occurrences in the state; or only a few remaining individuals; may be especially vulnerable to extirpation.
- S2 – Very rare; typically, between 6 and 20 known occurrences; may be susceptible to becoming extirpated.
- S3 – Rare to uncommon; typically, 21 to 50 known occurrences; S3 ranked species are not yet susceptible to becoming extirpated in the state but may be if additional populations are destroyed.
- S4 - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5 - Common, widespread, and abundant in the state.

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The CNPS's Eighth Edition of the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five ranks. 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. The list serves as the candidate list for listing as threatened and endangered by CDFW. CNPS has developed five categories of rarity that are summarized in Table 3-1.

Table 3-1. CNPS Ranks 1, 2, 3, & 4, and Threat Code Extensions

CNPS Rank	Comments
Rank 1A – Plants 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.
Rank 1B – Plants 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.
Rank 2A – Plants presumed Extirpated in California, But Common Elsewhere	Species that are presumed extinct in California but more common outside of California
Rank 2B – Plants Rare, Threatened or Endangered in California, But More Common Elsewhere	Species that are rare in California but more common outside of California
Rank 3 – Plants About Which More Information Is Needed (A Review List)	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. 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.

CNPS Rank	Comments
Rank 4 – Plants of Limited Distribution (A Watch List)	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, 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 included on this list should be monitored to ensure that future substantial declines are minimized.
Extension	**Comments**
.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.

3.3 Jurisdictional Waters

3.3.1 Army Corps of Engineers

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.

(8) Waters of the United States do not include prior converted cropland.[1] Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

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.

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the 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, the U.S. Environmental Protection Agency (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:

[1] 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.]

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 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.

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 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 Arid West 2016 Regional Wetland Plant List[23]);

- 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.

[2] Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. Arid West 2016 Regional Wetland Plant List. Phytoneuron 2016-30: 1-17. Published 28 April 2016.

[3] Note the Corps also publishes a National List of Plant Species that Occur in Wetlands (Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016.); however, the Regional Wetland Plant List should be used for wetland delineations within the Arid West Region.

3.3.2 Regional Water Quality Control Board

The State Water Resource Control Board and each of its nine Regional Boards regulate the discharge of waste (dredged or fill material) into waters of the United States[4] and waters of the state. Waters of the United States are defined above in Section II.A and waters of the state are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code 13050[e]).

Section 401 of the CWA requires certification for any federal permit or license authorizing impacts to waters of the U.S. (i.e., waters that are within federal jurisdiction), such as Section 404 of the CWA and Section 10 of the Safe Rivers and Harbors Act, to ensure that the impacts do not violate state water quality standards. When a project could impact waters outside of federal jurisdiction, the Regional Board has the authority under the Porter-Cologne Water Quality Control Act to issue Waste Discharge Requirements (WDRs) to ensure that impacts do not violate state water quality standards. Clean Water Act Section 401 Water Quality Certifications, WDRs, and waivers of WDRs are also referred to as orders or permits.

1. State Wetland Definition

The State Board Wetland Definition and Procedures define an area as wetland as follows: *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*

The following wetlands are waters of the state:

1. *Natural wetlands;*
2. *Wetlands created by modification of a surface water of the state;*[5] *and*
3. *Artificial wetlands*[6] *that meet any of the following criteria:*

[4] Therefore, wetlands that meet the current definition, or any historic definition, of waters of the U.S. are waters of the state. In 2000, the State Water Resources Control Board determined that all waters of the U.S. are also waters of the state by regulation, prior to any regulatory or judicial limitations on the federal definition of waters of the U.S. (California Code or Regulations title 23, section 3831(w)). This regulation has remained in effect despite subsequent changes to the federal definition. Therefore, waters of the state includes features that have been determined by the U.S. Environmental Protection Agency (U.S. EPA) or the U.S. Army Corps of Engineers (Corps) to be "waters of the U.S." in an approved jurisdictional determination; "waters of the U.S." identified in an aquatic resource report verified by the Corps upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the U.S." or any current or historic federal regulation defining "waters of the U.S." under the federal Clean Water Act.

[5] "Created by modification of a surface water of the state" means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.

[6] Artificial wetlands are wetlands that result from human activity.

a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
b. Specifically identified in a water quality control plan as a wetland or other water of the state;
c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):

i. Industrial or municipal wastewater treatment or disposal,
ii. Settling of sediment,
iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
iv. Treatment of surface waters,
v. Agricultural crop irrigation or stock watering,
vi. Fire suppression,
vii. Industrial processing or cooling,
viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
ix. Log storage,
x. Treatment, storage, or distribution of recycled water, or
xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
xii. Fields flooded for rice growing.[7]

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

[7] Fields used for the cultivation of rice (including wild rice) that have not been abandoned due to five consecutive years of non-use for the cultivation of rice (including wild rice) that are determined to be a water of the state in accordance with these Procedures shall not have beneficial use designations applied to them through the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as otherwise required by federal law for fields that are considered to be waters of the United States. Further, agricultural inputs legally applied to fields used for the cultivation of rice (including wild rice) shall not constitute a discharge of waste to a water of the state. Agricultural inputs that migrate to a surface water or groundwater may be considered a discharge of waste and are subject to waste discharge requirements or waivers of such requirements pursuant to the Water Board's authority to issue or waive waste discharge requirements or take other actions as applicable.

3.3.3 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1617 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 also defines a stream as "a body of water that flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical or biological indicators."

It is important to note that the Fish and Game Code defines fish and wildlife to include: all wild animals, birds, plants, fish, amphibians, invertebrates, reptiles, and related ecological communities including the habitat upon which they depend for continued viability (FGC Division 5, Chapter 1, section 45 and Division 2, Chapter 1 section 711.2(a) respectively). Furthermore, Division 2, Chapter 5, Article 6, Section 1600 et seq. of the California Fish and Game Code does not limit jurisdiction to areas defined by specific flow events, seasonal changes in water flow, or presence/absence of vegetation types or communities.

4.0 RESULTS

This section provides the results of general biological surveys, vegetation mapping, habitat assessments and focused surveys for special-status animals, an assessment for MSHCP riparian/riverine areas and vernal pools, and a jurisdictional delineation for Waters of the United States (including wetlands) subject to the jurisdiction of the Corps and Regional Board, and streams (including riparian vegetation) and lakes subject to the jurisdiction of CDFW.

4.1 Existing Conditions

The Project site occurs between existing residential development to the south and west, Interstate Highway 15 (I-15) to the north, and a combination of rural residential, undeveloped land, and quarry operations to the east. The topography slopes downward from south to north with elevation on the site ranging from 1,186 feet above mean sea level (amsl) to 1,427 feet amsl. Topography onsite includes mesa areas divided by deep canyons, which have a vertical relief of up to 200 feet. The Project site contains several drainage features that extend south to north, terminating at I-15.

At the time of initial biological studies in 2003, the Project site included multiple disturbance features, such as unpaved roads, agricultural orchards, unoccupied structures, bird coops, mobile homes, and associated ornamental vegetation associated with the western half of the Property. Additionally, the site had prior evidence of off-roading activities. Vegetative cover on Project site in 2003 consisted of approximately 40% native cover, which included limited areas of chaparral and mulefat scrub, and more expansive areas of coastal sage scrub and Diegan sage scrub (L&L 2003).

Approximately 60% of the site was dominated by non-native grasslands, ruderal species, and ornamental species. Impacts to the Project site were initiated in 2007, resulting in the removal of all vegetation within the impact boundary. After these removals, the Project was halted. By the time of this report, vegetation on the Project site has exhibited regrowth, with the majority of mesa areas becoming dominated by non-native ruderal species. Some areas onsite have been annually maintained, including a 50-foot fuel modification zone immediately adjacent to the surrounding residential areas.

Soils within the Study Area are mapped as Gorgonio loamy sand, Hanford cobbly coarse sandy loam, and terrace escarpments [Exhibit 7 – Soils Map].

4.2 Vegetation Mapping

The Study Area supports the following vegetation types: Brittle Bush Scrub, Disturbed California Buckwheat Scrub, Disturbed Chamise Chaparral, Southern Cottonwood Willow Riparian Forest, Unvegetated Wash, and Upland Mustards. Table 4-1 provides a summary of the vegetation types and their corresponding acreage. Descriptions of each vegetation type follow the table. A Vegetation Map is attached as Exhibit 6. Photographs depicting the Project are shown in Exhibit 8.

While GLA updated vegetation mapping for the Study Area, an updated jurisdictional delineation was not performed. Instead, GLA relied on L&L for jurisdictional acreages and associated riparian habitat numbers [Appendix C]. The numbers in L&L's jurisdictional delineation were approved through a submitted DBESP and documented as part of the currently valid regulatory permits and agreements issued for the Project. GLA did update riparian vegetation mapping during 2020 general biological surveys. GLA riparian vegetation numbers do not equate to MSHCP Riparian/Riverine numbers and are not delineated as such.

Table 4-1. Summary of Vegetation/Land Use Types for the Study Area

VEGETATION/LAND USE TYPE	PROJECT SITE (onsite acres)	PROJECT SITE (offsite acres)	AVOIDED OPEN SPACE (acres)	STUDY AREA (acres)
Brittle Bush Scrub	18.74	0.74	10.87	30.35
Disturbed California Buckwheat Scrub	33.81	0.01	18.24	52.06
Disturbed Chamise Chaparral	11.31	0	3.01	14.32
Southern Cottonwood Willow Riparian Forest	3.07	0.29	1.98	5.34
Unvegetated Wash	0	0	3.47	3.47
Upland Mustards	49.55	2.69	2.95	55.19
Disturbed Ornamental	0	0.04	0	0.04
Total	**116.52**	**3.77**	**40.52**	**160.77**

Brittle Bush Scrub

The Study Area supports 30.35 acres of brittle bush scrub, of which 19.48 acres occur within the Project site, and 10.87 acres occur within avoided open space [Exhibit 6]. These areas do not

typically undergo annual maintenance, and some of these areas were not historically used for agricultural purposes. Most plants in these areas are shrubs, though some trees are present.

Dominant species in these areas include brittlebush (*Encelia farinosa*), California sagebrush (*Artemisia californica*), and California buckwheat (*Eriogonum fasciculatum*). Additional native species within these areas include black sage (*Salvia mellifera*), blue elderberry (*Sambucus nigricans*), chaparral yucca (*Hesperoyucca whipplei*), coast live oak (*Quercus agrifolia*), coulter's matilija poppy (*Romneya coulteri*), golden yarrow (*Eriophyllum confertiflorum*), laurel sumac (*Malosma laurina*), matchweed (*Gutierrezia sarothrae*), toyon (*Heteromeles arbutifolia*), western sunflower (*Helianthus annuus*), and white sage (*Salvia apiana*). Non-native species within these areas are Peruvian pepper (*Schinus molle*) and summer mustard (*Hirschfeldia incana*).

Disturbed California Buckwheat Scrub
The Study Area supports 52.06 acres of disturbed California buckwheat scrub, of which 33.81 acres occur in the Project site, 0.01 acre of which occurs off site to the south of the Project near Bolo Court, and 18.24 acres occur within avoided open space [Exhibit 6]. Portions of these areas, particularly in the southwestern portion of the site, were annually maintained until 2006, with some areas being historically used for agricultural purposes. Most plants in these areas are shrubs, though some trees are sporadically distributed throughout.

Predominant species in these areas include native California sagebrush, California buckwheat and deerweed, and non-native summer mustard and tocalote. Additional native species within these areas include arroyo willow (*Salix lasiolepis*), black sage, blue elderberry, brittlebush, Coulter's matilija poppy, jimsonweed (*Datura wrightii*), laurel sumac, salt heliotrope, and telegraph weed (*Heterotheca grandiflora*). Additional non-native species include olive (*Olea europaea*), Peruvian pepper, prickly lettuce, and tamarisk (*Tamarix* sp.).

Disturbed Chamise Chaparral
The Study Area supports 14.32 acres of disturbed chamise chaparral, 11.31 acres of which occurs within the Project site, with the remaining 3.01 acres occurring in avoided open space [Exhibit 6]. These areas, located in the central, northern portions of the Study Area, are primarily associated with hillslopes and existing drainages. Although these areas were not historically used for agricultural purposes and have not been annually maintained, they are considered disturbed due to the elevated presence of invasive species, which comprise approximately 50% cover.

Predominant species in these areas include native chamise (*Adenostoma fasciculatum*), California buckwheat, black sage, and non-native tocalote (*Centaurea melitensis*) and summer mustard. Additional native species within these areas include California sagebrush, deerweed (*Acmispon glaber*), salt heliotrope (*Heliotropium curassavicum*), golden yarrow, and white sage. Additional non-native species in these areas include red brome (*Bromus rubens*) and prickly lettuce (*Lactuca serriola*).

Southern Cottonwood Willow Riparian Forest
The Study Area supports 5.34 acres of southern cottonwood willow riparian forest, primarily associated with the onsite drainage features and 0.05 acre of which occurs off site south of the Project near Bolo Court. Approximately 3.36 acres occur within the Project site and approximately 1.98 acres occur within avoided open space. These areas are dominated by native riparian tree species with associated understories present [Exhibit 6].

Predominant species in these areas include Fremont's cottonwood (*Populus fremontii*), black willow (*Salix gooddingii*), arroyo willow, and tamarisk trees. Additional native species include blue elderberry, mulefat (*Baccharis salicifolia*), California sagebrush, brittlebush, California buckwheat, western sunflower, California fan palm (*Washingtonia filifera*), and coast live oak. Non-native species, such as prickly lettuce, were also present.

Unvegetated Wash
The Study Area supports 3.47 acres of bare areas, all of which occur within avoided open space areas. These areas are comprised of unvegetated sand at the bottom of drainage features in the northeast portion of the Project [Exhibit 6].

Upland Mustards
The Study Area supports 55.19 acres of upland mustards areas, primarily associated with those areas which were historically used for agricultural purposes. Approximately 52.24 acres occur within the Project site, and approximately 2.95 acres occur in avoided open space. These areas are dominated by non-native species or ornamental species, though some native species still occur in small patches [Exhibit 6].

Predominant species in these areas include summer mustard and red brome. Native species within these areas include clustered tarweed (*Deinandra fasciculatum*), coyote brush (*Baccharis pilularis*), horseweed (*Erigeron canadensis*), and thick-leaved yerba santa (*Eriodictyon crassifolium*). Non-native species in these areas include Canarian sea lavender (*Limonium perezii*), European sea lavender (*Limonium duriusculum*), gum tree (*Eucalyptus* sp.), Mediterranean grass (*Schismus barbatus*), red-stemmed filaree (*Erodium cicutarium*), tamarisk, tocalote, and white horehound (*Marrubium vulgare*).

Disturbed/Developed Ornamental
The Study Area supports 0.04 acre of disturbed/developed ornamental habitat. These areas are located on an existing slope off site south of the Project site near Bolo Court and support non-native grasses and Eucalyptus species (*Eucalyptus* sp.) [Exhibit 6].

4.3 Special-Status Vegetation Communities

The CNDDB identifies the following 10 special-status vegetation communities for the Alberhill and surrounding quadrangle maps: valley needlegrass grassland, southern interior basalt flow vernal pool, southern riparian forest, southern coast live oak riparian forest, southern cottonwood willow riparian forest, southern mixed riparian forest, canyon live oak ravine forest, southern sycamore alder riparian woodland, southern willow scrub, and southern interior cypress forest. The Project site contains the following special-status vegetation types: southern cottonwood

willow riparian forest. Approximately 5.32 acres of southern cottonwood willow riparian forest occurs within the Study Area, of which 3.34 occurs within the Project site and 1.98 occurs in avoided open space.

4.4 Special-Status Plants

One special-status plant, Coulter's Matilija Poppy (*Romneya coulteri*), was detected at the Project site. Table 4-2 provides a list of special-status plants evaluated for the Project site through general biological surveys and habitat assessments. Species were evaluated based on the following factors: 1) species identified by the CNDDB and CNPS as occurring (either currently or historically) on or in the vicinity of the Project site, 2) applicable MSHCP survey areas, and 3) any other special-status plants that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs within the site.

Table 4-2. Special-Status Plants Evaluated for the Project Site

Species Name	Status	Habitat Requirements	Occurrence
Bottle liverwort *Sphaerocarpos drewei*	Federal: None State: None CNPS: Rank 1B.1	Openings in chaparral and coastal scrub.	Not expected to occur.
California ayenia *compacta*	Federal: None State: None CNPS: Rank 2B.3	Rocky soils in Mojavean desert scrub and Sonoran desert scrub.	Does not occur.
California Orcutt grass *Orcuttia californica*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(b)	Vernal pools	Does not occur.
California satintail *Imperata brevifolia*	Federal: None State: None CNPS: Rank 2B.1	Mesic soils in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), and riparian scrub.	Does not occur.
California screw moss *Tortula californica*	Federal: None State: None CNPS: Rank 1B.2	Sandy soil in chenopod scrub, and valley and foothill grassland.	Not expected to occur.
California spineflower *Mucronea callifornica*	Federal: None State: None CNPS: Rank 4.2	Sandy soil. Chaparral, Cismontane woodland, Coastal Dunes, Coastal scrub, Valley and foothill grassland	Does not occur.
Campbell's liverwort *Geothallus tuberosus*	Federal: None State: None CNPS: Rank 1B.1	Occurs on soil in coastal scrub (mesic) and vernal pools.	Does not occur.
Catalina mariposa lily *Calochortus catalinae*	Federal: None State: None CNPS: Rank 4.2	Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland.	Not expected to occur.
Chaparral nolina *Nolina cismontana*	Federal: None State: None CNPS: Rank 1B.2	Chaparral, coastal sage scrub. Occurring on sandstone or gabbro substrates.	Confirmed absent.

Species Name	Status	Habitat Requirements	Occurrence
Chaparral sand-verbena *Abronia villosa* var. *aurita*	Federal: None State: None CNPS: Rank 1B.1	Sandy soils in chaparral, coastal sage scrub.	Confirmed absent.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Playas, vernal pools, marshes and swamps (coastal salt).	Does not occur.
Coulter's matilija poppy *Romneya coulteri*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Often in burns in chaparral and coastal scrub.	Present on site.
Coulter's saltbush *Atriplex coulteri*	Federal: None State: None CNPS: Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal sage scrub, valley and foothill grassland. Occurring on alkaline or clay soils.	Does not to occur.
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(d)	Alkaline soils in coastal sage scrub, coastal bluff scrub.	Does not occur.
Hall's monardella *Monardella macrantha* ssp. *hallii*	Federal: None State: None CNPS: Rank 1B.3 MSHCP	Occurs on dry slopes and ridges within openings in broadleaved upland forest, chaparral, lower montane coniferous forest, cismontane woodland, and valley and foothill grassland.	Confirmed absent.
Hammitt's clay-cress *Sibaropsis hammittii*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(b)	Clay soils in openings of chaparral, and in valley and foothill grasslands.	Does not occur.
Heart-leaved pitcher sage *Lepechinia cardiophylla*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(d)	Closed-cone coniferous forest, chaparral, and cismontane woodland.	Confirmed absent.
Intermediate mariposa-lily *Calochortus weedii* var. *intermedius*	Federal: None State: None CNPS: Rank 1B.2 MSHCP	Rocky soils in chaparral, coastal sage scrub, valley and foothill grassland.	Low potential to occur.
Intermediate monardella *Monardella hypoleuca* ssp. *intermedia*	Federal: None State: None CNPS: Rank 1B.3	Usually in the understory of chaparral, cismontane woodland, and lower montane coniferous forest (sometimes).	Does not occur.
Jaeger's (bush) milk-vetch *Astragalus pachypus* var. *jaegeri*	Federal: None State: None CNPS: Rank 1B.1 MSHCP	Sandy or rocky soils in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland.	Does not occur.
La Purisima viguiera *purisimae*	Federal: None State: None CNPS: Rank 2B.3	Coastal bluff scrub and chaparral.	Does not occur.

Species Name	Status	Habitat Requirements	Occurrence
Lemon lily *Lilium parryi*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(f)	Mesic soils in lower montane coniferous forest, meadows and seeps, riparian forest, and upper montane coniferous forest.	Does not occur.
Little mousetail *Myosurus minimus* ssp. *apus*	Federal: None State: None CNPS: Rank 3.1 MSHCP(d)	Valley and foothill grassland, vernal pools (alkaline soils).	Does not occur.
Long-spined spineflower *Chorizanthe polygonoides* var. *longispina*	Federal: None State: None CNPS: Rank 1B.2 MSHCP	Clay soils in chaparral, coastal sage scrub, meadows and seeps, and valley and foothill grasslands	Low potential to occur.
Many-stemmed dudleya *Dudleya multicaulis*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(b)	Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils.	Low potential to occur.
Mesa horkelia *Horkelia cuneata* var. *puberula*	Federal: None State: None CNPS: Rank 1B.1	Sandy or gravelly soils in chaparral (maritime), cismontane woodland, and coastal scrub.	Does not occur.
Munz's onion *Allium munzii*	Federal: FE State: ST CNPS: Rank 1B.1 MSHCP(b)	Clay soils in chaparral, coastal sage scrub, and valley and foothill grasslands	Low potential to occur
Mud nama *Nama stenocarpum*	Federal: None State: None CNPS: Rank 2B.2 MSHCP(d)	Marshes and swamps	Does not occur.
Palmer's grapplinghook *Harpagonella palmeri*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral, coastal sage scrub, valley and foothill grassland. Occurring in clay soils.	Low potential to occur.
Paniculate tarplant *Deinandra paniculata*	Federal: None State: None CNPS: Rank 4.2	Usually in vernally mesic, sometimes sandy soils in coastal scrub, valley and foothill grassland, and vernal pools.	Not expected to occur on site.
Parish's brittlescale *Atriplex parishii*	Federal: None State: None CNPS: Rank 1B.1	Chenopod scrub, playas, vernal pools.	Does not occur.
Parish's meadowfoam *Limnanthes alba* ssp. *parishii*	Federal: None State: SE CNPS: Rank 1B.2 MSHCP	Vernally mesic soils in lower montane coniferous forests, meadows and seeps, and vernal pools.	Does not occur.
Parry's spineflower *Chorizanthe parryi* var. *parryi*	Federal: None State: None CNPS: Rank 1B.1 MSHCP	Sandy or rocky soils in open habitats of chaparral and coastal sage scrub.	Not expected to occur.
Parry's tetracoccus *dioicus*	Federal: None State: None CNPS: Rank 1B.2	Chaparral and coastal sage scrub.	Not expected to occur.

Species Name	Status	Habitat Requirements	Occurrence
Peninsular spineflower *Chorizanthe leptotheca*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Alluvial fan, granitic. Chaparral, coastal scrub, lower montane coniferous forest.	Not expected to occur onsite.
Plummer's mariposa lily *Calochortus plummerae*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Granitic, rock soils within chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, valley and foothill grassland.	Not expected to occur.
Prostrate vernal pool navarretia *prostrata*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Coastal sage scrub, valley and foothill grassland (alkaline), vernal pools. Occurring in mesic soils.	Does not occur.
Rainbow manzanita *Arctostaphylos rainbowensis*	Federal: None State: None CNPS: Rank 1B.1 MSHCP	Chaparral	No potential to occur.
Robinson's pepper grass *Lepidium virginicum* var. *robinsonii*	Federal: None State: None CNPS: Rank 4.3	Chaparral, coastal sage scrub	Not expected to occur.
Round-leaved filaree *California macrophylla*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Clay soils in cismontane woodland, valley and foothill grassland	Low potential to occur on slopes.
Salt Spring checkerbloom *Sidalcea neomexicana*	Federal: None State: None CNPS: Rank 2B.2	Mesic, alkaline soils in chaparral, coastal sage scrub, lower montane coniferous forest, Mojavean desert scrub, and playas.	Does not occur.
San Bernardino aster *Symphyotrichum defoliatum*	Federal: None State: None CNPS: Rank 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic).	Does not occur.
San Diego ambrosia *Ambrosia pumila*	Federal: FE State: None CNPS: Rank 1B.1 MSHCP(b)	Chaparral, coastal sage scrub, valley and foothill grassland, vernal pools. Often in disturbed habitats.	Not expected to occur.
San Diego button-celery *Eryngium aristulatum* var. *parishii*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP	Mesic soils in vernal pools, valley and foothill grasslands, coastal sage scrub.	Does not occur.
San Jacinto Valley crownscale *Atriplex coronata* var. *notatior*	Federal: FE State: None CNPS: Rank 1B.1 MSHCP(d)	Alkaline soils in chenopod scrub, valley and foothill grassland, vernal pools.	Does not occur.

Species Name	Status	Habitat Requirements	Occurrence
San Miguel savory *Clinopodium chandleri*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(b)	Rocky, gabbroic, or metavolcanic soils in chaparral, cismontane woodland, coastal sage scrub, riparian woodland, valley and foothill grassland.	Low potential to occur on slopes.
Santa Lucia dwarf rush *Juncus luciensis*	Federal: None State: None CNPS: Rank 1B.2	Chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, and vernal pools.	Does not occur.
Santa Rosa Basalt brodiaea *Brodiaea santarosae*	Federal: None State: None CNPS: Rank 1B.2	Basaltic soils in valley and foothill grassland.	Does not occur.
Santiago Peak phacelia *Phacelia keckii*	Federal: None State: None CNPS: Rank 1B.3	Closed-cone coniferous forest, chaparral	Does not occur.
Slender-horned spineflower *Dodecahema leptoceras*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(b)	Sandy soils in alluvial scrub, chaparral, cismontane woodland.	Does not occur.
Small-flowered microseris *Microseris douglasii* ssp. *platycarpha*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Cismontane woodland, coastal sage scrub, valley and foothill grassland, vernal pools. Occurring on clay soils.	Does not occur.
Small-flowered morning-glory *Convolvulus simulans*	Federal: None State: None CNPS: Rank 4.2	Chaparral (openings), coastal sage scrub, valley and foothill grassland. Occurring on clay soils and serpentinite seeps.	Does not occur.
Smooth tarplant *Centromadia pungens* ssp. *laevis*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grasslands, disturbed habitats.	Does not occur.
Southern mountains skullcap *Scutellaria bolanderi* ssp. *austromontana*	Federal: None State: None CNPS: Rank 1B.2	Mesic soils in chaparral, cismontane woodland, lower montane coniferous forest.	Does not occur.
Southern tarplant *Centromadia parryi* ssp. *australis*	Federal: None State: None CNPS: Rank 1B.1	Disturbed habitats, margins of marshes and swamps, vernally mesic valley and foothill grassland, vernal pools.	Does not occur.
South coast saltscale *Atriplex pacifica*	Federal: None State: None CNPS: Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal sage scrub, playas.	Does not occur.
Spreading navarretia *Navarretia fossalis*	Federal: FT State: None CNPS: Rank 1B.1 MSHCP(b)	Vernal pools, playas, chenopod scrub, marshes and swamps (assorted shallow freshwater).	Does not occur.

Species Name	Status	Habitat Requirements	Occurrence
Sticky dudleya *Dudleya viscida*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(f)	Coastal bluff scrub, chaparral, coastal sage scrub. Occurring on rocky soils.	Does not occur.
Summer holly *Comarostaphylis diversifolia* ssp. *diversifolia*	Federal: None State: None CNPS: Rank 1B.2	Chaparral.	Confirmed absent.
Tecate cypress *Hesperocyparis forbesii*	Federal: None State: None CNPS: Rank 1B.1	Closed-cone coniferous forest, chaparral.	Confirmed absent.
Thread-leaved brodiaea *Brodiaea filifolia*	Federal: FT State: SE CNPS: Rank 1B.1 MSHCP(d)	Clay soils in chaparral (openings), cismontane woodland, coastal sage scrub, playas, valley and foothill grassland, vernal pools.	Does not occur.
Vernal barley *Hordeum intercedens*	Federal: None State: None CNPS: Rank 3.2 MSHCP	Coastal dunes, coastal sage scrub, valley and foothill grassland (saline flats and depressions), vernal pools.	Does not occur.
White rabbit-tobacco *Pseudognaphalium leucocephalum*	Federal: None State: None CNPS: Rank 2B.2	Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland.	Does not occur.
Woven-spored lichen *Texosporium sancti-jacobi*	Federal: None State: None CNPS: Rank 3	On soil, small mammal pellets, dead twigs, and on *Selaginella* spp. Chaparral (openings).	Not expected to occur.
Wright's trichocoronis *Trichocoronis wrightii* var. *wrightii*	Federal: None State: None CNPS: Rank 2B.1 MSHCP(b)	Alkaline soils in meadows and seeps, marshes and swamps, riparian scrub, vernal pools.	Does not occur. .

STATUS

Federal
FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate

State
SE – State Endangered
ST – State Threatened

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

Threat Code extension
.1 – Seriously endangered in California (over 80% occurrences threatened)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

MSHCP
MSHCP = No additional action necessary
MSHCP(a) = Surveys may be required as part of wetlands mapping
MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area
MSHCP(c) = Surveys may be required within locations shown on survey maps
MSHCP(d) = Surveys may be required within Criteria Area
MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species
MSHCP(f) = Covered species when a Memorandum of Understanding is executed with the Forest Service Land

OCCURRENCE

- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.
- Confirmed present – The species was detected onsite incidentally or through focused surveys

4.4.1 Special-Status Plants Detected at the Project Site

Coulter's Matilija Poppy (*Romneya coulteri*) – Coulter's matilija poppy is designated as a CNPS Rank 4.2 species and is a covered species under the MSHCP without additional survey or conservation requirements. Coulter's matilija poppy is not a federal or state listed species. Coulter's matilija poppy is a member of the poppy family (PAPAVERACEAE). This perennial herb is known to occur in chaparral and coastal scrub from 20 to 1,200 meters (66 to 3,940 feet) MSL and is known as a fire follower species. Coulter's matilija poppy is known from Los Angeles, Orange, Riverside and San Diego counties and is known to bloom from March through July.

Two small populations were detected during general and focused surveys. The Study Area supports approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) for the Coulter's matilija poppy. Approximately 64.61 acres of potential habitat occurs in the impacted portion of the Project Study Area. As previously stated, this species is covered under the MSHCP.

4.4.2 Special-Status Plant Species Not Observed but with a Potential to Occur at the Project Site

Intermediate Mariposa Lily (*Romneya coulteri*) – Intermediate mariposa lily is designated as a CNPS Rank 1B.2 species and is a covered species under the MSHCP without additional survey or conservation requirements. Intermediate mariposa lily is not a federal or state listed species.

Intermediate mariposa lily is a member of the Lily family (LILIACEAE) is known to occur in chaparral, coastal scrub and valley and foothill grasslands. Intermediate mariposa lily is known to occur from Los Angeles, Orange and Riverside counties. This species is known to bloom from May through July.

Intermediate mariposa lily was not detected during 2020 surveys. The Study Area supports approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) for the intermediate mariposa lily. Approximately 64.61 acres of potential habitat occurs in the impacted portion of the Project Study Area. As previously stated, this species is covered under the MSHCP.

Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*) – Long-spined spineflower is designated as a CNPS Rank 1B.2 species and is a covered species under the MSHCP without additional survey or conservation requirements. Long-spined spineflower is not a federal or state listed species.

Long-spined spineflower is a member of the buckwheat family (POLYGONACEAE). This annual herb is known to occur in chaparral, coastal scrub, meadows and seeps, valley and foothill grasslands and vernal pools from 30 to 1,530 meters (98 to 5,018 feet) MSL. Long-spined spineflower is known to occur from Santa Barbara, Orange, Riverside, and San Diego counties as well as Baja California and is known to bloom from April through July.

Long-spined spineflower was not detected during 2020 surveys. The Study Area supports approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) for the long-spined spineflower. Approximately 64.61 acres of potential habitat occurs in the impacted portion of the Project Study Area. As previously stated, this species is covered under the MSHCP.

Many-Stemmed Dudleya (*Dudleya multicaulis*) – Many-stemmed dudleya is designated as a CNPS Rank 1B.2 species and is a covered species under the MSHCP outside of NEPSSA. Within NEPSSA, focused plant surveys are required. Many-stemmed dudleya is not a federal or state listed species.

Many-stemmed dudleya is a member of the stonecrop family (CRASSULACEAE). This perennial herb is known to occur in chaparral, coastal scrub and valley and foothill grasslands and is often associated with clay soils. Many stemmed dudleya is known to occur from Los Angeles, Orange, Riverside, San Bernardino and San Diego counties from 15 to 790 meters (50 to 2,590 feet) MSL. This species is known to bloom from April through July.

Many-stemmed dudleya was not detected during 2020 surveys. The Study Area supports approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) for the many-stemmed dudleya. Approximately 64.61 acres of potential habitat occurs in the impacted portion of the Project Study Area. As previously stated, this species is covered under the MSHCP outside of NEPSSA. Within NEPSSA, focused plant surveys for NEPSSA plant species are required.

Munz's Onion (*Allium munzii*) – Munz's onion is designated as a CNPS Rank 1B.1 species and is a covered species under the MSHCP outside of NEPSSA. Within NEPSSA, focused plant surveys are required. Munz's onion is designated as federal endangered and is state listed as threatened.

Munz's onion is a member of the onion family (ALLIACEAE). This perennial bulbiferous herb is known to occur in chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland and mesic valley and foothill grassland associated with clay soils from 297 to 1,070 meters (975 to 3,510 feet) MSL. Munz's onion is known to from Riverside County and is known to bloom from March through May.

Munz's onion was not detected during 2020 surveys. The Study Area supports approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) for Munz's onion. Approximately 64.61 acres of potential habitat occurs in the impacted portion of the Project Study Area. As previously stated, this species is covered under the MSHCP outside of NEPSSA. Within NEPSSA, focused plant surveys for NEPSSA plant species are required.

Palmer's Grapplinghook (*Harpagonella palmeri*) – Palmer's grapplinghook is designated as a CNPS Rank 4.2 species and is a covered species under the MSHCP without additional survey or conservation requirements. Palmer's grapplinghook is not a federal or state listed species.

Palmer's grapplinghook is a member of the borage family (BORAGINACEAE). This annual herb is known to occur from chaparral, coastal sage and valley and foothill grasslands with clay affinities from 20 to 955 meters (66 to 3,132 feet) MSL. Palmer's grapplinghook is known from Los Angeles, Orange, Riverside, San Diego counties as well as Catalina Island and Baja California and is known to bloom from March through May.

Palmer's grapplinghook was not detected during 2020 surveys. The Study Area supports approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) for Palmer's grapplinghook. Approximately 64.61 acres of potential habitat occurs in the impacted portion of the Project Study Area. As previously stated, this species is covered under the MSHCP.

Round-Leaved Filaree (*California macrophylla*) – Round-leaved filaree is designated as a CNPS Rank 1B.1 species and is a covered species under the MSHCP outside of CAPSSA. Within CAPSSA, focused plant surveys are required. Round-leaved filaree is not a federal or state listed species.

Round-leaved filaree is a member of the geranium family (GERANIACEAE). This annual herb is known to occur on cismontane woodland, and valley and foothill grasslands with clay soils from 15 to 1,200 meters (50 to 3,936 feet) MSL. Round-leaved filaree is known to occur from several counties in Southern California including San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Riverside and Dan Diego. This species is known to bloom from March through May.

Round-leaved filaree was not detected during 2020 surveys. The Study Area supports approximately 66.42 acres of potential habitat (disturbed chamise chaparral, disturbed California buckwheat scrub) for the round-leaved filaree. Approximately 45.12 acres of potential habitat occurs within the Project site. As previously stated, this species is covered under the MSHCP

outside of CAPSSA. Within CAPSSA, focused plant surveys for CAPSSA plant species are required.

San Miguel Savory (*Clinopodium chandleri*) – San Miguel savory is designated as a CNPS Rank 1B.2 species and is a covered species under the MSHCP outside of NEPSSA. Within NEPSSA, focused plant surveys are required. San Miguel savory is not a federal or state listed species.

San Miguel savory is a member of the mint family (LAMIACEAE). This perennial shrub is known to occur in chaparral, cismontane woodland, coastal scrub, riparian woodland and valley and foothill grasslands from 120 to 1,075 meters (394 to 3,526 feet) MSL. San Miguel savory is known to occur from Orange, Riverside and San Diego Counties as well as Baja California and is known to bloom from March through July.

San Miguel savory was not detected during 2020 surveys. The Study Area supports approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) for San Miguel savory. Approximately 64.61 acres of potential habitat occurs in the impacted portion of the Project Study Area. As previously stated, this species is covered under the MSHCP outside of NEPSSA. Within NEPSSA, focused plant surveys for NEPSSA plant species are required.

4.5 Special-Status Animals

The following special-status animals were detected at the Project site during the 2020 biological surveys: coast horned lizard and coastal California gnatcatcher. Table 4-3 provides a list of special-status animals evaluated for the Project site through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors, including: 1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the Project site, 2) applicable MSHCP survey areas, and 3) any other special-status animals that are known to occur within the vicinity of the Project site, for which potentially suitable habitat occurs on the site.

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

Species Name	Status	Habitat Requirements	Occurrence
Invertebrates			
Crotch bumble bee *Bombus crotchii*	Federal: None State: SC	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	Not expected to occur.
Quino checkerspot butterfly *Euphydryas editha quino*	Federal: FE State: None MSHCP	Larval and adult phases each have distinct habitat requirements tied to host plant species and topography. Larval host plants include *Plantago erecta* and *Castilleja exserta*. Adults occur on sparsely vegetated rounded hilltops and ridgelines and are known to disperse through	Low potential to occur.

Species Name	Status	Habitat Requirements	Occurrence
		disturbed habitats to reach suitable nectar plants.	
Riverside fairy shrimp *Streptocephalus woottoni*	Federal: FE State: None MSHCP(a)	Restricted to deep seasonal vernal pools, vernal pool-like ephemeral ponds, and stock ponds.	Does not occur.
San Diego fairy shrimp *Branchinecta sandiegonensis*	Federal: FE State: None	Seasonal vernal pools	Does not occur.
Vernal pool fairy shrimp *Branchinecta lynchi*	Federal: FT State: None MSHCP(a)	Seasonal vernal pools	Does not occur.
Fish			
Arroyo chub *Gila orcutti*	Federal: None State: SSC MSHCP	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.	Does not occur.
Santa Ana speckled dace *Rhinichthys osculus* ssp. *3*	Federal: None State: SSC	Occurs in the headwaters of the Santa Ana and San Gabriel Rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temperatures of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Does not occur.
Steelhead - southern California DPS *Oncorhynchus mykiss irideus pop. 10*	Federal: FE State: None	Clear, swift moving streams with gravel for spawning. Federal listing refers to populations from Santa Maria river south to southern extent of range (San Mateo Creek in San Diego county.)	Does not occur.
Amphibians			
Arroyo toad *Anaxyrus californicus*	Federal: FE State: SSC MSHCP(c)	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 gravely 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.
California red-legged frog *Rana draytonii*	Federal: FT State: SSC MSHCP(c)	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	Does not occur.
Coast Range newt *Taricha torosa*	Federal: None State: SSC	Found in wet forests, oak forests, chaparral, and rolling grasslands. In southern California, drier chaparral, oak woodland, and grasslands are used.	Does not occur.

Species Name	Status	Habitat Requirements	Occurrence
Western spadefoot *Spea hammondii*	Federal: None State: SSC MSHCP	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Does not occur.
Reptiles			
California glossy snake *Arizona elegans occidentalis*	Federal: None State: SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Not expected to occur.
Coast horned lizard *Phrynosoma blainvillii*	Federal: None State: SSC MSHCP	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Detected during 2020 surveys.
Coast patch-nosed snake *Salvadora hexalepis virgultea*	Federal: None State: SSC	Occurs in coastal chaparral, desert scrub, washes, sandy flats, and rocky areas.	Low potential to occur in non-riparian areas of the Project site.
Coastal whiptail *Aspidoscelis tigris stejnegeri (multiscutatus)*	Federal: None State: SSC MSHCP	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	Not expected to occur.
Red-diamond rattlesnake *Crotalus ruber*	Federal: None State: SSC MSHCP	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	Low potential to occur.
Southern California legless lizard *Anniella stebbinsi*	Federal: None State: SSC	Broadleaved upland forest, chaparral, coastal dunes, coastal scrub; found in a broader range of habitats that any of the other species in the genus. Often locally abundant, specimens are found in coastal sand dunes and a variety of interior habitats, including sandy washes and alluvial fans	Not expected to occur.
Two-striped garter snake *Thamnophis hammondii*	Federal: None State: SSC	Aquatic snake typically associated with wetland habitats such as streams, creeks, and pools.	Does not occur.
Western pond turtle *Emys marmorata*	Federal: None State: SSC MSHCP	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.
Birds			
Bald eagle (nesting & wintering) *Haliaeetus leucocephalus*	Federal: Delisted State: SE, FP MSHCP	Primarily in or near seacoasts, rivers, swamps, and large lakes. Perching sites consist of large trees or snags with heavy limbs or broken tops.	Does not occur.
Burrowing owl (burrow sites &	Federal: None State: SSC	Shortgrass prairies, grasslands, lowland scrub, agricultural lands	Confirmed absent.

Species Name	Status	Habitat Requirements	Occurrence
some wintering sites) *Athene cunicularia*	MSHCP(c)	(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.	
Coastal cactus wren (San Diego & Orange County only) *Campylorhynchus brunneicapillus sandiegensis*	Federal: None State: SSC MSHCP	Occurs almost exclusively in cactus (cholla and prickly pear) dominated coastal sage scrub.	Does not occur.
Coastal California gnatcatcher *Polioptila californica californica*	Federal: FT State: SSC MSHCP	Low elevation coastal sage scrub and coastal bluff scrub.	Detected during 2020 surveys.
Golden eagle (nesting & wintering) *Aquila chrysaetos*	Federal: None State: WL, FP MSHCP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Does not occur
Least Bell's vireo (nesting) *Vireo bellii pusillus*	Federal: FE State: SE MSHCP(a)	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Confirmed absent.
Loggerhead shrike (nesting) *Lanius ludovicianus*	Federal: None State: SSC MSHCP	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 fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	Potential to occur.
Long-eared owl (nesting) *Asio otus*	Federal: None State: SSC	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	Not expected to occur.
Northern harrier (nesting) *Circus cyaneus*	Federal: None State: SSC MSHCP	A variety of habitats, including open wetlands, grasslands, wet pasture, old fields, dry uplands, and croplands.	Low potential to forage on site.
Southwestern willow flycatcher (nesting) *Empidonax traillii extimus*	Federal: FE State: SE MSHCP(a)	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Does not occur.
Tricolored blackbird (nesting colony) *Agelaius tricolor*	Federal: None State: CE, SSC MSHCP	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	Does not occur.

Species Name	Status	Habitat Requirements	Occurrence
Western snowy plover (nesting) *Charadrius alexandrinus nivosus*	Federal: FT State: SSC	Sandy or gravelly beaches along the coast, estuarine salt ponds, alkali lakes, and at the Salton Sea.	Does not occur.
White-tailed kite (nesting) *Elanus leucurus*	Federal: None State: FP MSHCP	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	Potential to occur.
Yellow rail *Coturnicops noveboracensis*	Federal: None State: SSC	Shallow marshes, and wet meadows; in winter, drier freshwater and brackish marshes, as well as dense, deep grass, and rice fields.	Does not occur.
Yellow-breasted chat (nesting) *Icteria virens*	Federal: None State: SSC MSHCP	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Not expected to occur.
Mammals			
American badger *Taxidea taxus*	Federal: None State: SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	Does not occur.
Northwestern San Diego pocket mouse *Chaetodipus fallax fallax*	Federal: None State: SSC MSHCP	Coastal sage scrub, sage scrub/grassland ecotones, and chaparral.	Potential to occur.
Pallid bat *Antrozous pallidus*	Federal: None State: SSC WBWG: H	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Does not occur.
Pocketed free-tailed bat *Nyctinomops femorosaccus*	Federal: None State: SSC WBWG: M	Rocky areas with high cliffs in pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian.	Does not occur.
San Bernardino kangaroo rat *Dipodomys merriami parvus*	Federal: FE State: SSC MSHCP(c)	Typically found in Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans and floodplains, and along washes with nearby sage scrub.	Does not occur.
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	Federal: None State: SSC MSHCP	Occupies a variety of habitats but is most common among shortgrass habitats. Also occurs in sage scrub but needs open habitats.	Not expected to occur.
San Diego desert woodrat *Neotoma lepida intermedia*	Federal: None State: SSC MSHCP	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	Potential to occur.
Stephens' kangaroo rat *Dipodomys stephensi*	Federal: FE State: ST MSHCP	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	Low potential to occur.

Species Name	Status	Habitat Requirements	Occurrence
Western mastiff bat *Eumops perotis californicus*	Federal: None State: SSC WBWG: H	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.	Not expected to occur.
Western red bat *Lasiurus blossevillii*	Federal: None State: SSC WBWG: H	Prefers riparian areas dominated by walnuts, oaks, willows, cottonwoods, and sycamores where they roost in broad-leafed trees.	Not expected to occur.
Western yellow bat *Lasiurus xanthinus*	Federal: None State: SSC WBWG: H	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Not expected to occur.
Yuma myotis *Myotis yumanensis*	Federal: None State: None WBWG: LM	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.	Not expected to occur.

STATUS

Federal
FE – Federally Endangered
FT – Federally Threatened
FPT – Federally Proposed Threatened
FC – Federal Candidate
BGEPA– Bald and Golden Eagle Protection Act

State
SE – State Endangered
ST – State Threatened
SC– State Candidate
CFP – California Fully-Protected Species
SSC – Species of Special Concern

MSHCP
MSHCP = No additional action necessary
MSHCP(a) = Surveys may be required as part of wetlands mapping
MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area
MSHCP(c) = Surveys may be required within locations shown on survey maps
MSHCP(d) = Surveys may be required within Criteria Area
MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species
MSHCP(f) = Covered species when a Memorandum of Understanding is executed with the Forest Service Land

Western Bat Working Group (WBWG)
H – High Priority
LM – Low-Medium Priority
M – Medium Priority
MH – Medium-High Priority

OCCURRENCE

- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.

- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.
- Confirmed present – The species was detected onsite incidentally or through focused surveys

4.5.1 Special-Status Wildlife Species Observed within the Project Site

Reptiles

Coast Horned Lizard (*Phrynosoma blainvillii*) – The coast horned lizard is designated as a CDFW Species of Special Concern (SSC) and is a covered species under the MSHCP. *P. blainvillii* is found in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest (Klauber, 1939; Stebbins, 1954). In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (*e.g.*, floods, fire, roads, grazed areas, fire breaks) (Jennings and Hayes, 1994). Extensive habitat loss from agriculture and urbanization, have been the main reasons cited for the decline of this taxon (e.g., Jennings 1987c).

There is approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) within the Study Area, of which approximately 64.61 acres occurs in the impacted portion of the Project Study Area. The coast horned lizard was detected during 2020 surveys.

Birds

Coastal California Gnatcatcher (*Polioptila californica californica*) – The coastal California gnatcatcher (gnatcatcher) is designated as a federally threatened species, a CDFW California Species of Special Concern, and is a covered species under the MSHCP. The gnatcatcher typically occurs in or near sage scrub habitat, which is a broad category of vegetation that includes the following plant communities as classified by Holland (1986): Venturan coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. Gnatcatchers also use chaparral, grassland, and riparian or alluvial habitats where they occur adjacent to sage scrub (Bontrager 1991).

There is approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) within the Study Area, of which approximately 64.61 acres occurs in the impacted portion of the Project Study Area.

Annual focused surveys for the gnatcatcher were performed by both L&L, Inc. and GLA from 2003 to 2006, as shown in Section 1.1 of this report. One pair of gnatcatchers was detected on site in 2006. The coastal California gnatcatcher was also detected during 2020 surveys but is considered a covered species adequately conserved under the MSHCP.

4.5.2 Special-Status Wildlife Species Not Observed but with a Potential to Occur at the Project Site

Invertebrates

Quino Checkerspot Butterfly (*Euphydryas editha quino* – QCB) - The federally listed endangered QCB was listed in 1997 and is currently a covered species under the MSHCP. Currently, QCB is known only from scattered locations in San Diego and western Riverside counties, and northwestern Baja California, Mexico. QCB have two distinctive phases in its life history: early stages (egg, larva or caterpillar, and the pupa or chrysalis) and adult. Each phase has distinct habitat requirements. Habitat associations seem to be tied to both host plant species and topography. Larvae feed immediately upon *Plantago erecta*, *Plantago patagonia, Antirrhinum coulterianum*, *Cordylanthus rigidus* (USFWS 2001, USFWS 2002) and possibly other *Plantago* species and *Collinsia concolor*, and *Castilleja exserta* which have been shown to support larvae in the laboratory (Pratt, unpubl. data). Additionally, *Collinsia* spp. and *Castilleja* spp. are larval food plants for other *Euphydryas editha* subspecies (Singer 1971, 1972, 1982, White 1974, Garth and Tilden, 1986). After diapause, the larvae feed again on *Plantago erecta* before metamorphosing. After metamorphosing, the adult's nectar mostly on small annuals.

The Project site has previously been identified as an area that has historically supported QCB. There is approximately 30.35 acres of potential habitat (brittle bush scrub) within the Study Area, of which approximately 19.48 occurs in the impacted portion of the Project Study Area.

Reptiles

Coast Patch-Nosed Snake (*Salvadora hexalepis virgultea*) – The coast patch-nosed snake is designated as a CDFW California Species of Special Concern. The coast patch-nosed snake is thought to be associated with brushy or shrubby vegetation, such as chaparral (Klauber 1924, Bogert 1935, Perkins 1938). If the assessment that *S. h. virgultea* adjusts its activity around that of its whiptail lizard prey, the link to shrubby associations may simply be a function that being the preferred habitat of its prey. Whatever the link, coast patch-nosed snakes seem to require at least a low shrub structure of minimum density since they are not found in habitats lacking this structural component. Coast patch-nosed snakes are presumed to take refuge and perhaps overwinter in burrows or woodrat nests, so the presence of one or more burrow- or refuge-creating mammals may be necessary for this snake to be present.

There is approximately 14.32 acres of potential habitat (disturbed chamise chaparral) within the Study Area, of which approximately 11.31 acres occur in the impacted portion of the Project Study Area and 3.01 acres occur in avoided open space.

Red-diamond rattlesnake (*Crotalus ruber*) – The red-diamond rattlesnake is designated as a CDFW Species of Special Concern and is a covered species under the MSHCP without additional survey or conservation requirements. From an ecological standpoint, the rattlesnake has a wide tolerance for varying environments. Although *C. ruber* is recorded from a number of vegetation types, it is most commonly associated with heavy brush with large rocks or boulders (Klauber, 1972). Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub

(Stebbins, 1954, 1985; Fitch, 1970), and desert slope scrub associations are known to carry populations of *C. ruber*, however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats (Jennings and Hayes, 1994).

There is approximately 14.32 acres of potential habitat (disturbed chamise chaparral) within the Study Area, of which approximately 11.31 acres occur in the impacted portion of the Project Study Area and 3.01 acres occur in avoided open space.

Birds

Loggerhead Shrike (*Lanius ludovicianus*) - The loggerhead shrike is designated as a CDFW California Species of Special Concern when nesting and is a covered species under the MSHCP. 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).

There is approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) within the Study Area, of which approximately 64.61 acres occurs in the impacted portion of the Project Study Area.

Northern Harrier (*Circus cyaneus*) - The northern harrier is designated as a CDFW California Species of Special Concern when nesting and is a covered species under the MSHCP. 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. 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). 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).

There is approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) within the Study Area, of which approximately 64.61 acres occurs in the impacted portion of the Project Study Area.

White-Tailed Kite (*Elanus leucurus*) - The white-tailed kite does not have a federal or state designation, however this species is considered locally rare when nesting. It is also designated as a covered species under the MSHCP. The white-tailed kite inhabits low elevation, open

grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Riparian areas adjacent to open areas are used for nesting (Dunk 1995). The white-tailed kite uses trees with dense canopies for cover and the specific plant associations seem to be unimportant with the vegetation structure and prey abundance apparently more important (Dunk 1995).

There is approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) within the Study Area, of which approximately 64.61 acres occurs in the impacted portion of the Project Study Area.

Mammals

Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*) – The northwestern San Diego pocket mouse is designated as a CDFW Species of Special Concern and is a covered species under the MSHCP. The northwestern San Diego pocket mouse inhabits coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities. It inhabits open, sandy areas of both the Upper and Lower Sonoran life-zones of southwestern California and northern Baja California (in McClenaghan 1983). Bleich (1973) recorded the highest populations of the San Diego pocket mouse in coastal sage scrub supporting a mixture of coastal sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*) on the Naval Weapons Station, Fallbrook Annex in northwestern San Diego County, but it was also relatively abundant in chaparral. The San Diego pocket mouse generally exhibits a strong microhabitat affinity for moderately gravelly and rocky substrates (Bleich 1973; Price and Waser 1984), and, to a lesser extent, shrubby areas (MWD and RCHCA 1995).

There is approximately 52.06 acres of potential habitat (disturbed California buckwheat scrub) in the Study Area, of which approximately 33.82 acres occurs in the impacted portion of the Project Study Area and 18.24 occurs in avoided open space.

San Diego Desert Woodrat (*Neotoma lepida intermedia*) – The San Diego desert woodrat is designated as a CDFW Species of Special Concern and is a covered species under the MSHCP. 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 Rainy 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). In chaparral, rock dens usually are located near primary food sources to minimize travel time and exposure to predators. 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.

There is approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) within the Study Area, of which approximately 64.61 acres occurs in the impacted portion of the Project Study Area.

Stephens' Kangaroo Rat (*Dipodomys stephensi*) – The Stephens' kangaroo rat (SKR) is designated as a federally endangered species and a state threatened species and is a covered species under the MSHCP. The Stephens' kangaroo rat is found almost exclusively in open grasslands or sparse shrublands with cover of less than 50 percent during the summer (*e.g.*, Bleich 1973; Bleich and Schwartz 1974; Grinnell 1933; Lackey 1967; O'Farrell 1990; Thomas 1973). Although there are no confirmatory data, it has been assumed that the Stephens' kangaroo rat historically occupied habitat dominated by native perennial grasses and forbs (*e.g.*, Price and Endo 1989). Soil type also is an important habitat factor for Stephens' kangaroo rat occupation (O'Farrell and Uptain 1987; Price and Endo 1989). As a fossorial (burrowing) animal, the Stephens' kangaroo rat typically is found in sandy and sandy loam soils with a low clay to gravel content, although there are exceptions where they can utilize the burrows of Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel (*Spermophilus beecheyi*). Additionally, the Stephens' kangaroo rat has been trapped in brittlebush (*Encelia farinosa*) dominated coastal sage scrub with an estimated shrub cover of over 50 percent (USFWS 1997).

There is approximately 30.35 acres of potential habitat (brittle bush scrub) in the Study Area, of which approximately 19.48 occurs in the impacted portion of the Project Study Area and 10.87 occurs within avoided open space.

4.5.3 Special-Status Wildlife Species Confirmed Absent Through Focused Surveys at the Project Site

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 is a covered species not adequately conserved under the MSHCP, which means that projects located within the burrowing owl survey area may have to evaluate avoidance measures if burrowing owls are present.

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 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.

The northwestern portion of the Project site occurs within the MSHCP survey area for the burrowing owl; therefore, focused surveys were conducted in 2004 and 2005 by L&L Environmental, Inc. No burrowing owls or sign of burrowing owls were detected at that time. In August 2020, updated focused burrowing owl surveys were performed by GLA pursuant to the MSHCP. GLA biologists did not observe burrowing owls, or evidence of burrowing owls (e.g., cast pellets, preened feathers, or whitewash clustered at a burrow) during the focused burrowing owl surveys conducted in 2020. Exhibit 5 – Burrowing Owl Survey Area/Burrow Map depicts

the location of the burrowing owl survey areas and of burrows detected during the focused burrow survey. This species was confirmed absent from the burrowing owl study area.

Least Bell's Vireo (*Vireo bellii pusillus*) – The least Bell's vireo is designated as a federally and state endangered species. The least Bell's vireo is a covered species not adequately conserved under the MSHCP, which means that projects with wetland mapping components may have to evaluate avoidance measures if least Bell's vireo are present.

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.

As the site contains riparian habitat, the site has the potential to support the least Bell's vireo. Therefore, in 2003, 2004, and 2005, focused least Bell's vireo surveys were performed by L & L Environmental, Inc. In 2003, one least Bell's vireo was detected offsite within the Temescal Wash, although none were detected on site. No vireos were detected during focused surveys in 2004 or 2005, or during updated focused surveys conducted by GLA in 2020.

4.6 Raptor Use

The Project site provides suitable foraging and breeding habitat for a number of raptor species, including special-status raptors.

Southern California holds a diversity of birds of prey (raptors), and many of these species are in decline. For most of the declining species, foraging requirements include extensive open, undisturbed, or lightly disturbed areas, especially grasslands. This type of habitat has declined severely in the region, affecting many species, but especially raptors. A few species, such as red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), are somewhat adaptable to low-level human disturbance and can be readily observed adjacent to neighborhoods and other types of development. These species still require appropriate foraging habitat and low levels of disturbance in vicinity of nesting sites.

Many of the raptors that would be expected to forage and nest within western Riverside County are fully covered species under the MSHCP with the MSHCP providing the necessary conservation of both foraging and nesting habitats. Some common raptor species (e.g., American kestrel and red-tailed hawk) are not covered by the MSHCP but are expected to be conserved with implementation of the Plan due to the parallel habitat needs with those raptors covered under the Plan.

The MSHCP does not provide MBTA and Fish and Game Code take for raptors covered under the Plan.

The Project site provides potential nesting habitat (e.g., mature trees, shrubs) for the white-tailed kite and potential foraging for the northern harrier.

Appendix B (faunal compendium) provides a list of the hawks and falcons detected over the course of the field studies. These species were Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and great-horned owl (*Bubo virginianus*) (refer to Section 4.5.1). The Project site supports nesting habitat (e.g., mature trees, shrubs) for these species, primarily in the riparian areas on site. The Project site is expected to provide foraging habitat for all of these species in the form of insects, spiders, lizards, snakes, small mammals, and other birds.

4.7 Nesting Birds

The Project site contains trees, shrubs, and ground cover that provide suitable habitat for nesting native birds. Mortality of native birds (including eggs) is prohibited under California Fish and Game Code.[8]

Birds anticipated to nest on the Project site would be those that are common to disturbed habitats, riparian habitats, and coastal sage scrub. These birds include mourning dove, Anna's hummingbird, American crow, common raven, Bewick's wren, rock wren, house finch, and lesser goldfinch.

4.8 Wildlife Linkages/ Corridors and Nursery Sites

Habitat linkages are areas which provide a communication between two or more other habitat areas which are often larger or superior in quality to the linkage. Such linkage sites can be quite small or constricted but may be vital to the long-term health of connected habitats. Linkage values are often addressed in terms of "gene flow" between populations, with movement taking potentially many generations.

Corridors are similar to linkages but provide specific opportunities for individual animals to disperse or migrate between areas, generally extensive but otherwise partially or wholly separated regions. Adequate cover and tolerably low levels of disturbance are common requirements for corridors. Habitat in corridors may be quite different than that in the connected areas, but if used by the wildlife species of interest, the corridor will still function as desired.

[8] 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.

Wildlife nurseries are sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and bat colonies. Nurseries can be important to both special-status species as well as commonly occurring species.

The eastern quarter of the Project site is identified by the MSHCP as being within a conceptual linkage or corridor. The Project site, therefore, may represent an area valuable to wildlife movement.

The Project site does not represent a nursery site due to the disturbed nature of the site and its adjacent surrounding areas (residential areas).

4.9 Critical Habitat

The Project site does not occur within any USFWS designated critical habitat.

4.10 Jurisdictional Waters

The original study in 2003 performed by L&L Environmental, Inc. found six drainage channels flowing from southwest to northeast. The six drainages varied from shallow to deeply incised and are tributary to Temescal Wash which borders the extreme northeastern portion of the property. An updated study was conducted in 2004-2005 due to record rainfall during the 2004-2005 wet season [Appendix C]. Additionally, GLA performed a jurisdictional delineation in 2006 for offsite drainages in the northwestern portion of the Project site, adding one additional drainage feature [Appendix D]. The jurisdictional features contained in the biological report are derived from GLA's interpretation or the Project's jurisdictional delineation report prepared by L&L dated May 2005, as well as the existing approved regulatory permits issued by the Corps, Regional Board, and CDFW for the Project. Finally, one 0.05-acre riparian area and 0.03 acre of wetland streambed located south of the Project site near Bolo Court was also identified. This area supports Southern Cottonwood-Willow Riparian Forest Habitat.

4.10.1 Corps Jurisdictional Features

Corps jurisdiction associated with the Project site, which includes on and offsite areas, totals 3.26 acres (3.18 acres onsite, 0.08-acre offsite), 0.13 acre of which is wetland. A total of 10,800 linear feet of streambed is present.

The Project site supports six features, including ephemeral streams/tributaries, erosional areas, and swales, that flow in direct response to precipitation (e.g., rain) or suburban runoff. One additional feature (Channel 7) occurs in the Offsite area. Table 4-4 provides a summary of Corps jurisdiction associated with the Project site, and Table 4-5 provides a summary of Corps jurisdiction associated with the Offsite areas.

Table 4-4. Summary of Corps Jurisdiction for the Onsite Areas*

Channel Name	Non-Wetland Waters (acres)	Wetlands (acres)	Total (acres)	Length (linear feet)
Channel 1	0.02	0	0.02	200
Channel 2	0.22	0.10	0.32	900
Channel 3	0.41	0	0.41	2,500
Channel 4	0.11	0	0.11	700
Channel 5	0.34	0	0.34	2,200
Channel 6	1.98	0	1.98	3,600
Total	**3.08**	**0.10**	**3.18**	**10,100**

*See Table 2-b of the jurisdictional report by L&L, Inc.

Table 4-5. Summary of Corps Jurisdiction for the Offsite Areas.

Channel Name	Non-Wetland Waters (acres)	Wetlands (acres)	Total (acres)	Length (linear feet)
Channel 1	0.01	0	0.01	75
Channel 3	0.01	0	0.01	125
Channel 6	0	0.03	0.03	75
Channel 7	0.03	0	0.03	425
Total	**0.05**	**0.03**	**0.08**	**700**

1. Channel 1

Corps jurisdiction associated with Channel 1 totals 0.03 acre (0.02 acre onsite and 0.01 acre offsite), none of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 1 as an ephemeral drainage vegetated primarily by upland species such as mustard with sporadic individuals of mulefat present, as well as scrub oaks and a coast live oak tree. The drainage originates on site and flows northeast for approximately 200 feet before entering into the Offsite Impacts area, where it flows for another 75 feet before exiting the Study Area. Flows originating from Channel 1 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake. The onsite portion of the drainage averages approximately 10 feet in width, while the offsite portion averages approximately 4 feet in width. Adjacent upland areas consisted of disturbed Riversidean sage scrub vegetated with California buckwheat and white sage; disturbed areas vegetated with ruderal vegetation and non-native grasses; and scrub oak chaparral vegetated with scrub oak (*Quercus berberidifolia*), chamise, and sugar bush (*Rhus ovata*).

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 1 consisted primarily of brittle bush scrub and upland mustards as described in Section 4.2 of this report.

2. Channel 2

Corps jurisdiction associated with Channel 2 totals 0.32 acre (all onsite), 0.10 acre of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 2 as an intermittent drainage vegetated primarily by dense southern willow woodland with an understory of mulefat thickets. The drainage arrives on the property through a storm drain on the western boundary adjacent to residential development and flows northeast for approximately 900 feet before exiting the Study Area. Flows from Channel 2 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake. After approximately 700 feet from its entrance into the Project site, Channel 2 becomes more sparsely vegetated, though consisting of the same component habitat.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 2 consisted primarily of southern cottonwood willow riparian forest as described in Section 4.2 of this report.

3. Channel 3

Corps jurisdiction associated with Channel 3 totals 0.42 acre (0.41 acre onsite and 0.01 acre offsite), none of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 3 as an ephemeral drainage vegetated primarily by upland species such as mustards and bromes in the south, and by sage scrub and chamise community vegetation in the northern portions of the drainage feature. The drainage originates on site and flows northeast for approximately 2500 feet before entering into the Offsite Impacts area, where it flows for another 125 feet before exiting the Study Area. Flows originating from Channel 3 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake. The onsite portion of the drainage averages approximately 5 feet in width, while the offsite portion averages approximately 4 feet in width. Adjacent upland areas consisted of disturbed areas dominated by ruderal vegetation and non-native grasses, Riversidean sage scrub dominated by California sagebrush, and scrub oak/chamise chaparral vegetated with scrub oak, chamise, California sagebrush, California bush poppy (*Dendromecon rigida*), and thick-leaved lilac (*Ceanothus crassifolius*).

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 3 consisted primarily of brittle bush scrub and disturbed California buckwheat scrub as described in Section 4.2 of this report.

4. Channel 4

Corps jurisdiction associated with Channel 4 totals 0.11 acre (all onsite), none of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 4 as an ephemeral drainage vegetated primarily by dense coastal sage scrub and chamise chaparral. The drainage originates on the property and flows northeast for approximately 700 feet before exiting the Study Area. Flows from Channel 4 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 4 consisted primarily of disturbed California buckwheat scrub and disturbed chamise chaparral as described in Section 4.2 of this report.

5. Channel 5

Corps jurisdiction associated with Channel 5 totals 0.34 acre (all onsite), none of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 5 as an ephemeral drainage vegetated primarily by dense coastal sage scrub and chamise chaparral. The drainage originates on the property and flows northeast for approximately 2200 feet before exiting the Study Area. Flows from Channel 5 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 5 consisted primarily of disturbed California buckwheat scrub, disturbed chamise chaparral, and upland mustards as described in Section 4.2 of this report.

6. Channel 6

Corps jurisdiction associated with Channel 6 totals 2.01 acres (1.98 acres onsite and 0.03 acre off site), none of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 6 as an intermittent drainage vegetated primarily by dense willows and cottonwoods in the southern portion of the channel, which then thins into unvegetated streambed. The drainage originates from a suburban runoff storm drain along the southeast boundary of the Project and flows north for approximately 3600 feet before exiting the Study Area. Flows from Channel 6 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 6 has

expanded further north than previously described. The southern cottonwood willow riparian forest present in Channel 6 during the 2020 surveys is described in Section 4.2 of this report.

It should also be noted that a 0.03-acre and 75 linear foot off site portion of Channel 6 has been incorporated into the Project due to storm drain improvements. This area is depicted on Exhibit 10A.

7. Channel 7

Corps jurisdiction associated with Channel 7 totals 0.03-acre (all offsite), none of which consists of wetlands.

The initial jurisdictional delineation for Channel 7 performed by GLA in 2006 described Channel 7 as an ephemeral drainage vegetated primarily by arroyo willow, mulefat, and stinging nettle (*Urtica dioica*), as well as more sporadic areas of mulefat that support tree tobacco, castor bean, and salt cedar. The drainage originates at a culvert outlet in the southwest corner of the Offsite Impacts Area, and then extends approximately 425 linear feet north/northeast within the Offsite Impacts Area, at which point the channel then extends into the Interstate 15 right-of-way and enters a culvert pipe that conveys flows underneath the freeway and towards the Temescal Canyon Wash.

Current conditions on site have remained relatively consistent with the previous studies.

4.10.2 Regional Water Quality Control Board Jurisdictional Features

Regional Board jurisdiction associated with the Project site, which includes on and offsite areas, totals 3.26 acres (3.18 acres onsite, 0.08-acre offsite), 0.13 acre of which is wetland. A total of 10,800 linear feet of streambed is present.

The Project site supports six features, including ephemeral streams/tributaries, erosional areas, and swales, that flow in direct response to precipitation (e.g., rain) or suburban runoff. One additional feature (Channel 7) occurs in the Offsite area. Table 4-6 provides a summary of Regional Board jurisdiction associated with the Project site, and Table 4-7 provides a summary of Regional Board jurisdiction associated with the Offsite areas.

Table 4-6. Summary of Regional Board Jurisdiction for the Onsite Areas

Channel Name	Non-Wetland Waters (acres)	Wetlands (acres)	Total (acres)	Length (linear feet)
Channel 1	0.02	0	0.02	200
Channel 2	0.22	0.10	0.32	900
Channel 3	0.41	0	0.41	2,500
Channel 4	0.11	0	0.11	700
Channel 5	0.34	0	0.34	2,200
Channel 6	1.98	0	1.98	3,600
Total	**3.08**	**0.10**	**3.18**	**10,100**

*See Table 2-b of the jurisdictional report by L&L, Inc.

Table 4-7. Summary of Regional Board Jurisdiction for the Offsite Areas.

Channel Name	Non-Wetland Waters (acres)	Wetlands (acres)	Total (acres)	Length (linear feet)
Channel 1	0.01	0	0.01	75
Channel 3	0.01	0	0.01	125
Channel 6	0	0.03	0.03	75
Channel 7	0.03	0	0.03	425
Total	**0.05**	**0.03**	**0.08**	**800**

1. Channel 1

Regional Board jurisdiction associated with Channel 1 totals 0.03 acre (0.02 acre onsite and 0.01 acre offsite), none of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 1 as an ephemeral drainage vegetated primarily by upland species such as mustard with sporadic individuals of mulefat present, as well as scrub oaks and a coast live oak tree. The drainage originates on site and flows northeast for approximately 200 feet before entering into the Offsite Impacts area, where it flows for another 75 feet before exiting the Study Area. Flows originating from Channel 1 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake. The onsite portion of the drainage averages approximately 10 feet in width, while the offsite portion averages approximately 4 feet in width. Adjacent upland areas consisted of disturbed Riversidean sage scrub vegetated with California buckwheat and white sage; disturbed areas vegetated with ruderal vegetation and non-native grasses; and scrub oak chaparral vegetated with scrub oak (*Quercus berberidifolia*), chamise, and sugar bush (*Rhus ovata*).

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 1 consisted primarily of brittle bush scrub and upland mustards as described in Section 4.2 of this report.

2. Channel 2

Regional Board jurisdiction associated with Channel 2 totals 0.32 acre (all onsite), 0.10 acre of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 2 as an intermittent drainage vegetated primarily by dense southern willow woodland with an understory of mulefat thickets. The drainage arrives on the property through a storm drain on the western boundary adjacent to residential development and flows northeast for approximately 900 feet before exiting the Study Area. Flows from Channel 2 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake. After approximately 700 feet from its entrance into the Project site, Channel 2 becomes more sparsely vegetated, though consisting of the same component habitat.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 2 consisted primarily of southern cottonwood willow riparian forest as described in Section 4.2 of this report.

3. Channel 3

Regional Board jurisdiction associated with Channel 3 totals 0.42 acre (0.41 acre onsite and 0.01 acre offsite), none of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 3 as an ephemeral drainage vegetated primarily by upland species such as mustards and bromes in the south, and by sage scrub and chamise community vegetation in the northern portions of the drainage feature. The drainage originates on site and flows northeast for approximately 2500 feet before entering into the Offsite Impacts area, where it flows for another 125 feet before exiting the Study Area. Flows originating from Channel 3 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake. The onsite portion of the drainage averages approximately 5 feet in width, while the offsite portion averages approximately 4 feet in width. Adjacent upland areas consisted of disturbed areas dominated by ruderal vegetation and non-native grasses, Riversidean sage scrub dominated by California sagebrush, and scrub oak/chamise chaparral vegetated with scrub oak, chamise, California sagebrush, California bush poppy (*Dendromecon rigida*), and thick-leaved lilac (*Ceanothus crassifolius*).

Regional Board conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 3 consisted primarily of brittle bush scrub and disturbed California buckwheat scrub as described in Section 4.2 of this report.

4. Channel 4

Regional Board jurisdiction associated with Channel 4 totals 0.11 acre (all onsite), none of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 4 as an ephemeral drainage vegetated primarily by dense coastal sage scrub and chamise chaparral. The drainage originates on the property and flows northeast for approximately 700 feet before exiting the Study Area. Flows from Channel 4 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 4 consisted primarily of disturbed California buckwheat scrub and disturbed chamise chaparral as described in Section 4.2 of this report.

5. Channel 5

Regional Board jurisdiction associated with Channel 5 totals 0.34 acre (all onsite), none of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 5 as an ephemeral drainage vegetated primarily by dense coastal sage scrub and chamise chaparral. The drainage originates on the property and flows northeast for approximately 2200 feet before exiting the Study Area. Flows from Channel 5 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 5 consisted primarily of disturbed California buckwheat scrub, disturbed chamise chaparral, and upland mustards as described in Section 4.2 of this report.

6. Channel 6

Regional Board jurisdiction associated with Channel 6 totals 2.01 acres (1.98 acres of which is onsite and 0.03 acre of which is off site), none of which consists of wetlands.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 6 as an intermittent drainage vegetated primarily by dense willows and cottonwoods in the southern portion of the channel, which then thins into unvegetated streambed. The drainage originates from a suburban runoff storm drain along the southeast boundary of the Project and flows north for approximately 3600 feet before exiting the Study Area. Flows from Channel 6 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 6 has expanded further north than previously described. The southern cottonwood willow riparian forest present in Channel 6 during the 2020 surveys is described in Section 4.2 of this report.

It should also be noted that a 0.03-acre and 75 linear foot off site portion of Channel 6 has been incorporated into the Project due to storm drain improvements. This area is depicted on Exhibit 10B.

7. Channel 7

Regional Board jurisdiction associated with Channel 7 totals 0.03-acre (all offsite), none of which consists of wetlands.

The initial jurisdictional delineation for Channel 7 performed by GLA in 2006 described Channel 7 as an ephemeral drainage vegetated primarily by arroyo willow, mulefat, and stinging nettle (*Urtica dioica*), as well as more sporadic areas of mulefat that support tree tobacco, castor bean, and salt cedar. The drainage originates at a culvert outlet in the southwest corner of the

Offsite Impacts Area, and then extends approximately 425 linear feet north/northeast within the Offsite Impacts Area, at which point the channel then extends into the Interstate 15 right-of-way and enters a culvert pipe that conveys flows underneath the freeway and towards the Temescal Canyon Wash.

Current conditions on site have remained relatively consistent with the previous studies.

4.10.3 California Department of Fish and Wildlife Jurisdictional Features

CDFW jurisdiction associated with the Project site totals 8.10 acres (7.79 acres onsite, 0.31 acres offsite), 4.32 acres (4.04 acres onsite, 0.28-acre offsite) of which is riparian. A total of 10,800 linear feet (10,100 l.f. onsite, 700 l.f. offsite) of streambed is present.

CDFW jurisdiction is limited to seven drainage features (Channel 1-7) that convey surface water in direct response to precipitation (e.g., rain) and have the potential to support aquatic resources. These features are considered streams with indicators that include a defined bed, bank, and channel, as well as changes in soil characteristics, sediment deposition, litter and debris wracking, and/or shelving.

Table 4-8 provides a summary of CDFW jurisdiction associated with the Project site, and Table 4-9 provides a summary of CDFW jurisdiction associated with the Offsite areas.

Table 4-8. Summary of CDFW Jurisdiction for the Onsite Areas

Channel Name	Non-Riparian Streambed (acres)	Riparian Habitat (acres)	Total (acres)	Length (linear feet)
Channel 1	0	0.03	0.03	200
Channel 2	0.66	0.28	0.94	900
Channel 3	0	1.19	1.19	2,500
Channel 4	0	0.24	0.24	700
Channel 5	0	0.75	0.75	2,200
Channel 6	3.09	1.55	4.64	3,600
Total	**3.75**	**4.04**	**7.79**	**10,100**

*See Table 2-b of the jurisdictional report by L&L, Inc.

Table 4-9. Summary of CDFW Jurisdiction for the Offsite Areas.

Channel Name	Non-Riparian Streambed (acres)	Riparian Habitat (acres)	Total (acres)	Length (linear feet)
Channel 1	0.01	0	0.01	75
Channel 3	0.01	0	0.01	125
Channel 6	0	0.05	0.05	75
Channel 7	0.01	0.23	0.24	425
Total	**0.03**	**0.28**	**0.31**	**700**

1. Channel 1

CDFW jurisdiction associated with Channel 1 totals 0.04 acre (0.03 acre onsite and 0.01 acre offsite), 0.03 acre (onsite) of which consists of CDFW riparian.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 1 as an ephemeral drainage vegetated primarily by upland species such as mustard with sporadic individuals of mulefat present, as well as scrub oaks and a coast live oak tree. The drainage originates on site and flows northeast for approximately 200 feet before entering into the Offsite Impacts area, where it flows for another 75 feet before exiting the Study Area. Flows originating from Channel 1 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake. The onsite portion of the drainage averages approximately 10 feet in width, while the offsite portion averages approximately 4 feet in width. Adjacent upland areas consisted of disturbed Riversidean sage scrub vegetated with California buckwheat and white sage; disturbed areas vegetated with ruderal vegetation and non-native grasses; and scrub oak chaparral vegetated with scrub oak (*Quercus berberidifolia*), chamise, and sugar bush (*Rhus ovata*).

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 1 consisted primarily of brittle bush scrub and upland mustards as described in Section 4.2 of this report.

2. Channel 2

CDFW jurisdiction associated with Channel 2 totals 0.94 acre (all onsite), 0.28 acre of which consists of CDFW riparian.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 2 as an intermittent drainage vegetated primarily by dense southern willow woodland with an understory of mulefat thickets. The drainage arrives on the property through a storm drain on the western boundary adjacent to residential development and flows northeast for approximately 900 feet before exiting the Study Area. Flows from Channel 2 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake. After approximately 700 feet from its entrance into the Project site, Channel 2 becomes more sparsely vegetated, though consisting of the same component habitat.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 2 consisted primarily of southern cottonwood willow riparian forest as described in Section 4.2 of this report.

3. Channel 3

CDFW jurisdiction associated with Channel 3 totals 1.20 acre (1.19 acre onsite and 0.01 acre offsite), 1.19 acre (onsite) of which consists of CDFW riparian.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 3 as an ephemeral drainage vegetated primarily by upland species such as mustards and bromes in the south, and by sage scrub and chamise community vegetation in the northern portions of the drainage feature. The drainage originates on site and flows northeast for approximately 2500 feet before entering into the Offsite Impacts area, where it flows for another 125 feet before exiting the Study Area. Flows originating from Channel 3 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake. The onsite portion of the drainage averages approximately 5 feet in width, while the offsite portion averages approximately 4 feet in width. Adjacent upland areas consisted of disturbed areas dominated by ruderal vegetation and non-native grasses, Riversidean sage scrub dominated by California sagebrush, and scrub oak/chamise chaparral vegetated with scrub oak, chamise, California sagebrush, California bush poppy (*Dendromecon rigida*), and thick-leaved lilac (*Ceanothus crassifolius*).

CDFW conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 3 consisted primarily of brittle bush scrub and disturbed California buckwheat scrub as described in Section 4.2 of this report.

4. Channel 4

CDFW jurisdiction associated with Channel 4 totals 0.24 acre (all onsite), all of which consists of CDFW riparian habitat.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 4 as an ephemeral drainage vegetated primarily by dense coastal sage scrub and chamise chaparral. The drainage originates on the property and flows northeast for approximately 700 feet before exiting the Study Area. Flows from Channel 4 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 4 consisted primarily of disturbed California buckwheat scrub and disturbed chamise chaparral as described in Section 4.2 of this report.

5. Channel 5

CDFW jurisdiction associated with Channel 5 totals 0.75 acre (all onsite), all of which consists of CDFW riparian habitat.

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 5 as an ephemeral drainage vegetated primarily by dense coastal sage scrub and chamise chaparral. The drainage originates on the property and flows northeast for approximately 2200 feet before exiting the Study Area. Flows from Channel 5 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake.

Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 5 consisted primarily of disturbed California buckwheat scrub, disturbed chamise chaparral, and upland mustards as described in Section 4.2 of this report.

6. Channel 6

CDFW jurisdiction associated with Channel 6 totals 4.69 acres (4.64 acres on site and 0.05 acre off site), 1.60 acre of which consists of CDFW riparian habitat (1.55 acres on site and 0.05 acre off site).

The initial jurisdictional delineation performed by L&L in 2003 and revised in 2005 described Channel 6 as an intermittent drainage vegetated primarily by dense willows and cottonwoods in the southern portion of the channel, which then thins into unvegetated streambed. The drainage originates from a suburban runoff storm drain along the southeast boundary of the Project and flows north for approximately 3600 feet before exiting the Study Area. Flows from Channel 6 ultimately discharge off site into Temescal Canyon Wash, which is tributary to Corona Lake. Current conditions on site have changed since the previous studies, as vegetation removals occurred in 2007. As of the 2020 surveys performed by GLA, vegetation within Channel 6 has expanded further north than previously described. The southern cottonwood willow riparian forest present in Channel 6 during the 2020 surveys is described in Section 4.2 of this report.

It should also be noted that a 0.05-acre and 75 linear foot off site portion of Channel 6 has been incorporated into the Project due to storm drain improvements. This area is depicted on Exhibit 10C.

7. Channel 7

CDFW jurisdiction associated with Channel 7 totals 0.24 acre (all offsite), 0.23 acre of which consists of CDFW riparian habitat.

The initial jurisdictional delineation for Channel 7 performed by GLA in 2006 described Channel 7 as an ephemeral drainage vegetated primarily by arroyo willow, mulefat, and stinging nettle (*Urtica dioica*), as well as more sporadic areas of mulefat that support tree tobacco, castor bean, and salt cedar. The drainage originates at a culvert outlet in the southwest corner of the Offsite Impacts Area, and then extends approximately 425 linear feet north/northeast within the Offsite Impacts Area, at which point the channel then extends into the Interstate 15 right-of-way and enters a culvert pipe that conveys flows underneath the freeway and towards the Temescal Canyon Wash.

Current conditions on site have remained relatively consistent with the previous studies.

4.11 MSHCP Riparian/Riverine Areas and Vernal Pools

Vegetation communities associated with riparian systems and vernal pools are depleted natural vegetation communities because, similar to coastal sage scrub, they have declined throughout

Southern California during past decades. In addition, they support a large variety of special-status wildlife species. Most species associated with riparian/riverine are covered species under the MSHCP (under Section 6.1.2 of the Plan). The MSHCP has specific policies and procedures regarding the evaluation and conservation of riparian/riverine resources (including riparian vegetation) and vernal pools because it supports MSHCP covered species. Specifically, 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.* Thus, the MSHCP classification of riparian/riverine includes both riparian (depleted natural vegetation communities) as well as ephemeral drainages that are natural in origin but may lack riparian vegetation.

The Study Area contains 8.10 acres of MSHCP riparian/riverine areas, including 4.32 acres of riparian areas and 3.78 acres of unvegetated riverine. Of this total, 7.79 acres are located onsite and 0.31 acres are located within offsite improvement areas. These acreages derived from GLA's interpretation or the Project's jurisdictional delineation report prepared by L&L dated May 2005, as well as the existing approved regulatory permits issued by the Corps, Regional Board, and CDFW for the Project.

As stated in Section 4.2 of this report, while GLA updated vegetation mapping for the Study Area, an updated jurisdictional delineation was not performed. Instead, GLA relied on L&L for jurisdictional acreages and associated riparian habitat numbers [Appendix C]. The numbers in L&L's jurisdictional delineation were approved through a submitted DBESP. GLA did update riparian vegetation mapping during 2020 general biological surveys. GLA riparian vegetation numbers do not equate to MSHCP Riparian/Riverine numbers and are not delineated as such.

The Project site does not contain vernal pools and does not contain other seasonal pools, including natural depressions and human created depressions such as stock ponds and tire ruts. As discussed above, no ponding was observed at the site during biological surveys, including those that occurred following periods of substantial rainfall. The site lacks the suitable topography (including localized depressions) to support prolonged inundation necessary to support fairy shrimp. The site slopes from north to south and as a result of the sloping topography and drainage, there is no opportunity for water to pond at the site. In addition, the site is mapped as containing sandy loam soils, loamy sand soils, and terrace escarpments, which are generally not associated with vernal pools. Observations of the soils at the site showed a lack of clay soil components. Lastly, no plants were observed at the site that are associated with vernal pools and similar habitats that experience prolonged inundation.

Site photographs are provided as Exhibit 8.

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 offsite 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 invasive species, as well as changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites.

Cumulative impacts refer 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)

A. 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.

B. Criteria for Determining Significance Pursuant to CEQA

Appendix G of the 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 state or federally protected wetlands (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 Special-Status Species

Appendix G(a) of the CEQA guidelines asks if a project is likely to "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."

5.2.1 Special-Status Plants

The proposed Project will impact one special-status plant species, the Coulter's matilija poppy. Two populations of approximately 100 individuals were detected on site; as the Coulter's matilija poppy is a List 4 species, and due to the limited impact, the Project would have on the population on a regional scale, impacts to these small populations would be considered less than significant. Additionally, the Coulter's matilija poppy is a covered species under the MSHCP without additional survey or conservation requirements. Impacts to this species are considered less than significant.

5.2.2 Special-Status Animals

5.2.2.1 Impacts to Listed Species

The proposed Project will result in the loss of habitat for the coastal California gnatcatcher, which was detected on site during 2020 surveys, and had been previously detected in 2006. The proposed Project may result in the loss of habitat for Quino checkerspot butterfly and SKR. Although not confirmed present, Quino checkerspot butterfly and SKR have the potential to occur at the Project site.

Coastal California Gnatcatcher. Development of the proposed Project would remove 64.61 acres of habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) for the coastal California gnatcatcher (CAGN). This species is listed as a federally Threatened, therefore, the removal of this amount of habitat would be a significant impact under CEQA. Since the CAGN is a MSHCP Covered Species, the loss of habitat for CAGN would be mitigated through compliance with the MSHCP and payment of MSHCP development fees.

Quino Checkerspot Butterfly. Development of the proposed Project would remove 19.48 acres of potential habitat (brittle bush scrub) for Quino checkerspot butterfly. This species is listed as federally endangered and is a Covered Species under the MSHCP. Due to the small and relatively isolated nature of the potential habitat, the number of individual Quino checkerspot butterflies potentially affected would be very low. Regardless, the loss of potential habitat for Quino checkerspot butterfly would be mitigated through compliance with the MSHCP and payment of MSHCP development fees.

SKR. An estimated 30.35 acres of potential habitat for SKR (brittle bush scrub) occurs within the Study Area, of which approximately 19.48 are proposed for permanent impacts. Impacts to SKR occupied habitat could be a potentially significant impact under CEQA; however, the impacts are covered under the SKR HCP. The proposed Project occurs within the SKR Fee Assessment Area. All projects located within Fee Assessment Area are required to pay the SKR fee, which therefore provides coverage for the SKR. Participation with the SKR HCP mitigates any impacts to SKR to a less than significant level.

5.2.2.2 Impacts to Non-Listed Species

In addition to the listed species discussed above, the proposed Project would impact habitat for the following non-listed and/or special-status species that have potential to occur but that are covered by the MSHCP: 1) Reptiles: coast horned lizard and red-diamond rattlesnake 2) Birds: burrowing owl, loggerhead shrike, northern harrier hawk (foraging role only), and white-tailed kite; and 3) Mammals: northwestern San Diego pocket mouse and San Diego desert woodrat. The proposed Project would impact habitat for the following non-listed and/or special-status species that have potential to occur but that are not covered by the MSHCP: 1) Reptiles: coast patch-nosed snake.

Non-Listed Species, MSHCP Covered

Burrowing Owl.

L&L conducted focused burrowing owl surveys in 2004 and 2005. GLA conducted additional focused burrowing owl surveys in 2006. No burrowing owls or presence thereof were detected during any previous surveys for the Project. GLA biologists conducted updated focused burrowing owl surveys for the Project in 2020. Burrowing owls were not detected within the Project site or within any adjacent areas.

There is approximately 96.77 acres of potential habitat (brittle bush scrub, disturbed chamise chaparral, disturbed California buckwheat scrub) within the Study Area, of which approximately 64.61 acres occurs in the impacted portion of the Project Study Area.

Pursuant to the 2006 MSHCP Burrowing Owl Survey Instructions, pre-construction owl surveys must be performed no more than 30 days prior to disturbance. If burrowing owls are detected during pre-construction surveys, then then owls must be relocated from the site outside of the breeding season following accepted protocols, and subject to the approval of the Regional Conservation Authority (RCA), CDFW, and USFWS.

Other Non-Listed Species. Proposed impacts to coast horned lizard, loggerhead shrike (foraging role only), northwestern San Diego pocket mouse, northern harrier (foraging role only), red-diamond rattlesnake, San Diego desert woodrat, and white-tailed kite, would be less than significant under CEQA. This is based on the number of individuals potentially affected, the species role in the Project Site, and/or whether the species remains “common” to the region. Regardless, these species are designated as covered species under the MSHCP, and the loss of

habitat for these species would be covered through the MSHCP and payment of development fees.

Non-Listed Species, MSHCP Non-Covered

Proposed impacts to coast patch-nosed snake would be less than significant under CEQA. This species is not covered under the MSHCP but impacts to this species would be less than significant as a result of a low level of sensitivity, low quality of habitat onsite, low numbers of individuals that would potentially be expected to be impacted by the proposed Project, and/or whether the species remains "common" to the region.

5.3 Sensitive Vegetation Communities

Appendix G(a) of the CEQA guidelines asks if a project is likely to "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."
The proposed Project would permanently impact approximately 120.29 acres of lands through grading, including areas of remedial grading that will not be restored to pre-project conditions. Permanent impacts include approximately 19.48 acres of brittle bush scrub, 33.86 acres of disturbed California buckwheat scrub, 11.31 acres of disturbed chamise chaparral, 3.36 acres of southern cottonwood willow riparian forest, 0.04 acre of disturbed/developed ornamental areas, and 52.54 acres of upland mustards. The Project will avoid 3.47 acres of unvegetated wash, 10.87 acres of brittle bush scrub, 18.24 acres of disturbed California buckwheat scrub, 3.01 acres of disturbed chamise chaparral, 1.98 acres of southern cottonwood willow riparian forest, and 2.95 acres of upland mustards. All direct impacts associated with the Project are permanent. Table 5-1 provides a summary of impacts to vegetation/land use types.

Table 5-1. Summary of Vegetation/Land Use Impacts

Vegetation/Land Use Type	Onsite Impacts (Acres)	Offsite Impacts (Acres)	Total Impacts (Acres)	Avoidance (Acres)
Brittle Bush Scrub	18.74	0.74	**19.48**	**10.87**
Disturbed California Buckwheat Scrub	33.85	0.01	**33.86**	**18.24**
Disturbed Chamise Chaparral	11.31	0	**11.31**	**3.01**
Southern Cottonwood Willow Riparian Forest	3.07	0.29	**3.36**	**1.98**
Unvegetated Wash	0	0	**0**	**3.47**
Disturbed/Developed Ornamental	0	0.04	**0.04**	**0**
Upland Mustards	49.55	2.69	**52.24**	**2.95**
Total	**116.52**	**3.77**	**120.29**	**40.52**

The Project will permanently impact 3.36 acres of southern cottonwood willow riparian forest, which as a riparian community, is considered as a sensitive community under CEQA. Additionally, southern cottonwood willow riparian forest is listed under the CNDDB as a G3

S3.2 special vegetation community. Furthermore, the loss of riparian habitat must be mitigated pursuant to the MSHCP riparian/riverine policies. Impacts to southern cottonwood willow riparian forest would be less than significant with mitigation. A majority of the compensatory mitigation has already been purchased from the Riverside-Corona Resource Conservation District at their Lee Lake Preserve, consisting of 13.92 acres of habitat creation and conservation, and through 9.28 acres of habitat restoration and Arundo donax removal within Bedford Canyon Wash. Only 0.05-acre of off site impact to southern cottonwood willow riparian forest located south of the Project near Bolo Court has not yet been mitigated; however, mitigation to compensate for this loss would occur at the Riverpark Mitigation Bank at a 2:1 mitigation ratio through the purchase of re-establishment and/or rehabilitation mitigation credits.

None of the other vegetation communities to be impacted by the Project are considered as sensitive communities.

5.4 Wetlands

Appendix G(c) of the State CEQA guidelines asks if a project is likely to "have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means."

The jurisdictional features contained in the biological report are derived from GLA's interpretation of the Project's jurisdictional delineation report prepared by L&L dated May 2005, as well as the existing approved regulatory permits issued by the Corps, Regional Board, and CDFW for the Project. Specifically, areas designated as "State wetlands" in the L&L 2005 report have been interpreted as signifying riparian habitat, and not federally recognized wetlands.

The Study Area contains approximately 0.13 acre of federally protected wetlands, all of which will be permanently impacted as a result of the Project. Due to the small size of the wetlands to be removed, these impacts would be considered less than significant by through compliance with approved mitigation measures listed in the authorized site jurisdictional permit approvals included a 401 Water Quality Certification in 2005, a CWA Section 404 permit in 2005 (extended in 2015), and a 1602 Streambed Alteration Agreement in 2004 (amended in 2013 and extended in 2019).

5.5 Wildlife Movement and Native Wildlife Nursery Sites

Appendix G(d) of the State CEQA guidelines asks if a project is likely to "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."

While most of the Project site occurs outside of proposed core/linkage areas, the eastern end of the project site does occur within Proposed Constrained Linkage 6 of the Estelle Mountain/Indian Canyon Subunit. This proposed linkage focuses on conserving the eastern 40% to 50% of areas within Criteria Cell 3748 and places an emphasis on conserving riparian areas

that drain into Temescal Wash. The purpose of the proposed linkage is to connect Proposed Core 1, Proposed Extension of Existing Core 2, and Proposed Linkage 1. The proposed impacts to criteria areas and cells triggered the JPR process (JPR Number 04-11-30-01). In 2003 the Project applicant submitted a HANS application; after several correspondences with the RCA, it was determined that designating approximately 27.1 acres on the eastern edge of the Project as Open Space Conservation would be sufficient to meet the requirements of Proposed Constrained Linkage 6 (HANS Number 206). This land would be dedicated for conservation in coordination with the RCA, either via fee title or conservation easement. Portions of this approximate 27.1 acres of land have been disturbed by adjacent landowners. This situation is currently being rectified through coordination with the RCA; however, the area must be restored prior to formal dedication to the RCA.

Additionally, due to the limited size of the Project impacts on these areas and the limited potential for wildlife movement from the adjacent residential development, these impacts would only have an impact on local wildlife movement and would not represent a significant impact under CEQA with mitigation afforded by the MSHCP.

The Project site lacks wildlife nursery sites. The Project site lacks sufficient habitat features to support colonies of nesting birds or large numbers of roosting bats. No impact to wildlife nursery sites would occur.

The project has the potential to impact active bird nests if vegetation is removed during the nesting season (February 1 to August 31). Impacts to nesting birds are prohibited by the California Fish and Game Code. A measure is identified in Section 6.0 of this report to avoid impacts to nesting birds.

The general loss of habitat for native birds would not be a significant impact under CEQA. The native birds with potential to nest on the Project site would be those that are extremely common to the region and highly adapted to human landscapes (e.g., house finch, killdeer). The number of individuals potentially affected by the Project would not significantly affect regional, let alone local populations of such species.

5.6 Local Policies or Ordinances

Appendix G(e) of the State CEQA guidelines asks if a project is likely to "conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance." The Project will not conflict with oak tree management guidelines for Riverside county, as no oak trees were detected during 2020 surveys. An Oak Tree Survey performed by L & L Environmental, Inc. in 2003 identified two clusters of coast live oaks and several clusters of scrub oak (*Quercus berberidifolia*) on site. Of the oaks present, only the coast live oaks would have qualified for protection/mitigation, as both had diameter-breast-height measurements greater than 2.5 inches. In 2007, all vegetation within the Project site was removed. As of 2020 field surveys, no large oak trees were detected on site. GLA did not observe any oak trees within the development footprint; it is assumed that all oak trees previously present on site were removed in 2007, and that the Project will not be subject to the guidelines moving forward.

5.7 Habitat Conservation Plans

Appendix G(f) of the State CEQA guidelines asks if a project is likely to "conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan." As discussed throughout this report, the Project is within the Western Riverside County MSHCP. Section 7.0 of this report analyzes compliance of the Project with the Reserve Assembly and species/habitat requirements of the MSHCP. Impacts to species/habitats with MSHCP requirements are summarized here. Through compliance with the applicable requirements, the Project will not conflict with the provisions of the MSHCP.

NEPSSA/CAPSSA Species. The Project site occurs within the NEPSSA and CAPSSA for the following target species: thread-leaved brodiaea, Davidson's saltscale, Parish's brittlescale, smooth tarplant, round-leaved filaree, Coulter's goldfields, little mousetail, Munz's onion, San Diego ambrosia, slender-horned spineflower, many-stemmed dudleya, spreading navarretia, California Orcutt grass, San Miguel savory, Hammitt's clay-cress, Wright's trichocoronis. However, as confirmed through a combination of habitat assessments and focused surveys, none of these species are present within the Project's impact footprint.

Burrowing Owl. Focused surveys for burrowing owl were performed in August 2020 in accordance with the 2006 MSHCP Burrowing Owl Survey Instructions. No burrowing owls or evidence of burrowing owl occupation were detected. Additionally, although not expected, a pre-construction survey as described in Section 6.1 of this report will be conducted to prevent impacts to burrowing owls, should they occupy the site prior to construction.

Least Bell's Vireo. Focused surveys for least Bell's vireo were performed from May 2020 to July 2020 in accordance with the 2001 Least Bell's Vireo Survey Guidelines. No least Bell's vireo were detected. As such, no impacts to least Bell's vireo will occur as a result of Project activities.

Riparian/Riverine. As mentioned in Section 4.10 and 4.11, the Project site supports riverine and riparian areas. Approximately 4.00 acres of riparian areas and 0.95 acre of riverine areas would be permanently impacted under the proposed Project and 0.25 acre would be temporarily impacted. Impacts to these areas would be considered less than significant with mitigation as described in Section 6.4 of this report.

SKR. An estimated 30.35 acres of potential habitat for SKR (brittle bush scrub) occurs within the Study Area, of which approximately 19.48 are proposed for permanent impacts. Impacts to SKR occupied habitat could be a potentially significant impact under CEQA; however, the impacts are covered under the SKR HCP. The proposed Project occurs within the SKR Fee Assessment Area. All projects located within Fee Assessment Area are required to pay the SKR fee, which therefore provides coverage for the SKR. Participation with the SKR HCP mitigates any impacts to SKR to a less than significant level.

5.8 Jurisdictional Waters

Implementation of the proposed Project would permanently impact 1.95 acres (1.87 acre onsite, 0.08 acre offsite) of Corps jurisdiction, of which 0.13 acre consists of jurisdictional wetlands.

Implementation of the proposed Project would permanently impact 1.95 acres (1.87 acre onsite, 0.08 acre offsite) of Regional Board jurisdiction, of which 0.13 acre consists of jurisdictional wetlands.
The Project would also permanently impact 4.95 acres (4.64 acres onsite, 0.31 acre offsite) of CDFW jurisdiction, of which 4.00 acres (3.72 acres onsite, 0.28 acre offsite) consists of CDFW riparian. A total of 8,151 linear feet (7,451 l.f. onsite, 700 l.f. offsite) of ephemeral streambed would be removed. The Project will permanently fill the entire lengths of Channels 1, 3, and 5, and portions of Channels 2, 4, 6, and 7, as shown in Appendix C. The Project would also result in 0.25 acre of temporary impact.

Regulatory permits and agreements from the Corps, the CDFW, and the Regional Board have already been issued and a majority of the compensatory mitigation has been completed; however, each of these permits/agreements will need to be amended to incorporate the updated project description and the additional impact to 0.03 acre of Corps/Regional Board jurisdiction and 0.05 acre of CDFW jurisdiction located south of the Project near Bolo Court. This impact will be mitigated at the Riverpark Mitigation Bank at a 2:1 ratio through the purchase of re-establishment and/or rehabilitation credits. With mitigation, this impact would be less than significant.

The Project Proponent is expected to secure amended regulatory permits and agreements from the regulatory agencies prior to the commencement of grading with waters of the U.S. and/or waters of the State.

The jurisdictional features contained in the biological report are derived from GLA's interpretation or the Project's jurisdictional delineation report prepared by L&L dated May 2005, as well as the existing approved regulatory permits issued by the Corps, Regional Board, and CDFW for the Project.

5.9 Indirect Impacts to Biological Resources

In the context of biological resources, indirect effects are those effects associated with developing areas adjacent to adjacent native open space.

The Project is not expected to result in significant indirect impacts to special-status biological resources, with the implementation of measures 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. To minimize potential edge effects, the guidelines are to be implemented in conjunction with review of individual public and private development projects in proximity to the MSHCP Conservation Area. The Project will implement measure consistent with the MSHCP guidelines to address the following:

- Drainage;
- Toxics;
- Lighting;
- Noise;
- Invasives;
- Barriers; and
- Grading/Land Development.

5.9.1 Drainage

Proposed Projects in proximity to the MSHCP Conservation Area shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged to the MSHCP Conservation Area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into the MSHCP Conservation Area. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Area. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

The Project's construction contractor would be required to develop a Stormwater Pollution Prevention Plan (SWPPP) to address potential runoff and water quality effects during construction. Following the completion of activities, and pursuant to the Project's Water Quality Management Plan (WQMP), the Project's drainage system would provide detention and water quality treatment to ensure runoff from the site does not result in increased drainage to the Santa Ana River, or affect the water quality of the river. Mandatory compliance with the future-required SWPPP during construction and the Project's WQMP under long-term operations would ensure that the Project does not conflict with the MSHCP provisions related to indirect drainage impacts.

However, following the completion of activities, the Project area will not contain any developed or paved areas, and will not in any way result in increased drainage to the Santa Ana River, or affect the water quality of the river. As such, no measures would be required post-construction.

5.9.2 Toxics

Land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife species, habitat or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area. Measures such as those employed to address drainage issues shall be implemented. The proposed Project will implement a SWPPP that will address runoff during construction.

5.9.3 Lighting

Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. If night lighting is required during construction, shielding shall be incorporated to ensure ambient lighting in the MSHCP Conservation Area is not increased.

5.9.4 Noise

Proposed noise generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards.

5.9.5 Invasive Species

Projects adjacent to the MSHCP Conservation Area shall avoid the use of invasive plant species in landscaping, including invasive, non-native plant species listed in Volume I, ***Table 6-2*** of the MSHCP.

5.9.6 Barriers

Proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass or dumping in the MSHCP Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage and/or other appropriate mechanisms.

5.9.7 Grading/Land Development

The MSHCP states that manufactured slopes associated with development shall not extend into the MSHCP Conservation Area.

5.10 Cumulative Impacts to Biological Resources

Cumulative impacts are defined as the direct and indirect effects of a proposed project which, when considered alone, would not be deemed a substantial impact, but when considered in addition to the impacts of related projects in the area, would be considered potentially significant. "Related projects" refers to past, present, and reasonably foreseeable probable future projects, which would have similar impacts to the proposed project.

The Project site provides 120.29 acres of potential habitat for special-status species and species common to western Riverside County. As discussed in this document, the 120.29 acres proposed for removal consist of relatively disturbed lands. There are eleven special status wildlife species with potential to occur on site (Quino checkerspot butterfly, western spadefoot, coast patch-

nosed snake, red-diamond rattlesnake, burrowing owl, least Bell's vireo, loggerhead shrike, northern harrier, white-tailed kite, northwestern San Diego pocket mouse, Stephens' kangaroo rat). One special-status plant species (Coulter's matilija poppy) and two special-status wildlife species (coast horned lizard, coastal California gnatcatcher) were detected on site. The Project site is not expected to provide valuable habitat for any of these species due to the degraded condition of the site and the developed nature of surrounding adjacent habitat. Given the low number of individuals potentially affected, the low potential for wildlife movement given the surrounding lands, the status of each species in western Riverside County, the Project would not make a cumulatively considerable contribution to the regional decline of these species of special-status plants or wildlife. Of these species, 11 species are fully covered under the MSHCP and any potential cumulative impacts would be mitigated by the Plan. For those species not covered under the MSHCP, the removal of the limited number of individuals potentially on the Project site would not be cumulatively significant to the regional population due to the disturbed nature of the Project site.

The Study Area contains approximately 1.27 acres of state protected wetlands and 1.05 acres federally protected wetlands. Approximately 0.91 acres of state and federally protected wetlands will be permanently impacted as a result of the Project. Due to the small size of the wetlands to be removed, these impacts would be considered less than significant by following the permitted mitigation measures listed in Section 6 of this report.

A small portion of the Project is located within Proposed Constrained Linkage 6 of the Estelle Mountain/Indian Canyon Subunit. Due to the small size of the area to be impacted within the linkage and its proximity with existing residential development, implementation of the Project would not result in significant impacts of wildlife movement in the region.

The Project site will impact approximately 3.36 acres of riparian area. Although impacts to these areas would occur, the loss of 3.36 acres would not account for a significant loss of overall environmental function within the region and would be less than significant given compliance with proposed mitigation. A majority of the compensatory mitigation for the Project has already been purchased from the Riverside-Corona Resource Conservation District at their Lee Lake Preserve, consisting of 13.92 acres of habitat creation and conservation, and through 9.28 acres of habitat restoration and Arundo donax removal within Bedford Canyon Wash.

Additional impact to 0.03 acre of Corps/Regional Board jurisdiction and 0.05 acre of CDFW jurisdiction located south of the Project near Bolo Court is being proposed due to required storm drain improvements. This impact will be mitigated at the Riverpark Mitigation Bank at a 2:1 ratio through the purchase of re-establishment and/or rehabilitation credits. With mitigation, this impact would be less than significant

Vernal pool resources and wildlife nurseries are not present on site.

6.0 MITIGATION/AVOIDANCE MEASURES

The following discussion provides project-specific mitigation/avoidance measures for actual or potential impacts to special-status resources.

6.1 Burrowing Owl

The Project site contains suitable habitat for burrowing owls; however, burrowing owls were not detected onsite during focused surveys. MSHCP Objective 6 for burrowing owls requires that pre-construction surveys prior to site grading. As such, the following measure is recommended to avoid direct impacts to burrowing owls and to ensure consistency with the MSHCP.

- **Pre-Construction Survey.** A 30-day pre-construction survey for burrowing owls is required prior to future ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, tree removal, site watering, equipment staging, etc.) to ensure that no owls have colonized the site in the days or weeks preceding the ground-disturbing activities. If burrowing owls have colonized the project site prior to the initiation of ground-disturbing activities, the project proponent will immediately inform the Regional Conservation Authority (RCA) and the Wildlife Agencies and will need to coordinate in the future with the RCA and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance. If ground-disturbing activities occur, but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure that burrowing owl have not colonized the site since it was last disturbed. If burrowing owls are found, the same coordination described above will be necessary.

6.2 Coastal California Gnatcatcher

The coastal California gnatcatcher was detected on site during focused surveys in 2006, and during general biological surveys in 2020. The gnatcatcher is designated as a Covered Species Adequately Conserved under the MSHCP without additional conservation requirements. However, the MSHCP does impose restrictions on clearing of occupied habitat during the nesting season. Condition 5b of the MSHCP Federal Fish and Wildlife take permit states that the "clearing of occupied habitat within PQP lands and the Criteria Area between March 1 and August 15 is prohibited." Although the take of gnatcatchers is covered under the MSHCP, the purpose of this condition is to allow for the successful reproduction of gnatcatchers during the nesting season and to prevent the take of active nests. The following mitigation measure will ensure compliance with Condition 5b:

- If habitat suitable to support the coastal California gnatcatcher is to be removed between March 1 and August 15, focused surveys should first be conducted to determine if the habitat is occupied by gnatcatchers. If gnatcatchers are present and are determined to be nesting, the occupied areas will be avoided until after August 15.

6.3 Nesting Birds

The Project site contains vegetation with the potential to support native nesting birds. As discussed above, the California Fish and Game Code prohibits mortality of native birds, including eggs. The following measure is recommended to avoid mortality to nesting birds. Potential impacts to native birds was not considered a biologically significant impact under CEQA, however, to comply with state law, the following is recommended:

- As feasible, vegetation clearing should be conducted outside of the nesting season, which is generally identified as February 1 through September 15. If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

6.4 Jurisdictional Waters

As noted above, the Project will impact a total of 0.13 acre of Corps jurisdictional wetlands and 4.00 acres of CDFW riparian habitat.

A DBESP for the Project was submitted in 2003 and approved in 2006, and the conditions listed therein were satisfied. Mitigation measures for impacts to jurisdictional waters have been approved through the permitting process, with 24.20 acres of offsite mitigation credits being purchased. The additional impact to 0.03 acre of Corps/Regional Board jurisdiction and 0.05 acre of CDFW jurisdiction located south of the Project near Bolo Court would also occur and be mitigated at the Riverpark Mitigation Bank at a 2:1 ratio through the purchase of re-establishment and/or rehabilitation credits.

Regulatory permits and agreements from the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and the Santa Ana Regional Water Quality Control Board have already been issued; however, each of these permits will need to be amended to incorporate the updated project description.

- The Project Proponent shall secure amended regulatory permits and agreements from the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and the Santa Ana Regional Water Quality Control Board prior to the commencement of grading with waters of the U.S. and/or waters of the State. Copies of each of these permits and agreements shall be provided to the County EPD before grading occurs within state or federal jurisdictional waters.

Compliance with mitigation measures in the amended permits for the Project site would reduce impacts to jurisdictional waters to less than significant.

6.5 MSHCP Riparian/Riverine Areas

As noted in Section 4.10, 4.11, and 5.7, the Project site supports riverine and riparian areas. Approximately 4.00 acres of riparian areas and 0.95 acre of riverine areas would be impacted under the proposed Project.

A DBESP for the Project was submitted in 2003, and the conditions listed therein were satisfied. Mitigation measures for impacts to jurisdictional waters have been approved through the permitting process, with 24.20 acres of offsite mitigation credits being purchased.

- The Project Proponent shall mitigate additional impact to 0.05 acre of MSHCP Riparian habitat located south of the Project near Bolo Court through the purchase of either re-establishment and/or rehabilitation mitigation credits at the Riverpark Mitigation Bank at a 2:1 ratio.

Compliance with mitigation measures in the approved DBESP for the Project site would reduce impacts to jurisdictional waters to less than significant.

7.0 MSHCP CONSISTENCY ANALYSIS

The purpose of this section is to provide an analysis of the proposed Project with respect to compliance with biological aspects of the MSHCP. Specifically, this analysis evaluates the proposed Project with respect to the Project's consistency 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 Project is located within the Estelle Mountain/Indian Canyon Area Plan of the MSHCP and is located within the MSHCP Criteria Cells 3647, 3648, and 3748 [Exhibit 4 – MSHCP Overlay]. A small portion of the Project is located within the MSHCP Core and Linkage areas. Specifically, the Project is located within Cell Groups E and F of the MSHCP. As such, part of the proposed Project was identified by the MSHCP for reserve assembly and is subject to the HANS process (HANS Number 00206)or the JPR process (JPR Number 04-11-30-01).

The Project submitted a HANS application which was approved in November 2003. Within Cell Groups E and F, targeted areas for conservation include approximately 40% to 50% of Cell Group E focusing on the northern portion and 65% to 75% of Cell Group F within the northern portion. The HANS letter [HANS 00206] identified approximately 27.1 acres on the eastern portion of the Study Area which would be required for onsite conservation for compliance with the MSHCP conservation assembly goals. These areas were incorporated into Project planning and will be open-space conservation areas. This land would be dedicated for conservation in coordination with the RCA, either via fee title or conservation easement. Portions of this

approximate 27.1 acres of land have been disturbed by adjacent landowners. This situation is currently being rectified through coordination with the RCA; however, the area must be restored prior to formal dedication to the RCA.

7.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

Volume I, Section 6.1.2 of the MSHCP establishes procedures through which the protection of Riparian/Riverine Areas and Vernal Pools would occur within the Plan Area. The purpose of the procedure is to ensure that the biological functions and values of these habitat areas throughout the MSHCP Plan Area are maintained such that habitat values for species inside the MSHCP Conservation Area are maintained.

As discussed in Section 5.7 of this report, the proposed Project will permanently impact 4.93 acres of riverine/riparian resources, 3.98 acres of which is associated with riparian vegetation. As stated in Section 6.4, a DBESP was provided to ensure that compensation for the removal of 4.95 acres of riparian/riverine resources (4.00 acres of riparian resources are included) will be replaced at a 1:1 ratio, after which, the proposed Project will be consistent with *Volume I, Section 6.1.2* of the MSHCP. Although language in the DBESP did not specifically address MSHCP Riverine areas, unvegetated CDFW jurisdictional areas are synonymous with MSHCP Riverine. Impacts to MSHCP Riverine and MSHCP Riparian areas have already been mitigated through the purchase of 24.20 acres of offsite mitigation credits through the RCRA. As such, the mitigation for these areas are considered biologically superior, and are consistent with *Volume I, Section 6.1.2* of the MSHCP.

Additionally, a 0.05-acre riparian impact area south of the Project near Bolo Court must occur due to storm drain improvements. The Project Proponent is proposing to mitigate this impact through the purchase of either re-establishment and/or rehabilitation mitigation credits at the Riverpark Mitigation Bank at a 2:1 ratio. The mitigation to compensate for the impact to these areas is considered biologically superior, and consistent with *Volume I, Section 6.1.2* of the MSHCP.

The Project site supports potential habitat for riparian-associated birds including least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo; however, none of these species were detected within the Project site during general or focused surveys. As focused surveys for species with the potential to occur on site (least Bell's vireo) were performed in 2020, the proposed Project is consistent with *Volume I, Section 6.1.2* of the MSHCP.

Additionally, no vernal pools or seasonal pools/depressions are present within the Project site.

7.3 Protection of Narrow Endemic Plants

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 proposed Project does occur within the NEPSSA. As such, appropriate habitat assessments for targeted NEPSSA species were conducted for thread-leaved brodiaea, Davidson's saltscale, Parish's brittlescale, smooth tarplant,

round-leaved filaree, Coulter's goldfields, little mousetail, Munz's onion, San Diego ambrosia, slender-horned spineflower, many-stemmed dudleya, spreading navarretia, California Orcutt grass, San Miguel savory, Hammitt's clay-cress, and Wright's trichocoronis. Habitat on the Project site was deemed unsuitable for these species; additionally, none of these species were detected during focused surveys in 2020. As such, the proposed Project is consistent with *Volume I, Section 6.1.3* of the MSHCP.

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.

An Evaluation of Urban-Wildland Interface was performed in January 2004 by L&L Environmental which details suggested methods of addressing potential edge impacts associated with the Project. As discussed in Section 5.0 of this report, the Project will implement applicable measures as it relates to temporary construction impacts to minimize adverse indirect impacts on special-status resources within Conserved Lands. The proposed Project will be consistent with *Section 6.1.4* of the MSHCP.

7.5 Additional Survey Needs and Procedures

Volume I, Section 6.3.2 of the MSHCP identifies that in addition to the Narrow Endemic Plant Species addressed in Section 6.1.3 of the MSHCP, additional surveys may be needed for other certain plant and animal species in conjunction with MSHCP implementation in order to achieve full coverage for these species. Within areas of suitable habitat, focused surveys are required if a Study Area occurs within a designated CAPSSA, or special animal species survey area (i.e., burrowing owl, amphibians, and mammals). The proposed Project occurs within CAPSSA and the burrowing owl survey area but does not occur within the amphibian or mammal survey areas. Focused plant surveys were conducted for the proposed project, and no CAPSSA plant species were detected. Focused burrowing owl surveys were conducted for the proposed Project, and no burrowing owls were detected. As indicated in Section 6.0 of this report, pre-construction burrowing owl surveys will occur within the 30 days of site disturbance in conjunction with

MSHCP requirements. The proposed Project will be consistent with MSHCP Volume I, Section 6.3.2.

7.6 Conclusion of MSHCP Consistency

As outlined above, the proposed Project will be 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.

Signed:__  Date: _September 29, 2021_____

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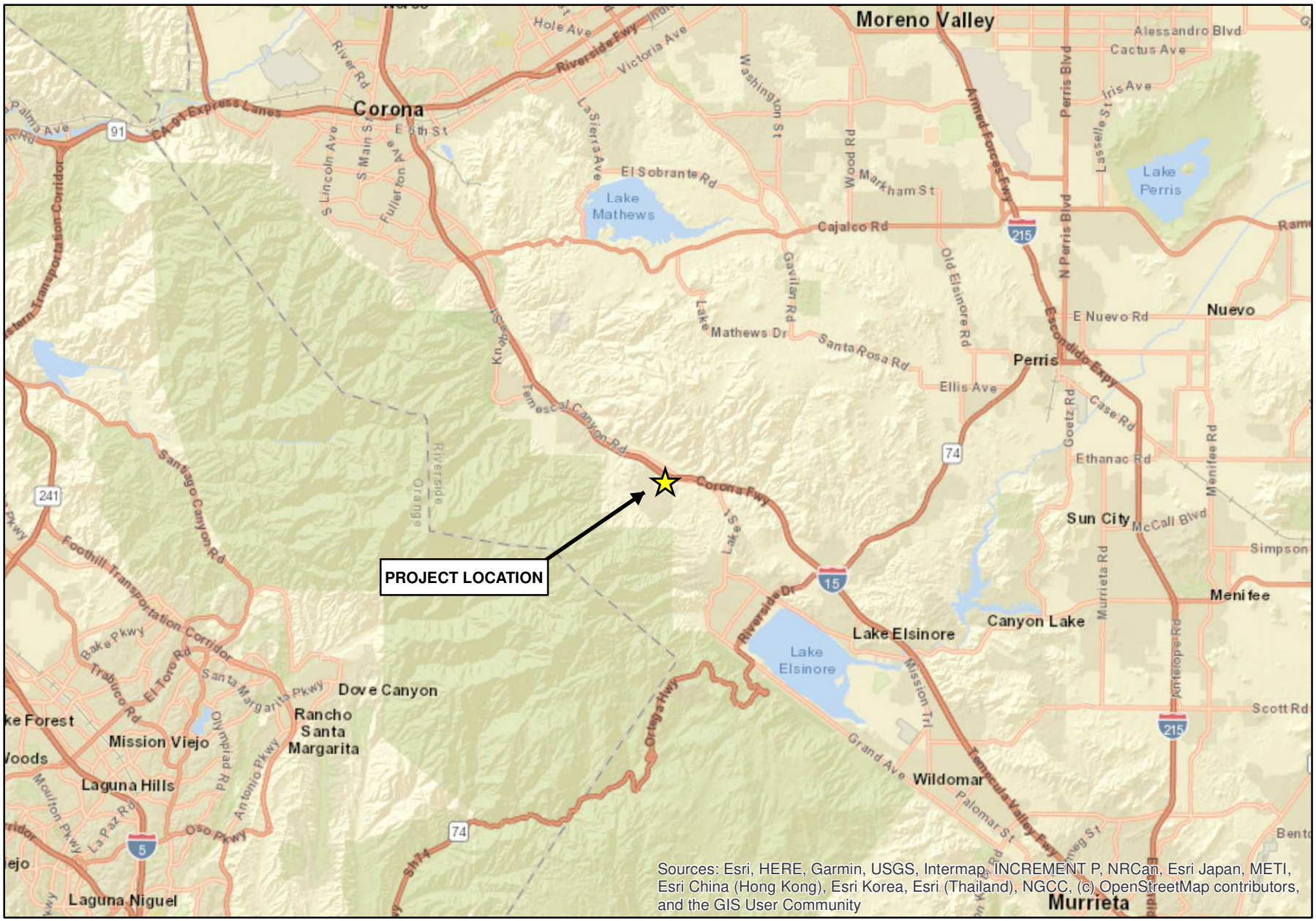

Source: ESRI World Street Map

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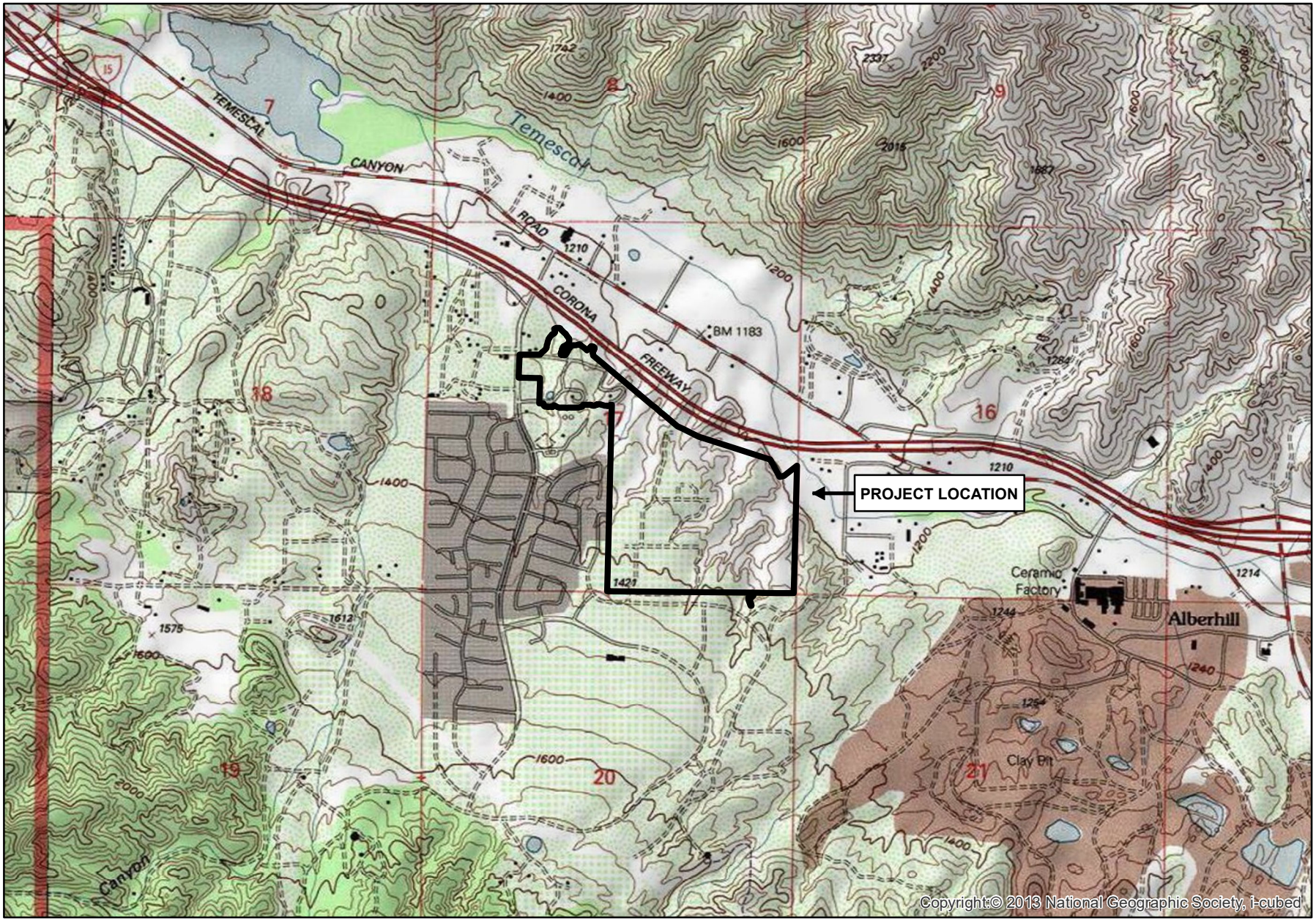
RENAISSANCE RANCH

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS Alberhill, CA quadrangle

N

0 1,000 2,000 4,000 Feet

RENAISSANCE RANCH

Map

GLENN LUKOS ASSOCIATES

Exhibit 2

Study Area

Offsite Areas

N

0 212.5 425 850

Feet

1 inch = 425 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 31, 2021

RENAISSANCE RANCH DEVELOPMENT PROJECT

Aerial Map

GLENN LUKOS ASSOCIATES

Exhibit 3

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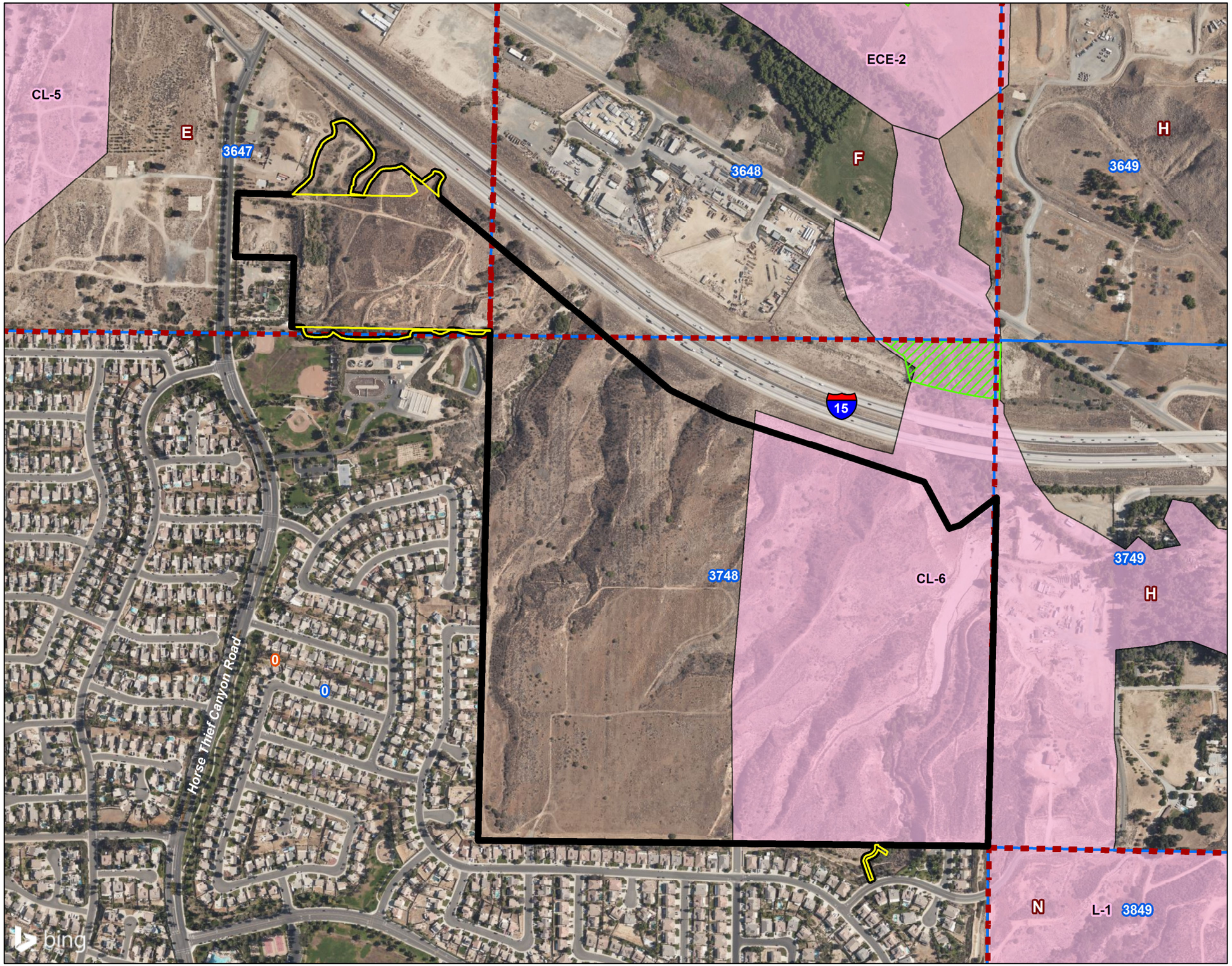

Study Area

Offsite Areas

Cell Group

Criteria Cell

MSHCP Conserved Lands

Conceptual Core Area / Linkage

N

0 250 500 1,000

Feet

1 inch = 500 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: August 31, 2021

RENAISSANCE RANCH DEVELOPMENT PROJECT

MSHCP Overlay Map

GLENN LUKOS ASSOCIATES

Exhibit 4A

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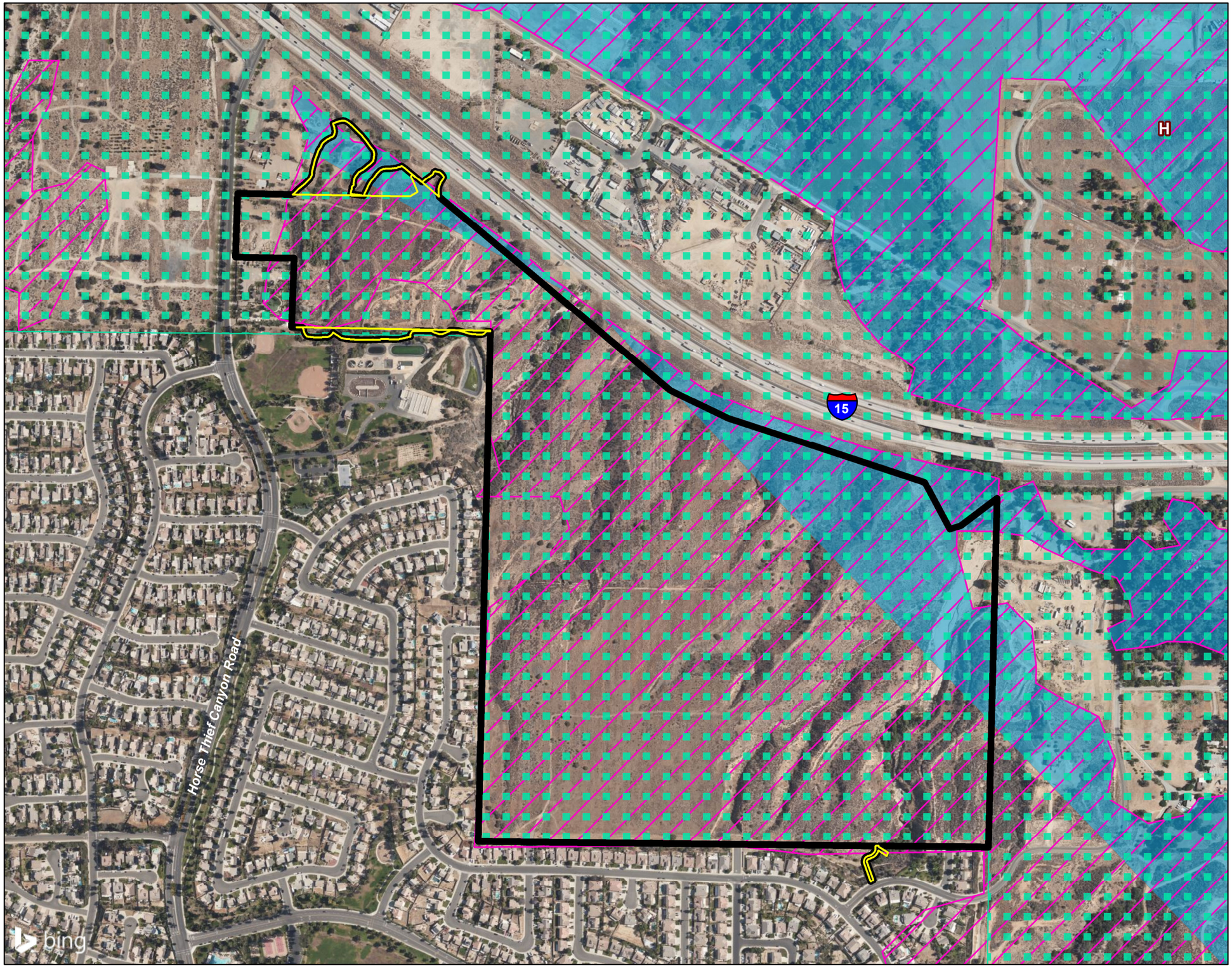

Study Area

Offsite Areas

Criteria Area Species Survey Area

Narrow Endemic Plant Survey Area

Burrowing Owl Survey Area

N

0 250 500 1,000

Feet

1 inch = 500 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: August 31, 2021

RENAISSANCE RANCH DEVELOPMENT PROJECT

MSHCP Overlay Survey Areas Map

GLENN LUKOS ASSOCIATES

Exhibit 4B

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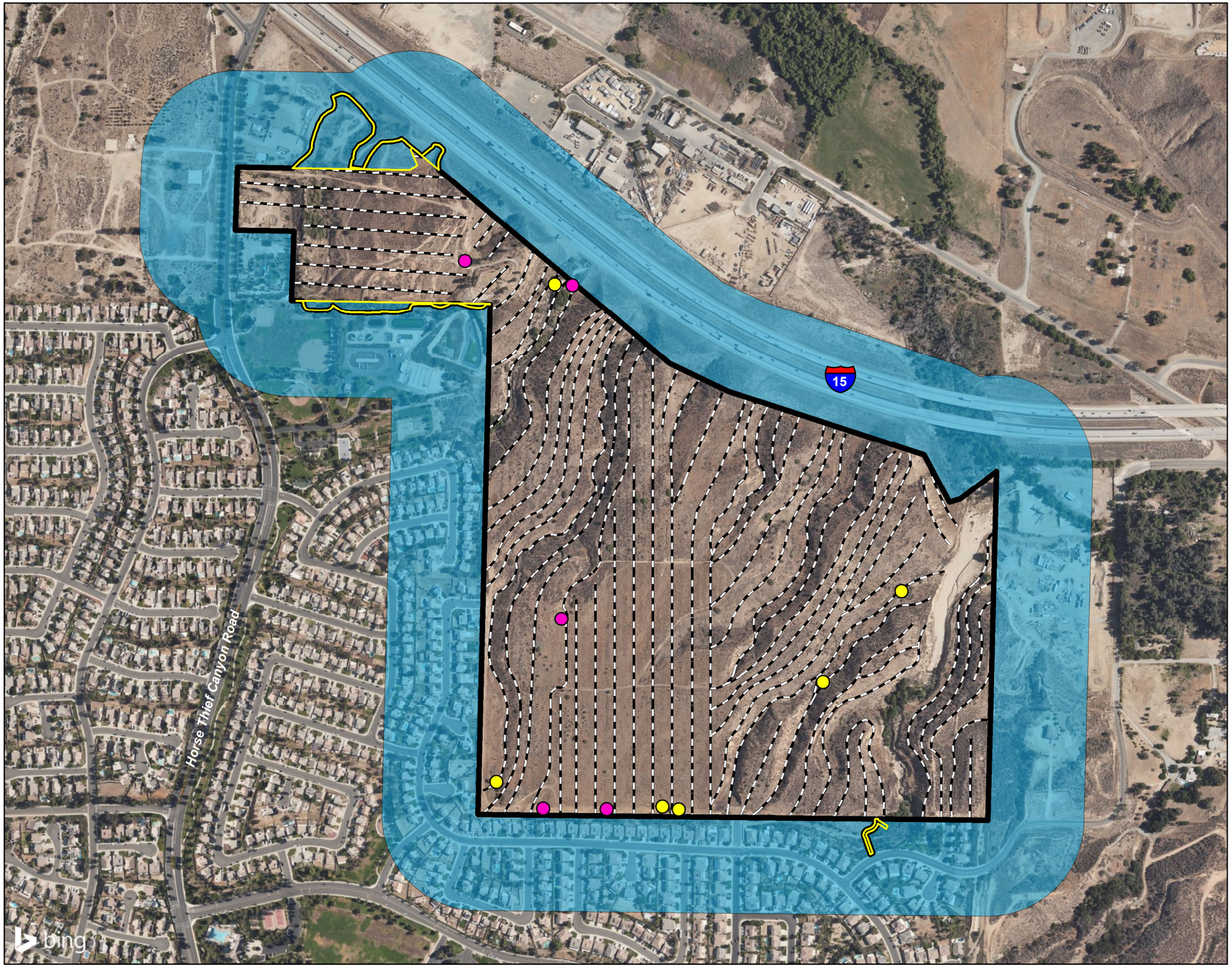

Study Area

Offsite Areas

500' Visual Survey Buffer

Transects

Burrow

Burrow Complex

N

0 250 500 1,000

Feet

1 inch = 500 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: August 31, 2021

RENAISSANCE RANCH DEVELOPMENT PROJECT

Burrowing Owl Survey Area/Burrow Map

GLENN LUKOS ASSOCIATES

Exhibit 5

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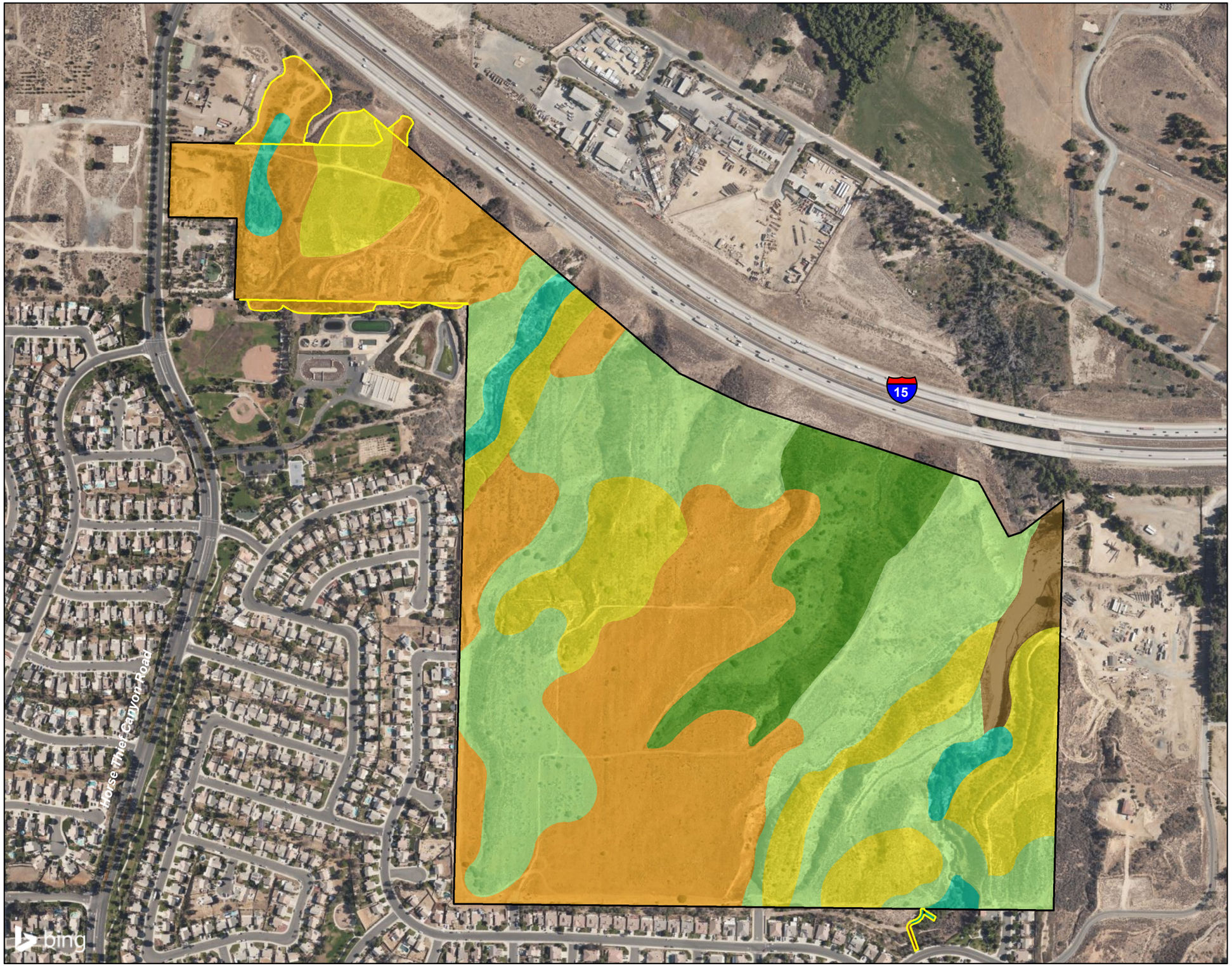

Study Area

Offsite Areas

Disturbed Ornamental

Brittle Bush Scrub

Disturbed California Buckwheat Scrub

Disturbed Chamise Chaparral

Southern Cottonwood Willow Riparian Forest

Upland Mustards

Unvegetated Wash

N

0 212.5 425 850

Feet

1 inch = 425 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: August 31, 2021

RENAISSANCE RANCH DEVELOPMENT PROJECT

Vegetation Map

GLENN LUKOS ASSOCIATES

Exhibit 6

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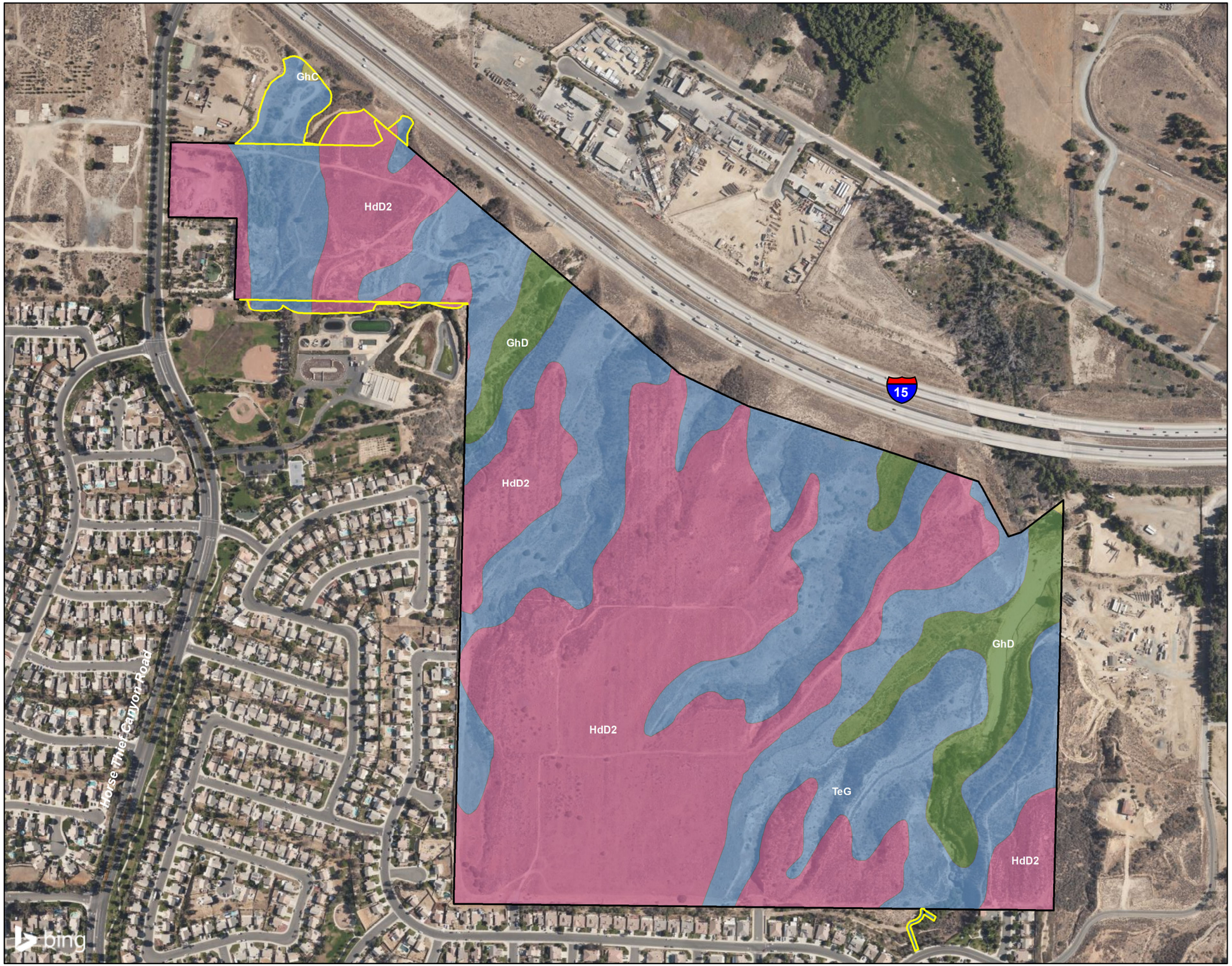

Study Area

Offsite Areas

GhC — Gorgonio loamy sand, 0 to 8 percent slopes

GhD — Gorgonio loamy sand, 8 to 15 percent slopes

HdD2 — Hanford cobbly coarse sandy loam, 2 to 15 percent slopes, eroded

TeG — Terrace escarpments

N

0 212.5 425 850

Feet

1 inch = 425 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: August 31, 2021

RENAISSANCE RANCH DEVELOPMENT PROJECT

Soils Map

GLENN LUKOS ASSOCIATES

Exhibit 7

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Photograph 1: Photo depicts southwestern portion of the site, which is primarily vegetated by non-native mustard species.

Photograph 2: Photo depicting disturbed California buckwheat scrub. These areas have been either historically mowed or support components of upland mustards.

Photograph 3: Photo depicting brittle bush scrub in the foreground, and disturbed California buckwheat scrub in the background

Photograph 4: Photo depicting burrow with the potential to support burrowing owl. Note the lack of diagnostic burrowing owl sign (pellets, feathers, white-wash, etc.), indicating the absence of burrowing owl.

GLENN LUKOS ASSOCIATES

Exhibit 8 – Page 1

RENAISSANCE RANCH DEVELOPMENT PROJECT

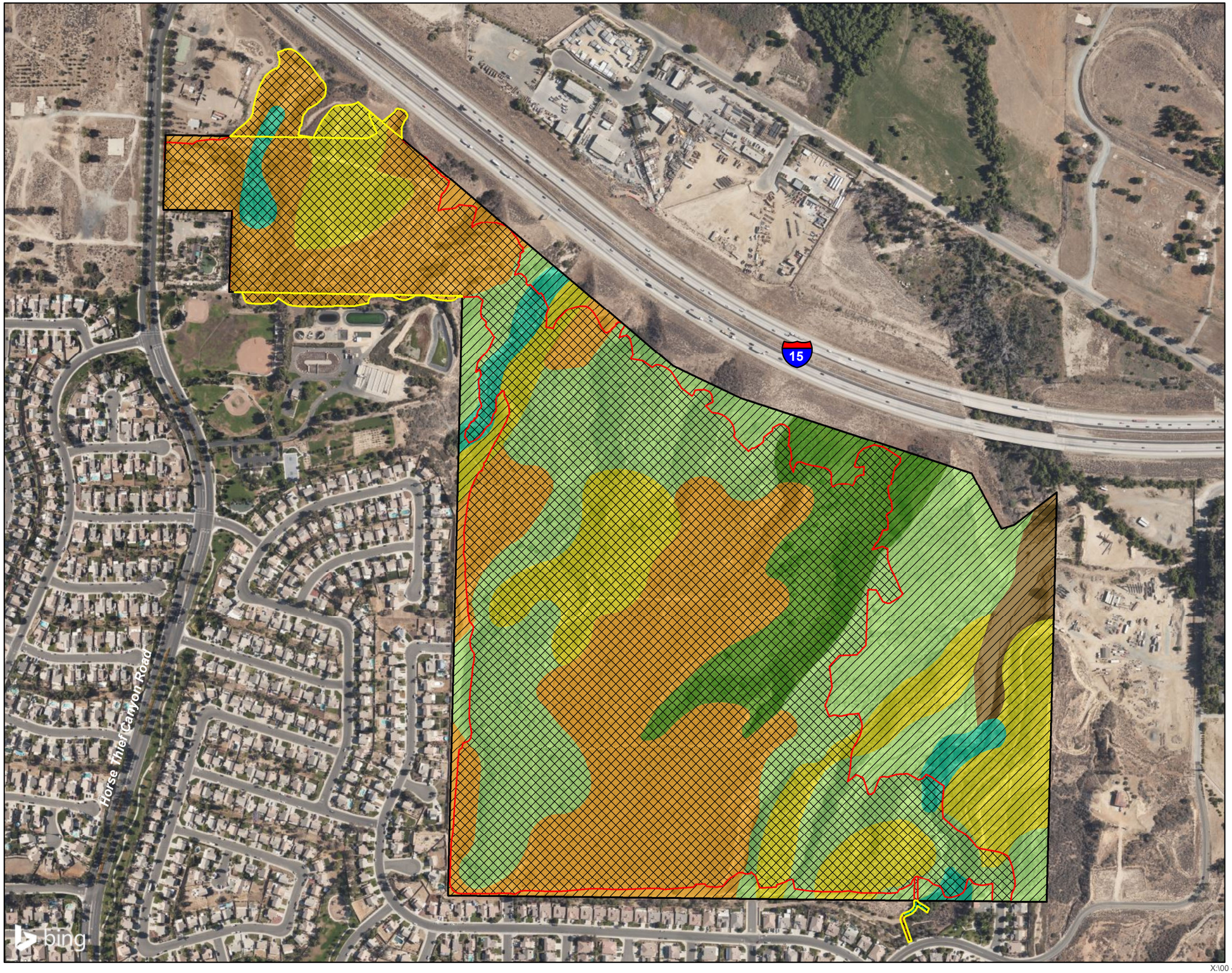
Site Photographs

Photograph 5: Photo depicting Channel 2 and its associated southern cottonwood willow riparian forest.

Photograph 6: Photo depicting Channel 6 and its associated southern cottonwood willow riparian forest.

Photograph 7: Photo depicting upland mustards within the northwestern portion of the Project site.

Photograph 8: Photo depicting Channel 1 and its associated southern cottonwood willow riparian forest.



- Study Area
- Offsite Areas
- Permanent Impact
- Conserved Open Space
- Disturbed Ornamental
- Brittle Bush Scrub
- Disturbed California Buckwheat Scrub
- Disturbed Chamise Chaparral
- Southern Cottonwood Willow Riparian Forest
- Upland Mustards
- Unvegetated Wash

N

0 212.5 425 850

Feet

1 inch = 425 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 31, 2021

RENAISSANCE RANCH DEVELOPMENT PROJECT

Vegetation Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 9

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Study Area

Offsite Areas

Permanent Impact

Conserved Open Space

Wetland Waters of the U.S.

N

0 20 40 80

Feet

1 inch = 40 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 31, 2021

RENAISSANCE RANCH DEVELOPMENT PROJECT

Corps Jurisdictional Delineation/Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 10A

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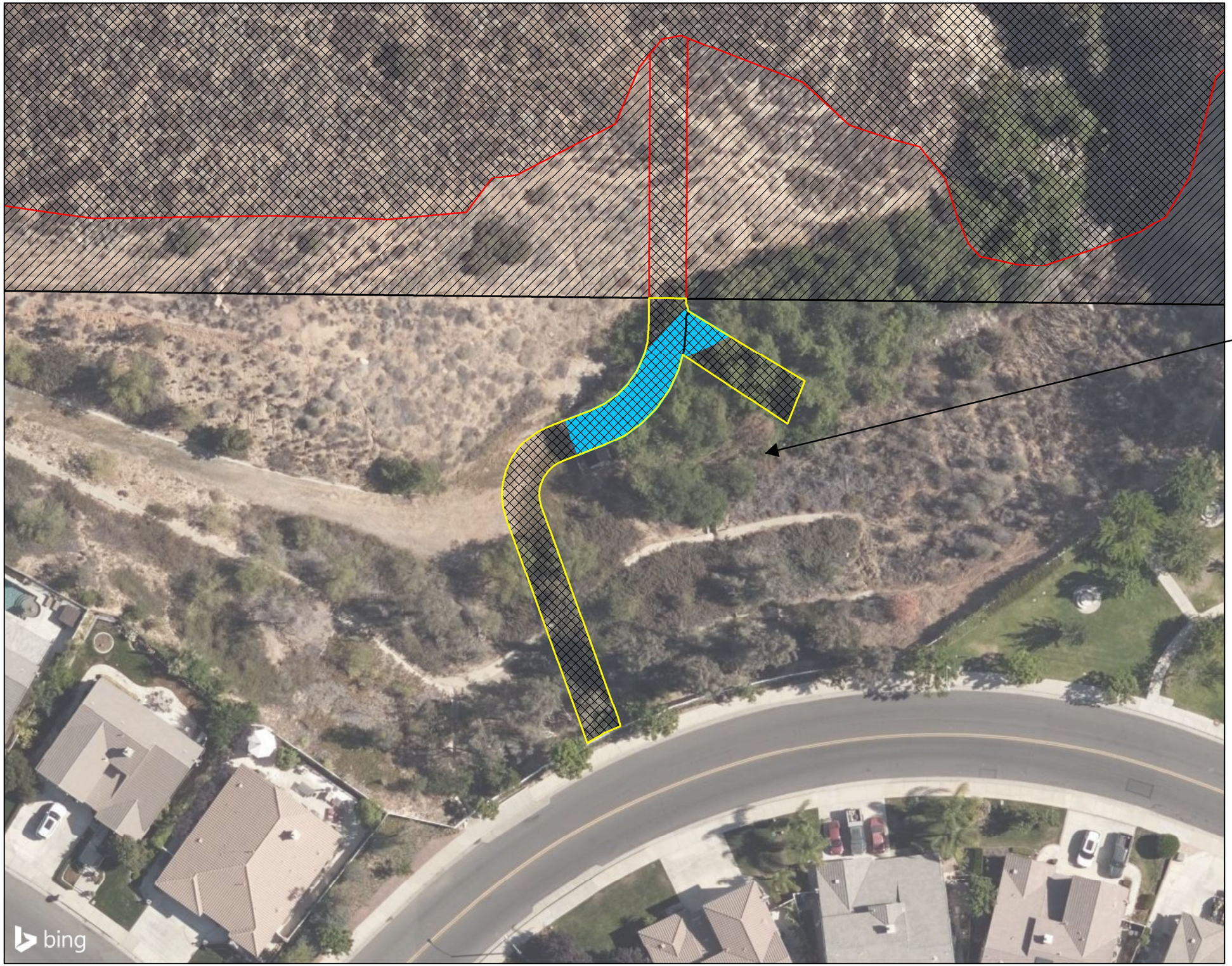


Study Area

Offsite Areas

Permanent Impact

Conserved Open Space

Wetland Waters of the State

N

0 20 40 80

Feet

1 inch = 40 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 31, 2021

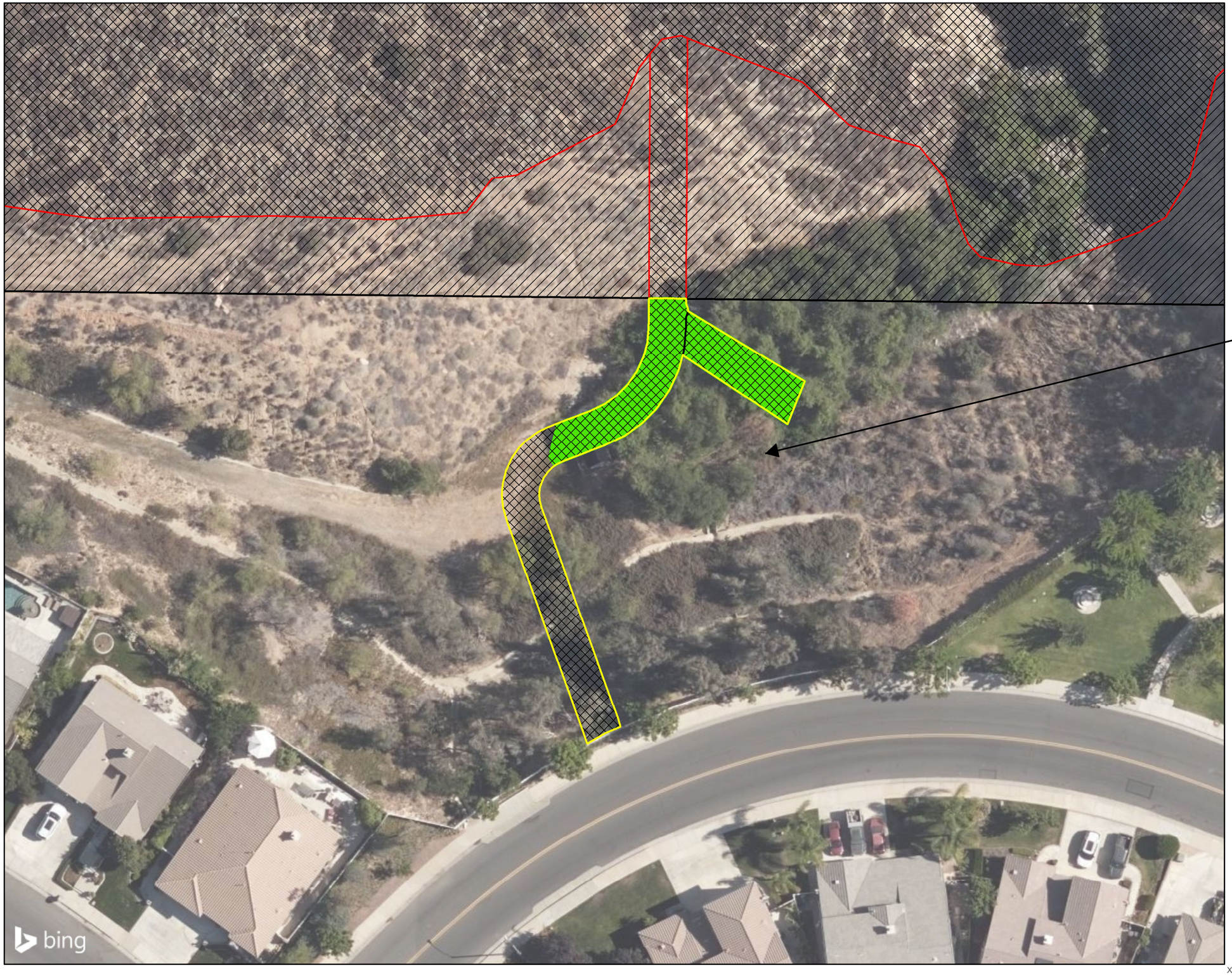
RENAISSANCE RANCH DEVELOPMENT PROJECT

RWQCB Jurisdictional Delineation/Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 10B

X:\00 - 0362 ONLY\0188-16RENA\188-16_GIS\ImpactsGIS\188-16_Impacts_RWQCB.mxd



Offsite Areas
Study Area
Permanent Impact
Conserved Open Space
CDFW Riparian

N

0 20 40 80
Feet

1 inch = 40 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 31, 2021

RENAISSANCE RANCH DEVELOPMENT PROJECT

CDFW Jurisdictional Delineation/Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 10C

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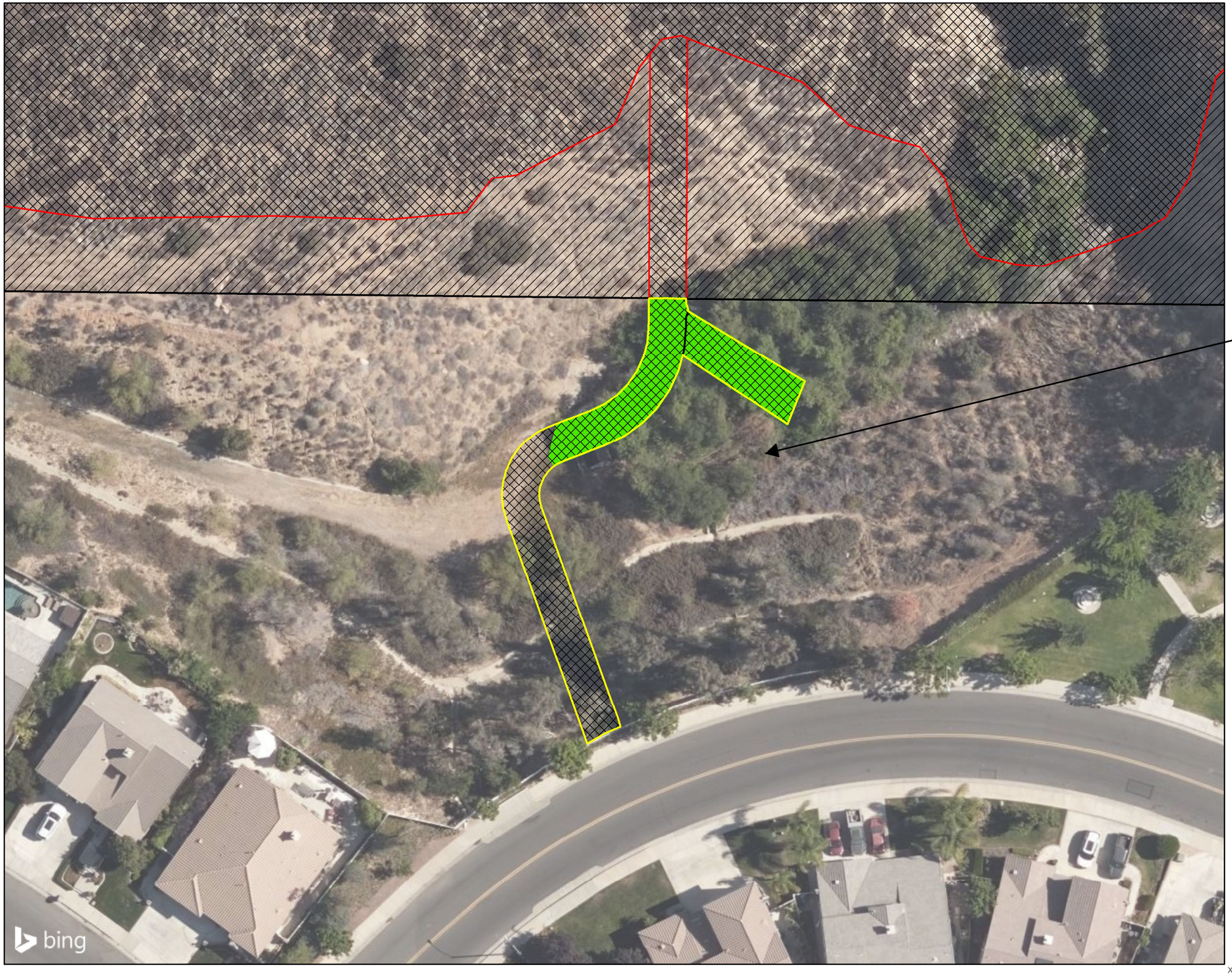

Offsite Areas

Study Area

Permanent Impact

Conserved Open Space

MSHCP Riparian

N

0 20 40 80

Feet

1 inch = 40 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 31, 2021

RENAISSANCE RANCH DEVELOPMENT PROJECT

MSHCP Riparian/Riverine/Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 10D

X:\00 - 0362 ONLY\0188-16RENA\188-16_GIS\ImpactsGIS\188-16_Impacts_RipRiv.mxd

APPENDIX A
FLORAL COMPENDIUM

The floral compendium lists all species identified during floristic level/focused plant surveys conducted for the Project site. Taxonomy typically follows the Angiosperm Phylogeny Group (APG), which in some cases differs from The Jepson Manual (2012). Common plant names are taken from Hickman (1993), Munz (1974), and Roberts et al (2004) and Roberts (2008). An asterisk (*) denotes a non-native species.

SCIENTIFIC NAME	COMMON NAME
MAGNOLIOPHYTA	**FLOWERING PLANTS**
MAGNOLIIDS	**MAGNOLIID CLADE**
MONOCOTYLEDONS	**MONOCOTS**
AGAVACEAE	**Agave Family**
Yucca whipplei	our lord's candle
ARECACEAE	**Palm Family**
Washingtonia filifera	California fan palm
POACEAE	**Grass Family**
* *Bromus madritensis* subsp. *rubens*	foxtail chess
* *Schismus barbatus*	Mediterranean grass
EUDICOTYLEDONS	**EUDICOTS**
ADOXACEAE	**Elderberry Family**
Sambucus nigra subsp. *caerulea*	blue elderberry
ANACARDIACEAE	**Sumac Family**
Malosma laurina	laurel sumac
* *Schinus molle*	Peruvian pepper tree
ASTERACEAE	**Sunflower Family**
Artemisia californica	California sagebrush
Baccharis pilularis	coyote bush
Baccharis salicifolia	mulefat
* *Centaurea melitensis*	tocalote
Erigeron canadensis	common horseweed
Encelia farinosa	brittlebush

	Eriophyllum confertiflorum var. *confertiflorum*	golden yarrow
	Gutierrezia sarothrae	San Joaquin matchweed
	Helianthus annuus	western sunflower
	Heterotheca grandiflora	telegraph weed
*	*Lactuca serriola*	prickly lettuce
BORAGINACEAE		**Borage Family**
	Eriodictyon crassifolium	thick-leaved yerba santa
	Heliotropium curassavicum	salt heliotrope
BRASSICACEAE		**Mustard Family**
*	*Hirschfeldia incana*	summer mustard
ERICACEAE		**Heath family**
	Rhododendron columbianum	western Labrador tea
FABACEAE		**Legume Family**
	Acmispon glaber	coastal deerweed
FAGACEAE		**Beech Family**
	Quercus agrifolia var. *agrifolia*	coast live oak
GERANIACEAE		**Geranium Family**
*	*Erodium cicutarium*	red-stemmed filaree
LAMIACEAE		**Mint Family**
*	*Marrubium vulgare*	horehound
	Salvia apiana	white sage
	Salvia mellifera	black sage
MYRTACEAE		**Myrtle Family**
*	*Eucalyptus globulus*	Tasmanian blue gum
PAPAVERACEAE		**Poppy Family**
	Romneya coulteri	Coulter's matilija poppy
PLUMBAGINACEAE		**Leadwort Family**
*	*Limonium duriusculum*	European sea-lavender
*	*Limonium perezii*	Perez's sea-lavender
POLYGONACEAE		**Buckwheat Family**
	Eriogonum fasciculatum	California buckwheat
ROSACEAE		**Rose Family**
	Adenostoma fasciculatum	chamise
	Heteromeles arbutifolia	toyon

SALICACEAE		**Willow Family**
	Populus fremontii subsp. *fremontii*	western cottonwood
	Salix gooddingii	Goodding's black willow
	Salix lasiolepis	arroyo willow
TAMARICACEAE		**Tamarisk Family**
*	*Tamarix* sp.	tamarisk

APPENDIX B
FAUNAL COMPENDIUM

The faunal compendium lists species that were either observed within or adjacent to the Study Area (denoted by a '*'), or that have some potential to occur within or adjacent to the Study Area (denoted by a '+'). Taxonomy and common names are taken from the California Wildlife Habitat Relationships System (CDFW 2016); AOU (2009) and CDFW (2016) for birds; Stebbins (1985), Collins (1990), Jones et al. (1992), and CDFW (2016) for reptiles and amphibians; and CDFW (2016) for mammals.

AVES

BIRDS

ANATIDAE
Anas platyrhynchos

Swans, Geese And Ducks
mallard

ODONTOPHORIDAE
Callipepla californica

New World Quail
California quail

ARDEIDAE
Ardea herodias

Herons And Bitterns
great blue heron

ACCIPITRIDAE
Accipiter cooperii

Hawks And Old World Vultures
Cooper's hawk

FALCONIDAE
Falco sparverius

Caracaras And Falcons
American kestrel

RECURVIROSTRIDAE
Himantopus mexicanus

Avocets And Stilts
black-necked stilt

COLUMBIDAE
* *Columba livia*
* *Streptopelia decaocto*
Zenaida macroura

Pigeons And doves
rock pigeon
Eurasian collared-dove
mourning dove

STRIGIDAE
Bubo virginianus

Typical Owls
great horned owl

APODIDAE
Aeronautes saxatilis

Swifts
white-throated swift

TROCHILIDAE
Calypte anna
Calypte costae

Hummingbirds
Anna's hummingbird
Costa's hummingbird

PICIDAE	**Woodpeckers And Allies**
Colaptes auratus	northern flicker
Melanerpes formicivorus	acorn woodpecker
TYRANNIDAE	**Tyrant Flycatchers**
Myiarchus cinerascens	ash-throated flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
CORVIDAE	**Crows And Jays**
Aphelocoma californica	California scrub-jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
ALAUDIDAE	**Larks**
Eremophila alpestris	horned lark
HIRUNDINIDAE	**Swallows**
Hirundo rustica	barn swallow
Petrochelidon pyrrhonota	cliff swallow
AEGITHALIDAE	**Long-Tailed Tits And Bushtits**
Psaltriparus minimus	bushtit
TROGLODYTIDAE	**Wrens**
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
SYLVIIDAE	**Old World Warblers And Gnatcatchers**
Polioptila caerulea	blue-gray gnatcatcher
Polioptila californica californica	coastal California gnatcatcher
TURDIDAE	**Thrushes**
Turdus migratorius	American robin
TIMALIIDAE	**Babblers**
Chamaea fasciata	wrentit
MIMIDAE	**Mockingbirds And Thrashers**
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
PTILOGONATIDAE	**Silky-flycatchers**
Phainopepla nitens	phainopepla

PARULIDAE	**Wood Warblers And Relatives**
Dendroica petechia	yellow warbler
EMBERIZIDAE	**Emberizids**
Melospiza melodia	song sparrow
Passerculus sandwichensis	savannah sparrow
Pipilo crissalis	California towhee
Pipilo maculatus	spotted towhee
ICTERIDAE	**Blackbirds**
Euphagus cyanocephalus	Brewer's blackbird
Icterus bullockii	Bullock's oriole
Icterus cucullatus	hooded oriole
FRINGILLIDAE	**Fringilline And Cardueline Finches and Allies**
Carpodacus mexicanus	house finch
Spinus psaltria	lesser goldfinch
PASSERIDAE	**Old World Sparrows**
* *Passer domesticus*	house sparrow
MAMMALIA	**MAMMALS**
LEPORIDAE	**Rabbits And Hares**
Sylvilagus audubonii	desert (Audubon's) cottontail
MURIDAE	**Mice, Rats And Voles**
Microtus californicus	California vole
Neotoma lepida	desert woodrat
SCIURIDAE	**Squirrels, Chipmunks, And Marmots**
Spermophilus beecheyi	California ground squirrel

Taxonomy and nomenclature are based on the following.

The faunal compendium lists species that were either observed within or adjacent to the Study Area (denoted by a '*'), or that have some potential to occur within or adjacent to the Study Area (denoted by a '+'). Taxonomy and common names are taken from the California Wildlife Habitat Relationships System (CDFG 2003); AOU (1998) and CDFG (1990) for birds; Stebbins (1985), Collins (1990), Jones et al. (1992), and CDFG (1990) for reptiles and amphibians; and CDFG (1990) for mammals.

0618-97-FSNA
report

L&L ENVIRONMENTAL, INC.
REGULATORY SERVICES
BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING

REVISED
JURISDICTIONAL WETLAND DELINEATION FOR APN's 391-140-006, 391-480-019, AND 391-100-025 HORSETHIEF CANYON, RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

Dave Schaffer
Renaissance Ranch, LLC
201 E. Sandpointe Ave., Suite 370
Santa Ana, CA 92707

Prepared by:

Leslie Irish, Principal Delineator
William Irish, Delineator
Julia Fox, Technical Editor

L & L Environmental, Inc.
1269 Pomona Road, Suite 102
Corona, California 91720

May 2003
Revised May 2004
Revised May 2005

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EXECUTIVE SUMMARY

At the request of Mr. Dave Schaffer of Renaissance Development, L & L Environmental, Inc. (L&L) conducted an updated Section 404, jurisdictional wetland delineation, on a project proposed for residential development located in the Horsethief Canyon area. Situated within the County of Riverside, California, this study took place on APN's 391-140-006, 391-480-019, and 391-100-025. The total amount of land covered is ±158 acres.

The purpose of the jurisdictional wetland delineation is to quantify the portion of the project site that is subject to the jurisdiction of US Army Corps of Engineers (ACOE) and the California Department of Fish and Game (CDFG). The jurisdictional determination was performed in order to accurately describe and quantify the project site's wetland and non-wetland waters of the United States. This information is required to complete the Clean Water Act (CWA) Section 404 permitting process.

L&L delineators, William Irish and Melissa Moshfegh, conducted a three-day survey of the parcel in January, April and May of 2003. The latest survey was conducted May 17 and 24, 2005. The site evaluation consisted of a review of topographic maps, soils information, and an onsite examination of vegetation, soils, and hydrology according to the Army Corps of Engineers (ACOE) three parameter (vegetation, soils, and hydrology) method of wetland delineation (US Department of the Army 1987).

L&L completed this jurisdictional wetlands delineation and (based on the wetland delineation training and experience of L&L staff) identified jurisdictional "waters of the US" on the project site. Jurisdictional areas on the project site included 251,744 ft.^{2} (5.78 ac.) of State streambeds and 110,476 ft.^{2} (2.54 ac.) of Federal waters of the US of which 53,915 ft.^{2} (1.24 ac.) are State wetlands and 44,310 ft.^{2} (1.02 ac.) are Federal wetlands. Current design indicates that of the 5.78 acres of State streambed 2.79 acres will be impacted and of the 2.54 acres of Federal drainages 1.22 acres will be impacted, of which 0.88 acres of impacts will be to State and Federal wetlands.

L&L advises the client that applications for Federal and State permits/agreements will need to be completed prior to development. This document has been prepared to accompany such permit applications or agreements under Federal or State law.

1.0) INTRODUCTION

The following report has been prepared for Mr. Dave Schaffer with Renaissance Development (RD) by L&L Environmental, Inc. (L&L). This report was prepared to accompany notifications or applications to the US Army Corps of Engineers (ACOE) and the Regional Water Quality Control Board and California Department of Fish and Game (CDFG) for permits or agreements under applicable federal and state laws. The project site is a proposed residential development on 158 acres east of the I-15 Freeway, within the Horsethief Canyon development, County of Riverside, California.

The project consists of undeveloped assessors parcel numbers 391-140-006, 391-480-019, and 391-100-025 within the development known as Horsethief Canyon, located within the County of Riverside. Topographically, mesa areas and deep canyons, with a combined maximum vertical relief of roughly 200 feet between the highest and lowest elevation points on the property, characterize the site. Elevations on the site range from approximately 1,200 to 1,421 feet above mean sea level (AMSL). Surrounding topographic features in the project vicinity include gently to steeply sloping hills, ridgelines, and canyons interspersed with relatively flat areas.

Section 404 of the Federal Clean Water Act requires permitting of activities that will result in discharge of dredge or fill material into "waters of the United States" or adjacent wetlands. Federal policy directs "no net loss" of wetland habitats. Section 1603 of the California Fish and Game code requires a "Streambed Alteration Agreement" for projects which would alter a stream channel.

One USGS-designated "blueline" stream crosses the site along the northwest portion. In addition, there are five other drainages found on the property and within the future development plan. Depending on specific design, this activity could place fill material in one or all of the drainages during construction on the site and therefore may fall under jurisdiction of the two agencies. This report identifies "waters of the United States" occurring on the property and determines their "wetland" status as well as identifying isolated wetlands, based on the *Corps of Engineers Wetlands Delineation Manual* (Department of the Army Environmental Laboratory 1987) for the purpose of permit application under the Federal Clean Water Act. This report will also serve as a basis for a California Streambed Alteration Permit application.

2.0) PROJECT LOCATION

The study area is generally located northwest of Lake Elsinore in the Horsethief Canyon area of the Santa Ana Mountain foothills in northwestern Riverside County (Figure 1). The site lies immediately adjacent to and southwest of the Interstate 15 (Escondido Freeway) right-of-way and can be accessed by taking I-15 south, exiting on Indian Truck, going left under the freeway, and then right on Temescal Canyon Road. Heading south, turning right onto Horsethief Canyon Road will cross under the freeway. At the intersection of De Palma Road the project begins immediately on the left. The project site is situated within Section 17 of Township 5 South, Range 5 West, as shown on a portion of the USGS Alberhill 7.5' Topographic Quadrangle (Figure 2).

The site is bounded as follows: to the west by residential areas; to the south by residential areas; to the north by a small strip of disturbed and relatively undisturbed open space adjacent to Interstate 15, with industrial developments, Temescal Wash, and the Lake Mathews Estelle Mountain Reserve beyond; and to the east by relatively undisturbed open space, rural residential units, and active clay pit mining operations beyond (Figure 3).

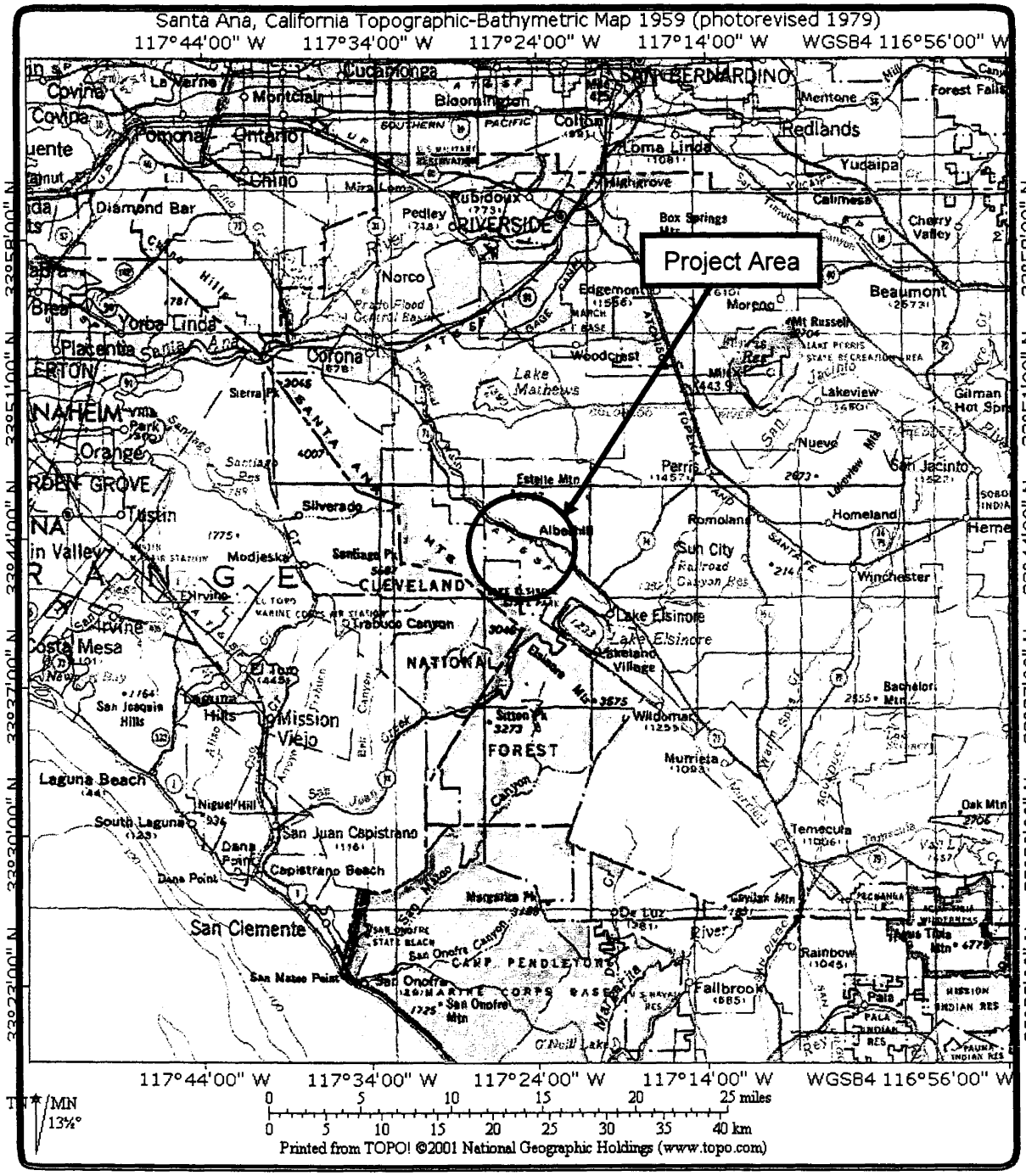

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Figure 1

Project Vicinity

Renaissance Communities, LLC.
County of Riverside, California

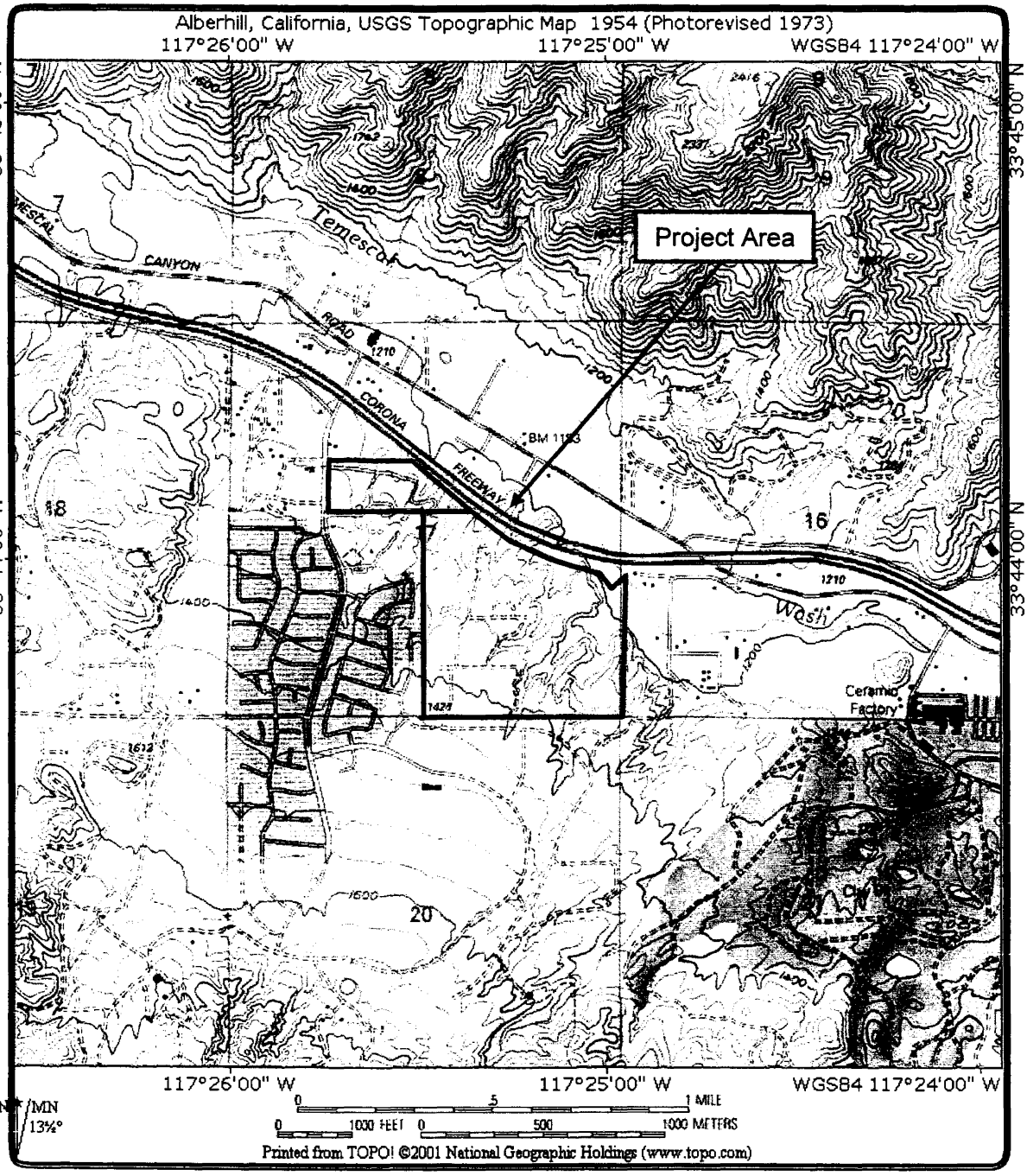

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Figure 2

Project Location

Renaissance Communities, LLC
County of Riverside, California

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Figure 3

Aerial Photograph

(taken June 4, 2002: Eagle Aerial Imaging)

Renaissance Communities LLC
County of Riverside, California

3.0) REGULATORY BACKGROUND

Jurisdictional Criteria

Section 404 of the Federal Clean Water Act applies to "Waters of the United States." By definition, these include waterways, streams, intermittent streams, and their tributaries that could be used for interstate commerce. In non-tidal waters the limits of jurisdiction are "ordinary high water marks" such as stream banks. Where wetlands occur above high water marks they are considered "adjacent wetlands" and are included within ACOE jurisdiction. The term "interstate commerce" has been broadly interpreted to include use by migratory waterfowl or out-of-state tourists and ACOE jurisdiction has often been extended to wetlands not adjacent to waters of the US ("isolated wetlands").

Section 1603 of the State Fish and Game Code is applied to stream channels, defined elsewhere in the Code as follows:

> "A stream is a body of water that flows at least periodically . . . through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."

The State definition does not specify a flow rate or inundation frequency and provides no clear distinction between jurisdictional and non-jurisdictional lands.

Evaluation Criteria

According to the Clean Water Act and the Delineation Manual, a "wetland" is a site that is "inundated or saturated . . . at a frequency and duration sufficient to support . . . vegetation typically adapted for life in saturated soil conditions. . . ." Soil saturation deprives plant roots of oxygen, limiting the types of plants that can grow. Absence of oxygen leads to reducing chemical conditions (rather than oxidizing conditions) and development of unique soil types (hydric soils). The ACOE evaluates wetlands by three criteria: hydrology, soils, and vegetation. Under the Federal delineation procedure, a site must normally satisfy all three criteria to be classified as a wetland. At its discretion, CDFG may consider a site a wetland based on only one of the criteria.

The hydrology criterion evaluates the presence of water based on observed flooding or inundation or on indirect evidence such as high water marks, drift lines, or sediment deposits. The soils criterion is based on "hydric" soil characteristics, such as certain colors and mottling, that develop under wetlands conditions (note, however, that these characteristics generally do not develop in sandy soils, as occur in many southern California streambeds). The vegetation criterion evaluates plant species growing on a site. Most plants cannot survive extended

periods of root saturation and are called "obligate upland" species. Others grow almost exclusively in wetlands habitats or on both wetlands and uplands. These are called "obligate wetlands" or "facultative wetlands" species, respectively.

4.0) METHODS

The potential occurrence of wetlands and waters of the US on the project site were evaluated through a literature review and a visit to the property on January 28, 2003 and May 12, 2003 for the original study in 2003 and more recently for this study on May 17 and 24, 2005.

Literature reviewed included soils maps and descriptions (Knect 1971), topographic maps (USDI Geological Survey 1953, Riverside County Flood Control Department, 1977), aerial photography (USGS 1996) and the list of wetland plants in California (Appendix O to the *Delineation Manual*).

Before visiting the site, a 4-foot contour interval topographic map of the property (Riverside County Flood Control) was studied. All drainages evident on the map were marked and were considered potential waters of the US, to be evaluated in the field. The drainage systems were labeled 1 through 6 for reference in the field and in this report.

In this study (2005), all drainage ways were examined in the field by walking along their entire length and located with the use of a Trimble Geo XT handheld GPS. Widths were estimated along the entire length and then averaged for calculation. In the office, the information was downloaded via GPS Pathfinder Office 3.00 and analyzed in ERSI's ArcGIS 9.0 software. The data was post processed for errors and exhibited over georeferenced aerial photos using NAD 83. USGS topographic quadrangles were imported using the World Coordinate System (WCS). This methodology is upgraded from the 2003 study which was performed using standard measuring tapes with the locations estimated on topographic maps and aerial photos.

Soil maps and descriptions of local soils have been prepared by the Soil Conservation Service (Knecht 1971). Soils mapped on the project site were listed and evaluated for their properties relating to potential wetlands. Soil conditions on-site were noted during the field visit, and discrepancies from the SCS descriptions were examined by digging soil pits where necessary. Soil color characteristics were evaluated using a "Munsell color chart".

During field surveys, vegetation growing in the drainages were examined, listing the dominant plant species and any potential indicators of wetland conditions. These lists of dominant plant species were compared against Appendix 0 of the *Delineation Manual,* which lists wetland plants of California. The vegetation criterion for wetlands is satisfied if half or more of the dominant plant species on a site are ranked as "obligate wetland," "facultative wetland," or "facultative" species (OBL, FACW, or FAC, respectively).

Table 1: Summary of Wetlands Vegetation Criteria

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (Estimated probability 67%-99%)
Facultative (FAC)	Equally likely to occur in wetlands and non-wetlands (est probability 34%-66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimates probability 67%-99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)

5.0) RESULTS

The original study in 2003 found six (6) drainage channels several of them branched, all trending generally southwest to northeast. These drainages vary from shallow (at the western portion of the site) to steep (at the eastern portion of the site) and all are tributary directly or indirectly to Temescal Wash which borders the extreme eastern and northeast portion of the property.

Hydrology

Because of the 2004-5 record rainfall and at the request of Jeff Brandt (CDFG) L&L reassessed the drainages in May of 2005 and found several changes from the 2003 study. The most dramatic change is elimination of two central drainages (4 & 5) from Federal jurisdiction and elimination of all but the very lowest portions of the drainages from State jurisdiction (Figure 4 and Figure 5). The main reason for the difference in findings is methodology used during drought years. During the 2003 study L&L made a number of assumptions of and corrections to flow conditions presumed accurate during dry conditions that were not visible on the surface of the ground during this wet year. We presumed that the arroyos would transport water in wet years and so we made certain allowances in order to project what we felt was a more accurate and reasonable jurisdiction in the absence of any measurable rainfall/ surface substantiation. At the time, the vegetation in the arroyos was badly in need of water and was very dry and brittle. Surface coverage in those two channels was estimated at low to moderate and on the decline.

Today it is clear that the water source for those channels is cut off by the development of the residential community to the south because there is no evidence that water flows across the plateau to drainages 4 or 5 nor is there any evidence of any surface flow within the drainages until the very bottom of the canyons where they intersect with the property boundary. At that point both drainages exhibit a minimum of sandy deposition within the boundary and some erosion features outside the property in question and within the basin in the CALTRANS right-of-way. L&L has concluded that water that formerly may have sheet flowed across the plateau to drainages 4 & 5 prior to 1980 has been diverted via the subdivision into channels 2 and 6. This chain of events is even clearer when one reviews the Historic Photo collection from 1938, 1953 and 1980 which we have supplied (see site photographs in Appendix B).

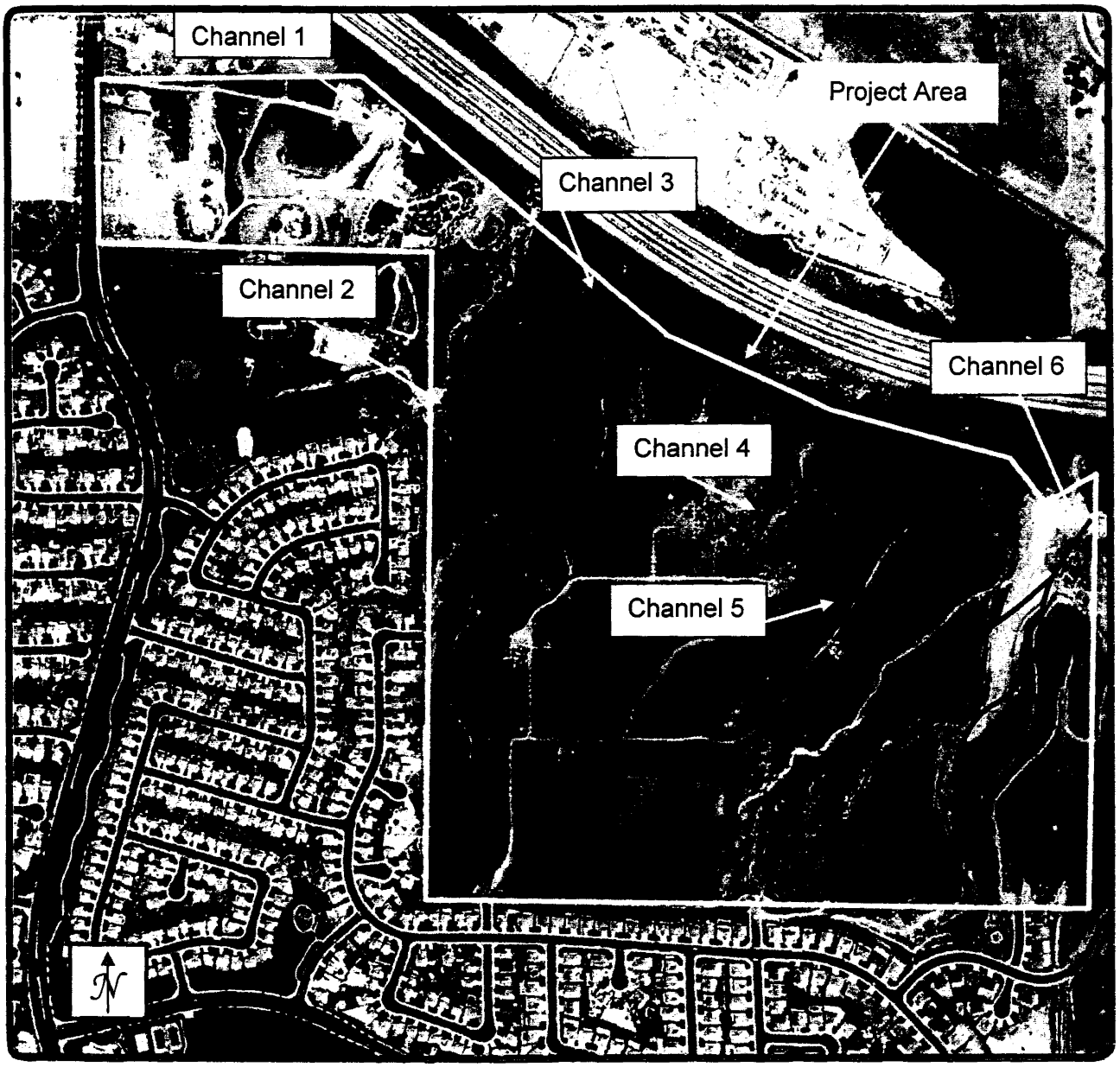

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Figure 4

2003 Water Resources Map

(taken June 4, 2002: Eagle Aerial Imaging)

Renaissance Development
County of Riverside, California

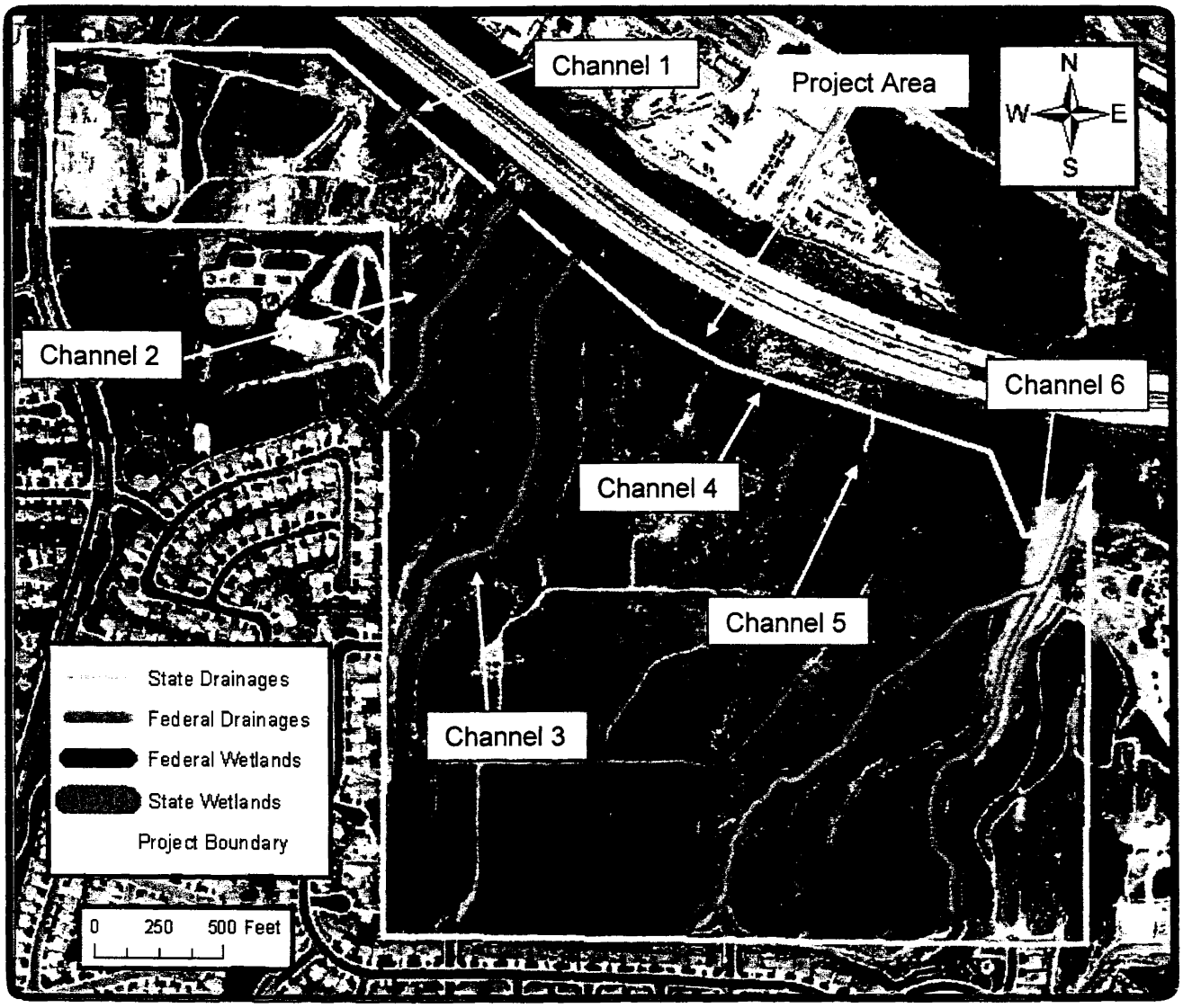

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Figure 5

2005 Water Resources Map

(obtained from AirPhotoUSA May 2005)

Renaissance Development
County of Riverside, California

The remaining drainages were found to be fairly consistent with the original delineation: The revised analysis follows:

Ephemeral Drainage 1: This drainage arrives onto the property via the sewer plant and park properties to the south and is nearly completely filled by the historic use of the property. Based on aerial photo study, the drainage seems to remain intact from 1939 though 1953, but sometime before 1980 it was filled and only the very bottom of the drainage remains. We estimate the current length of the drainage to be 111 lf. and it is under both State and Federal jurisdiction. Vegetation in the channel is upland in nature and is primarily mustard with some mulefat that is a recent addition. Scrub oaks and an oak are present (referenced in the biological report) and may be related to other drainages that were historically present on the property (see 1938 photo). This entire channel will be impacted by the design. Drainage 1 averages 10 feet for Federal and 15 feet wide for State jurisdiction. The revised area is 1,665 $ft.^2$ for State and 1,110 $ft.^2$ for Federal waters of the US. Overall this is an increased area from the 2003 study.

Intermittent Drainage 2: This drainage arrives on the property from a storm drain on the western boundary of the property via the residential development to the south. Historic photos show this drainage was transporting flows as late as 1980 albeit through a citrus grove. Earlier photos document changes and contrasting information. The 1938 photo shows a wide channel, while the 1953 photo shows a somewhat diminished channel. Drainage 2 measures 994 lf. and is a much more complex waterway than any of the others on the property. The entire length of the drainage qualifies as a State wetland via the vegetation criteria. Only the southern or first 597 lf. meet the three Federal criteria of soils, vegetation, and hydrology. Vegetation present in the drainage is dense mixed willow woodland with an understory of mulefat on the southern end, along with standing water. It transitions to a sparse, willow – mulefat, dry bottom channel. The channel contains 19,880 $ft.^2$ of State streambeds and 11,928 $ft.^2$ of Federal waters of the US (of which 20,895 $ft.^2$ are Federal and State wetlands). Of this an estimated 25,544 $ft.^2$ will be impacted to one degree or another by the installation of a road crossing and (either negatively or positively) by the creation of a detention structure. Overall, this is a slight decrease in the 2003 calculations.

Ephemeral Drainage 3: This channel has been dramatically impacted by the construction of the housing tract to the west. Presently the drainage does not collect any upstream offsite flows and no storm drain structures connect to this drainage. Water entering this drainage must now collect from rainfall falling within the property boundaries. As a result of topography only the land immediately south and within the boundary of the project currently contributes to this drainage. The 2003 delineation depicted the drainage beginning in the southwest corner. An examination of the 1953 and 1980 aerial photos shows how this error may have occurred, since the photos indicate a considerable amount of disturbance has occurred in the area. The 1938

photo shows two interesting conditions. First, the actual original beginning of the drainage was just south of the present property boundary. Secondly, potential for high flows entering drainage number 3 from drainage number 2 is evident. In any case, the present condition is much diminished and much reduced from our earlier estimation. Where we had originally considered the drainage to be a potential 2,500 lf., the 2005 study finds physical evidence for only 1,766 lf. of Federal waters of the US and State streambeds. Also, we were overgenerous in our projection of the likely flows during wet years and calculated the widths at 20 and 7 feet (State and Federal respectively). Current evidence supports an average width of 12 feet for State and 5 feet for Federal.

The vegetation in this drainage reflects the diminished flows and is a mix of CSS and chemise community shrubs, perennials, and annuals. A good deal of the southern disturbed area is dominated by non-natives, such as mustards and bromes. Areas calculated are 21,192 $ft.^2$ for State Streambeds and 8,830 $ft.^2$ for Federal waters of the US, of which none are State or Federal wetlands. This is a reduction from the original 2003 delineation.

Ephemeral Drainage 4: This drainage has all but disappeared entirely from the property. In our 2003 study we ventured a guess at what the flows would have been in a more normal year. We found these estimates wholly and completely unsupported by evidence in 2005. The former arroyo has nearly all but transitioned to upland community and is impassable with dense stands of costal sage and chemise right down to the bottom of the canyon. Trash and debris pushed or fallen over the sides from the old orchard production years is completely undisturbed by flow or flow pattern. In addition, areas where dry grasses and annuals had transitioned to sticks and stubble on the ground also remained undisturbed. The understory of annual grasses, aside from land already covered by woody shrubs, ranged from 60 - 100% cover. No Federal jurisdiction was found either in the form of wetland or waters of the US. Any water contributed to this arroyo is coming completely from the rainfall on the site soaks into the sandy soils long before any runoff can accumulate. To mark the location L&L chose a short 16 foot section and marked the point with GPS coordinates. This was the only area accessible and the only sandy bottom land in view. We now estimate this drainage to be 16 lf. and 80 $ft.^2$

Ephemeral Drainage 5: The situation here is nearly identical to drainage 4 described above, however, there are two differences: 1) addition of two (2) cholla at the property line and 2) a slightly larger presentation of remnant state streambeds. Visible drainage was measured at 147 lf. and calculated to cover 2,205 $ft.^2$ No Federal jurisdictional area is present.

Intermittent Drainage 6: This drainage is little changed and was estimated at only slightly larger than the original area. We added an additional 91 lf. to the combined or branched water way and verified the widths as consistent with our original estimate. Our revise measurements are 3692 lf. and an average of 56 feet wide for State and 24 feet for Federal streambeds. Width

ranged between 133 feet to 1 foot in width. State streambed measures 206,752 ft.^{2} and Federal waters of the US measured 88,608 ft.^{2} Of this we estimated that 669 lf. (at an average width of 35 feet) would qualify for State and Federal wetland status, totaling 23,415 ft.^{2} Of the entire area covered by drainage 6 we understand 84,300 ft.^{2} of State streambed, 35,850 ft.^{2} of Federal waters of the US, and 17,561 ft.^{2} of State and Federal wetlands may be impacted to some degree for an access road.

Wetlands in Drainage 2 and 6

During the field visit standing water was present in the southern portion of Channel 2 through the course of about 597 feet; a considerable increase from the 200 feet in our first study. Again, this inundated portion results from water received from offsite. Ordinary high water marks were evident along the entire length of the channel. Average width of this channel was estimated at 35 feet for vegetation and 12 feet for standing or running water (an increase from the previous estimates of 21 feet and 6 feet).

Channel 2 was identified as at least an intermittent stream in our May 2003 study and we found that consistent in May of 2005.

Where we had concluded in 2003 that drainages 1, 3, 4, 5, and 6 were ephemeral streams and only receive water from rainfall we have presently revised our statement to include drainage 6 as intermittent and a wetland in the southern 1/3 of the channel. Our reasoning is that clearly there is enough water present in channel six to create ground moisture sufficient to cause facultative and obligate vegetation grown. The vegetation is immature but aging and succeeding in changing the ecology. Where step sided canyons with sandy bottom channels is the norm on the northern end, the southern end is a narrow gorge which is shaded from the afternoon sun and contains a historic bench were a few cottonwoods and willows have taken root. Continuing up the channel, moving south, the rocky bottom becomes small pools of water and birds and wildlife are present. The canyon contained several diamondback rattlesnakes, particularly in the confined space of the gorge, on the bench, and on the plateau above.

On the north end of channel 6 (after the merger of the two branches) the ground water table is very high. Near the I-15 freeway standing and stagnant water was present in the sandy bottom channel just prior to the transition to willow woodland habitat.

Soils

Soil Conservation Service (SCS) maps (Knecht 1971) identify three soil mapping units on the site: Gergonio loamy sand, Handord cobbly sandy loam, and Terrace escarpments. None of these soils are included in the Soil Conservation Service's field office list of hydric soils for the area and all are well drained. No parts of the property have soils likely to create wetlands.

Mapping units, as defined by the SCS, are not necessarily composed entirely of the soil type they are named for. For example, areas shown as the "Cajalco" mapping unit are predominantly Cajalco soils, but may include patches of unnamed soils with slightly different profiles. Descriptions by Knecht (1971) do not indicate that any of the soil mapping units on the project site have unmapped inclusions of hydric soils.

In the field, soils were sampled in the dry channels. Soils in the dry channels did not have sufficiently low chroma to meet hydric soils criteria. Soils within the inundated northwestern end of channel 1 were not sampled due to standing water. They were assumed to have hydric soil characteristics.

Vegetation

Wetland indicator plant species were found in association with the drainages on the site and in areas immediately adjacent to the site. The remainder of the site contains a mix of disturbed to relatively undisturbed ruderal non-native grasslands, Diegan coastal sage scrub, and mesic chaparral vegetation communities. The subject property contains a mixture of relatively undisturbed and occasionally dense coastal sage chaparral scrub, Diegan sage scrub, and disturbed areas containing mostly ruderal vegetation.

A mixture of dense and/or relatively sparse growth of CSS or CSS/NMC inhabits many of the canyon bottoms. At the eastern portion of the property where these canyons are more defined (and steep) sandy soils are present at the bottom with little or no plant growth except along the edges where CSS/NMC and/or CSS meet the canyon bottom. Some mulefat was observed at these locations. At least one of the canyons contains a road and evidence of off-road vehicle activity leading up from the Temescal Wash area to the southeastern portion of the site. At the extreme west-central portion of the property several small arroyo willows have become established.

The presence of drainages along canyon bottoms, as well as the presence of wetland indicator plants such as mulefat and willow, indicates the presence of jurisdictional areas. Vegetation in the inundated northern portions of channel 2 was dominated by facultative and obligate species

including mulefat (*Baccharis salicifolia*, FACW), California sycamore (*Platanus racemosa*, FACW), cattails (*Typha domingensis* and *T. latifolia*, both OBL), tamarisk (*Tamarix* sp., FACW and FAC), and arroyo willow (*Salix lasiolepis*, FACW). These sites meet the vegetation criterion for wetlands. Dry sections of the remaining 5 channels were dominated by upland weedy species (*Bromus madritensis* ssp. *Rubens, Eremocarpus setigerus, Avena barbata, Hirschfeldia incana*), and other unidentified native and non-native grass species. These areas do not meet the vegetation criterion for wetlands. However, the California Department of Fish and Game claims jurisdiction of areas that satisfy only one of the three criteria and will likely consider this a wetland despite the upland vegetation.

6.0) CONCLUSIONS

L&L has concluded that jurisdictional streambed and waters of the US are present on the project site. Those portions of drainages that do not impound water are jurisdictional "Waters of the US" because they connect to navigable waters (Temescal Wash). Jurisdictional areas on the project site included 251,744 ft.^{2} (5.78 ac.) of State streambeds and 110,476 ft.^{2} (2.54 ac.) of Federal waters of the US of which 53,915 ft.^{2} (1.24 ac.) are State wetlands and 44,310 ft.^{2} (1.02 ac.) are Federal wetlands. Current design indicates that of the 5.78 acres of State streambed 2.79 acres will be impacted and of the 2.54 acres of Federal drainages 1.22 acres will be impacted, of which 0.88 acres of impacts will be to State and Federal wetlands.

In order for channels to fall under Federal jurisdiction, they must either (1) be tributaries to interstate waters, or (2) meet the interstate commerce clause as interpreted by the ACOE. It is evident that these channels meet criteria as tributaries, since the downstream channel drains into Temescal Wash. Presently the source of water is storm drain runoff from the now developed adjacent properties and hills beyond.

The developer should consult with the Army Corps of Engineers and California Dept. of Fish and Game for qualification under the "Nationwide 39" or 404 permit and State Streambed Alteration Agreement (1603). This must occur prior to any earthmoving or vegetation disturbing activities. Additionally, a Federal 401 permit will be required from the Regional Water Quality Control Board.

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US Department of the Interior Geological Survey. 1953. Romoland, Calif. 7.5-Minute topographic map (photorevised 1979). USGS, Denver, Colorado.

Table 2-a. 2005 Updated Summary of Wetlands Criteria and Jurisdiction

Feature	Length (ft.)	State Area (sq. ft.)	Federal Area (sq. ft.)	Hydro.	Veg.	Soils	Federal wetland (sq. ft.)	California wetland (sq. ft.)	Impacts California Stream / Wetland (sq. ft.)	Impacts Federal Waters / Wetland (sq. ft.)	Impacted Waters in Linear Feet
Channel 1 (dry)	111	1,665	1,110	No	No	No	None	1,665	1,665 / 0	1,110 / 0	111
Channel 2 North	397	7,940	4,764	No	No	No	None	7,940	0 / 0	0 / 0	0
Channel 2 (saturated) South	597	11,940	7,164	Yes	Yes	Yes	20,895	20,895	11,940 / 20,895	7,164 / 20,895	597
Channel 3 (dry)	1,766	21,192	8,830	No	No	No	None	None	21,192 / 0	8,830 / 0	1,766
Channel 4 (dry)	16	80	0	No	No	No	None	None	80 / 0	0 / 0	16
Channel 5 (dry)	147	2,205	0	No	No	No	None	None	2,205 / 0	0 / 0	147
Channel 6 (dry & wet)	3,692	206,752	88,608	Yes	Yes	Yes	23,415	23,415	84,300 / 17,561	35,850 / 17,561	1,500
TOTALS	**6,726**	**251,744 (5.78 ac.)**	**110,476 (2.54 ac.)**				**44,310 (1.02 ac.)**	**53,915 (1.24 ac.)**	**121,382 / 38,456 (2.79 ac. / 0.88 ac.)**	**52,954 / 38,456 (1.22 ac. / 0.88 ac.)**	**4,137**

*Note: The impacted totals do not include any area calculations for created wetlands or fuel modification zones.

Table 2-b. 2003 Summary of Wetlands Criteria and Jurisdiction [Alternate 2, Updated May 2004]

Feature	Length (ft.)	State Area (sq. ft.)	Fed. Area (sq. ft.)	Hydro.	Veg.	Soils	Waters of US	Federal wetland	Calif. Stream-bed	Calif. wetland	Impacts Calif. Stream / Wetland (sq. ft.)	Impacts Federal Waters (sq. ft.)	Impacted Waters in Linear Feet
Channel 1 (dry)	200	1,200	800	Yes	No	No	Yes	No	Yes	Yes	1,200	800	200
Channel 2 (inundated)	200	8,520	4,260	Yes	Yes	Yes	Yes	Yes	Yes	Yes	0	0	0
Channel 2 (saturated	700	32,725	9,765	Yes	Yes	No	Yes	Yes	Yes	Yes (4,185 sq. ft.)	24,544	7,324 (of this, 4,185 are wetlands)	525
Channel 3 (dry)	2,500	51,825	17,975	Yes	No	No	Yes	No	Yes	Yes	51,058	17,709	2,463
Channel 4 (dry)	700	10,395	4,809	Yes	No	No	Yes	No	Yes	Yes	8,910	4,122	600
Channel 5 (dry)	2,200	32,560	14,916	Yes	No	No	Yes	No	Yes	Yes	32,012	14,665	2,163
Channel 6 (dry)	3,600	202,320	86,040	Yes	No	No	Yes	No	Yes	Yes (67,440) (1.55 ac.)	84,300 (of this, 44,510 are wetlands)	35,850	1,500
TOTALS	**10,100**	**339,545 (7.79 ac.)**	**138,565 (3.18 ac.)**				**138,565 (3.18 ac.)**	**14,025 (0.32 ac.)**	**339,545 (7.79 ac.)**	**339,545 (7.79 ac.)**	**202,024 (4.64 ac.)**	**80,470 (1.87 ac.)**	**7,451**
	Quantities from Above Totals that are Wetlands:										**162,234 (3.72 ac.)**	**4185 (0.17 ac.)**	**300**

*Note: The impacted totals do not include any area calculations for created wetlands or fuel modification zones.

Table 3: Observed Species List (*non-native, **sensitive species)
(species identified from both the jurisdictional delineation and general biological surveys)

Latin Name	**Common Name**
VASCULAR PLANTS	
ANACARDIACEAE	CASHEW FAMILY
Malosma laurina (Rhus laurina)	Laurel sumac
Rhus ovata	Sugarbush
Rhus trilobata	Skunkbrush
* *Schinus molle*	Peruvian pepper tree
ASTERACEAE	ASTER FAMILY
Ambrosia acanthicarpa	Annual Bur-weed
Artemisia californica	California sagebrush
Baccharis salicifolia	Mulefat
Baccharis aarothroides	Desert broom
Bebbia juncea	Sweetbush
* *Centaurea melitensis*	Tocalote
* *Conyza bonariensis*	Flax-leaved horseweed
Conyza canadensis	Horseweed
Encelia farinosa	Brittlebush
Encelia californica	California encelia
Filago californica	California filago
* *Gazinia species*	Gazinia
Gnaphalium californicum	California everlasting
Helianthus annuus	Annual sunflower
Helianthus species	Sunflower
Hemizonia species	Tarplant
Heterotheca grandiflora	Telegraph weed
* *Lactuca serriola*	Prickly lettuce
Lessingia filaginifolia	Cudweed Aster
Senecio species	Senecio
Stephanomeria virgata	Twiggy wreath plant
BORAGINACEAE	BORAGE FAMILY
Amsinckia menziesii var. *intermedia*	Fiddleneck
Cryptantha intermedia	Common cryptantha
Heliotropium curassavicum	Wild heliotrope
BRASSICACEAE	MUSTARD FAMILY
* *Brassica geniculata (Hirschfeldia incana)*	Short-pod mustard
* *Brassica* species	Mustard
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY
Sambucus mexicana	Mexican elderberry
CHENOPODIACEAE	GOOSEFOOT FAMILY
* *Chenopodium album*	Lamb's quarters
* *Salsola tragus*	Russian thistle, tumbleweed
CONVOLVULACEAE	MORNING GLORY FAMILY
Calystegia macrostegia	Morning glory
CUSCUTACEAE	DODDER FAMILY
Cuscuta species	Dodder
EUPHORBIACEAE	SPURGE FAMILY
Eremocarpus setigerus	Doveweed
FABACEAE	PEA FAMILY
Lotus scoparius	Deerweed

GERANIACEAE	GERANIUM FAMILY
* *Erodium cicutarium*	Red-stemmed filaree
HYDROPHYLLACEAE	WATERLEAF FAMILY
Eriodictyon crassifolium	Thick-leaf yerba santa
LAMIACEAE	MINT FAMILY
* *Marrubium vulgare*	Horehound
Salvia apiana	White sage
Salvia mellifera	Black sage
MYRTACEAE	MYRTLE FAMILY
* *Eucalyptus* species	Eucalyptus
OLEACEAE	OLIVE FAMILY
* *Olea europea*	Russian olive
PAPAVERACEAE	POPPY FAMILY
** *Romneya coulteri*	Matilija poppy
Dicentra chrysantha	Golden eardrops
PINACEAE	PINE FAMILY
* *Pinus* species	Pine
POLYGONACEAE	BUCKWHEAT FAMILY
Eriogonum fasciculatum	California buckwheat
* *Eriogonum* species	Buckwheat
RHAMNACEAE	BUCKTHORN FAMILY
Ceanothus crassifolius	Hoary leaf Ceanothus
Rhamnus crocea	Spiny redberry
ROSACEAE	ROSE FAMILY
Adenostoma fasciculatum	Chamise
Heteromeles arbutifolia	Toyon
SALICACEAE	WILLOW FAMILY
Salix lasiolepis	Arroyo willow
Populus fremontii	Western cottonwood
SCROPHULARIACEAE	SNAPDRAGON FAMILY
Mimulus species	Monkey flower
SOLANACEAE	NIGHTSHADE FAMILY
Datura wrightii	Jimsonweed
* *Nicotiana glauca*	Tree tobacco
TAMARICACEAE	TAMARISK FAMILY
* *Tamarix* species	Tamarisk
ARECACEAE	PALM FAMILY
* *Washingtonia* species	Palm
LILIACEAE	LILY FAMILY
Yucca whipplei	Chaparral yucca
POACEAE	GRASS FAMILY
* *Avena barbata*	Slender wild oat
* *Bromus madritensis ssp. rubens (B. rubens)*	Foxtail Chess
Schismus barbatus	Mediterranean grass
* *Arundo donax*	Giant reed

VERTEBRATE ANIMALS

REPTILIA	REPTILES
IGUANIDAE	IGUANID LIZARDS
Uta stansburiana	Side-blotched lizard

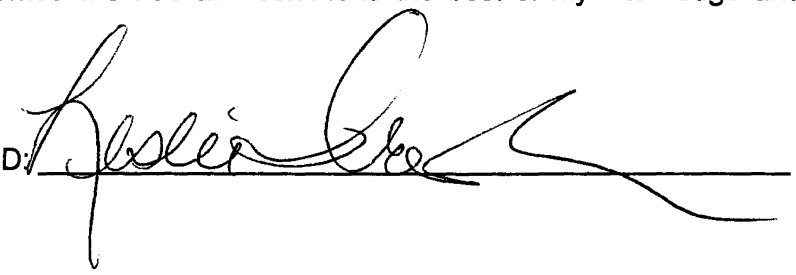
AVES	BIRDS
ACCIPITRIDAE	HAWKS, EAGLES, HARRIERS
** *Circus cyaneus*	Northern harrier
** *Accipiter cooperii*	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
FALCONIDAE	FALCONS
Falco sparverius	American kestrel
CHARADRIIDAE	PLOVERS
Charadrius vociferus	Killdeer
COLUMBIDAE	PIGEONS AND DOVES
Columba livia	Rock dove
Zenaida macroura	Mourning dove
TROCHILIDAE	HUMMINGBIRDS
Calypte anna	Anna's hummingbird
PICIDAE	WOODPECKERS
Colaptes auratus	Northern flicker
TYRANNIDAE	TYRANT FLYCATCHERS
Tyrannus verticalis	Western kingbird
ALAUDIDAE	LARKS
Eremophila alpestris	Horned lark
CORVIDAE	CROWS AND JAYS
Aphelocoma californica	Western scrub jay
Corvus brachyrhynchos	American crow
Corvus coraxclarionensis	Common raven
MUSCICAPIDAE	THRUSHES AND ALLIES
Chamaea fasciata	Wrentit
MIMIDAE	MOCKINGBIRDS AND THRASHERS
Mimus polyglottos	Northern mockingbird
EMBERIZIDAE	SPARROWS, WARBLERS, TANAGERS
Dendroica coronata	Yellow-rumped warbler
Pipilo crissalis	California towhee
Zonotrichia leucophrys	White-crowned sparrow
FRINGILLIDAE	FINCHES
Carpodacus mexicanus	House finch
Carduelis psaltria	Lesser goldfinch
PASSERIDAE	WEAVERS
* *Passer domesticus*	House sparrow
MAMMALIA	MAMMALS
LEPORIDAE	HARES AND RABBITS
Sylvilagus audubonii	Audubon cottontail
SCIURIDAE	SQUIRRELS
Spermophilus beecheyi	California ground squirrel
CANIDAE	FOXES, WOLVES AND COYOTES
Canis latrans	Coyote

APPENDIX B.

Riverside County Required Documentation

CERTIFICATION

Certification: I hereby certify that the statements furnished above and in the attached exhibits present the 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.

DATE: 6/8/05 SIGNED: 

Leslie Irish, L&L Environmental, Inc.

The remaining drainages were found to be fairly consistent with the original delineation: The revised analysis follows:

Ephemeral Drainage 1: This drainage arrives onto the property via the sewer plant and park properties to the south and is nearly completely filled by the historic use of the property. Based on aerial photo study, the drainage seems to remain intact from 1939 though 1953, but sometime before 1980 it was filled and only the very bottom of the drainage remains. We estimate the current length of the drainage to be 111 lf. and it is under both State and Federal jurisdiction. Vegetation in the channel is upland in nature and is primarily mustard with some mulefat that is a recent addition. Scrub oaks and an oak are present (referenced in the biological report) and may be related to other drainages that were historically present on the property (see 1938 photo). This entire channel will be impacted by the design. Drainage 1 averages 10 feet for Federal and 15 feet wide for State jurisdiction. The revised area is 1,665 $ft.^2$ for State and 1,110 $ft.^2$ for Federal waters of the US. Overall this is an increased area from the 2003 study.

Intermittent Drainage 2: This drainage arrives on the property from a storm drain on the western boundary of the property via the residential development to the south. Historic photos show this drainage was transporting flows as late as 1980 albeit through a citrus grove. Earlier photos document changes and contrasting information. The 1938 photo shows a wide channel, while the 1953 photo shows a somewhat diminished channel. Drainage 2 measures 994 lf. and is a much more complex waterway than any of the others on the property. The entire length of the drainage qualifies as a State wetland via the vegetation criteria. Only the southern or first 597 lf. meet the three Federal criteria of soils, vegetation, and hydrology. Vegetation present in the drainage is dense mixed willow woodland with an understory of mulefat on the southern end, along with standing water. It transitions to a sparse, willow – mulefat, dry bottom channel. The channel contains 19,880 $ft.^2$ of State streambeds and 11,928 $ft.^2$ of Federal waters of the US (of which 20,895 $ft.^2$ are Federal and State wetlands). Of this an estimated 25,544 $ft.^2$ will be impacted to one degree or another by the installation of a road crossing and (either negatively or positively) by the creation of a detention structure. Overall, this is a slight decrease in the 2003 calculations.

Ephemeral Drainage 3: This channel has been dramatically impacted by the construction of the housing tract to the west. Presently the drainage does not collect any upstream offsite flows and no storm drain structures connect to this drainage. Water entering this drainage must now collect from rainfall falling within the property boundaries. As a result of topography only the land immediately south and within the boundary of the project currently contributes to this drainage. The 2003 delineation depicted the drainage beginning in the southwest corner. An examination of the 1953 and 1980 aerial photos shows how this error may have occurred, since the photos indicate a considerable amount of disturbance has occurred in the area. The 1938

photo shows two interesting conditions. First, the actual original beginning of the drainage was just south of the present property boundary. Secondly, potential for high flows entering drainage number 3 from drainage number 2 is evident. In any case, the present condition is much diminished and much reduced from our earlier estimation. Where we had originally considered the drainage to be a potential 2,500 lf., the 2005 study finds physical evidence for only 1,766 lf. of Federal waters of the US and State streambeds. Also, we were overgenerous in our projection of the likely flows during wet years and calculated the widths at 20 and 7 feet (State and Federal respectively). Current evidence supports an average width of 12 feet for State and 5 feet for Federal.

The vegetation in this drainage reflects the diminished flows and is a mix of CSS and chemise community shrubs, perennials, and annuals. A good deal of the southern disturbed area is dominated by non-natives, such as mustards and bromes. Areas calculated are 21,192 $ft.^2$ for State Streambeds and 8,830 $ft.^2$ for Federal waters of the US, of which none are State or Federal wetlands. This is a reduction from the original 2003 delineation.

Ephemeral Drainage 4: This drainage has all but disappeared entirely from the property. In our 2003 study we ventured a guess at what the flows would have been in a more normal year. We found these estimates wholly and completely unsupported by evidence in 2005. The former arroyo has nearly all but transitioned to upland community and is impassable with dense stands of costal sage and chemise right down to the bottom of the canyon. Trash and debris pushed or fallen over the sides from the old orchard production years is completely undisturbed by flow or flow pattern. In addition, areas where dry grasses and annuals had transitioned to sticks and stubble on the ground also remained undisturbed. The understory of annual grasses, aside from land already covered by woody shrubs, ranged from 60 - 100% cover. No Federal jurisdiction was found either in the form of wetland or waters of the US. Any water contributed to this arroyo is coming completely from the rainfall on the site soaks into the sandy soils long before any runoff can accumulate. To mark the location L&L chose a short 16 foot section and marked the point with GPS coordinates. This was the only area accessible and the only sandy bottom land in view. We now estimate this drainage to be 16 lf. and 80 $ft.^2$

Ephemeral Drainage 5: The situation here is nearly identical to drainage 4 described above, however, there are two differences: 1) addition of two (2) cholla at the property line and 2) a slightly larger presentation of remnant state streambeds. Visible drainage was measured at 147 lf. and calculated to cover 2,205 $ft.^2$ No Federal jurisdictional area is present.

Intermittent Drainage 6: This drainage is little changed and was estimated at only slightly larger than the original area. We added an additional 91 lf. to the combined or branched water way and verified the widths as consistent with our original estimate. Our revise measurements are 3692 lf. and an average of 56 feet wide for State and 24 feet for Federal streambeds. Width

ranged between 133 feet to 1 foot in width. State streambed measures 206,752 ft.^{2} and Federal waters of the US measured 88,608 ft.^{2} Of this we estimated that 669 lf. (at an average width of 35 feet) would qualify for State and Federal wetland status, totaling 23,415 ft.^{2} Of the entire area covered by drainage 6 we understand 84,300 ft.^{2} of State streambed, 35,850 ft.^{2} of Federal waters of the US, and 17,561 ft.^{2} of State and Federal wetlands may be impacted to some degree for an access road.

Wetlands in Drainage 2 and 6

During the field visit standing water was present in the southern portion of Channel 2 through the course of about 597 feet; a considerable increase from the 200 feet in our first study. Again, this inundated portion results from water received from offsite. Ordinary high water marks were evident along the entire length of the channel. Average width of this channel was estimated at 35 feet for vegetation and 12 feet for standing or running water (an increase from the previous estimates of 21 feet and 6 feet).

Channel 2 was identified as at least an intermittent stream in our May 2003 study and we found that consistent in May of 2005.

Where we had concluded in 2003 that drainages 1, 3, 4, 5, and 6 were ephemeral streams and only receive water from rainfall we have presently revised our statement to include drainage 6 as intermittent and a wetland in the southern 1/3 of the channel. Our reasoning is that clearly there is enough water present in channel six to create ground moisture sufficient to cause facultative and obligate vegetation grown. The vegetation is immature but aging and succeeding in changing the ecology. Where step sided canyons with sandy bottom channels is the norm on the northern end, the southern end is a narrow gorge which is shaded from the afternoon sun and contains a historic bench were a few cottonwoods and willows have taken root. Continuing up the channel, moving south, the rocky bottom becomes small pools of water and birds and wildlife are present. The canyon contained several diamondback rattlesnakes, particularly in the confined space of the gorge, on the bench, and on the plateau above.

On the north end of channel 6 (after the merger of the two branches) the ground water table is very high. Near the I-15 freeway standing and stagnant water was present in the sandy bottom channel just prior to the transition to willow woodland habitat.

Soils

Soil Conservation Service (SCS) maps (Knecht 1971) identify three soil mapping units on the site: Gergonio loamy sand, Handord cobbly sandy loam, and Terrace escarpments. None of these soils are included in the Soil Conservation Service's field office list of hydric soils for the area and all are well drained. No parts of the property have soils likely to create wetlands.

Mapping units, as defined by the SCS, are not necessarily composed entirely of the soil type they are named for. For example, areas shown as the "Cajalco" mapping unit are predominantly Cajalco soils, but may include patches of unnamed soils with slightly different profiles. Descriptions by Knecht (1971) do not indicate that any of the soil mapping units on the project site have unmapped inclusions of hydric soils.

In the field, soils were sampled in the dry channels. Soils in the dry channels did not have sufficiently low chroma to meet hydric soils criteria. Soils within the inundated northwestern end of channel 1 were not sampled due to standing water. They were assumed to have hydric soil characteristics.

Vegetation

Wetland indicator plant species were found in association with the drainages on the site and in areas immediately adjacent to the site. The remainder of the site contains a mix of disturbed to relatively undisturbed ruderal non-native grasslands, Diegan coastal sage scrub, and mesic chaparral vegetation communities. The subject property contains a mixture of relatively undisturbed and occasionally dense coastal sage chaparral scrub, Diegan sage scrub, and disturbed areas containing mostly ruderal vegetation.

A mixture of dense and/or relatively sparse growth of CSS or CSS/NMC inhabits many of the canyon bottoms. At the eastern portion of the property where these canyons are more defined (and steep) sandy soils are present at the bottom with little or no plant growth except along the edges where CSS/NMC and/or CSS meet the canyon bottom. Some mulefat was observed at these locations. At least one of the canyons contains a road and evidence of off-road vehicle activity leading up from the Temescal Wash area to the southeastern portion of the site. At the extreme west-central portion of the property several small arroyo willows have become established.

The presence of drainages along canyon bottoms, as well as the presence of wetland indicator plants such as mulefat and willow, indicates the presence of jurisdictional areas. Vegetation in the inundated northern portions of channel 2 was dominated by facultative and obligate species

including mulefat (*Baccharis salicifolia*, FACW), California sycamore (*Platanus racemosa*, FACW), cattails (*Typha domingensis* and *T. latifolia*, both OBL), tamarisk (*Tamarix* sp., FACW and FAC), and arroyo willow (*Salix lasiolepis*, FACW). These sites meet the vegetation criterion for wetlands. Dry sections of the remaining 5 channels were dominated by upland weedy species (*Bromus madritensis* ssp. *Rubens, Eremocarpus setigerus, Avena barbata, Hirschfeldia incana*), and other unidentified native and non-native grass species. These areas do not meet the vegetation criterion for wetlands. However, the California Department of Fish and Game claims jurisdiction of areas that satisfy only one of the three criteria and will likely consider this a wetland despite the upland vegetation.

6.0) CONCLUSIONS

L&L has concluded that jurisdictional streambed and waters of the US are present on the project site. Those portions of drainages that do not impound water are jurisdictional "Waters of the US" because they connect to navigable waters (Temescal Wash). Jurisdictional areas on the project site included 251,744 ft.^{2} (5.78 ac.) of State streambeds and 110,476 ft.^{2} (2.54 ac.) of Federal waters of the US of which 53,915 ft.^{2} (1.24 ac.) are State wetlands and 44,310 ft.^{2} (1.02 ac.) are Federal wetlands. Current design indicates that of the 5.78 acres of State streambed 2.79 acres will be impacted and of the 2.54 acres of Federal drainages 1.22 acres will be impacted, of which 0.88 acres of impacts will be to State and Federal wetlands.

In order for channels to fall under Federal jurisdiction, they must either (1) be tributaries to interstate waters, or (2) meet the interstate commerce clause as interpreted by the ACOE. It is evident that these channels meet criteria as tributaries, since the downstream channel drains into Temescal Wash. Presently the source of water is storm drain runoff from the now developed adjacent properties and hills beyond.

The developer should consult with the Army Corps of Engineers and California Dept. of Fish and Game for qualification under the "Nationwide 39" or 404 permit and State Streambed Alteration Agreement (1603). This must occur prior to any earthmoving or vegetation disturbing activities. Additionally, a Federal 401 permit will be required from the Regional Water Quality Control Board.

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(species identified from both the jurisdictional delineation and general biological surveys)

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Malosma laurina (Rhus laurina)	Laurel sumac
Rhus ovata	Sugarbush
Rhus trilobata	Skunkbrush
* *Schinus molle*	Peruvian pepper tree
ASTERACEAE	ASTER FAMILY
Ambrosia acanthicarpa	Annual Bur-weed
Artemisia californica	California sagebrush
Baccharis salicifolia	Mulefat
Baccharis aarothroides	Desert broom
Bebbia juncea	Sweetbush
* *Centaurea melitensis*	Tocalote
* *Conyza bonariensis*	Flax-leaved horseweed
Conyza canadensis	Horseweed
Encelia farinosa	Brittlebush
Encelia californica	California encelia
Filago californica	California filago
* *Gazinia species*	Gazinia
Gnaphalium californicum	California everlasting
Helianthus annuus	Annual sunflower
Helianthus species	Sunflower
Hemizonia species	Tarplant
Heterotheca grandiflora	Telegraph weed
* *Lactuca serriola*	Prickly lettuce
Lessingia filaginifolia	Cudweed Aster
Senecio species	Senecio
Stephanomeria virgata	Twiggy wreath plant
BORAGINACEAE	BORAGE FAMILY
Amsinckia menziesii var. *intermedia*	Fiddleneck
Cryptantha intermedia	Common cryptantha
Heliotropium curassavicum	Wild heliotrope
BRASSICACEAE	MUSTARD FAMILY
* *Brassica geniculata (Hirschfeldia incana)*	Short-pod mustard
* *Brassica* species	Mustard
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY
Sambucus mexicana	Mexican elderberry
CHENOPODIACEAE	GOOSEFOOT FAMILY
* *Chenopodium album*	Lamb's quarters
* *Salsola tragus*	Russian thistle, tumbleweed
CONVOLVULACEAE	MORNING GLORY FAMILY
Calystegia macrostegia	Morning glory
CUSCUTACEAE	DODDER FAMILY
Cuscuta species	Dodder
EUPHORBIACEAE	SPURGE FAMILY
Eremocarpus setigerus	Doveweed
FABACEAE	PEA FAMILY
Lotus scoparius	Deerweed

GERANIACEAE	GERANIUM FAMILY
* *Erodium cicutarium*	Red-stemmed filaree
HYDROPHYLLACEAE	WATERLEAF FAMILY
Eriodictyon crassifolium	Thick-leaf yerba santa
LAMIACEAE	MINT FAMILY
* *Marrubium vulgare*	Horehound
Salvia apiana	White sage
Salvia mellifera	Black sage
MYRTACEAE	MYRTLE FAMILY
* *Eucalyptus* species	Eucalyptus
OLEACEAE	OLIVE FAMILY
* *Olea europea*	Russian olive
PAPAVERACEAE	POPPY FAMILY
** *Romneya coulteri*	Matilija poppy
Dicentra chrysantha	Golden eardrops
PINACEAE	PINE FAMILY
* *Pinus* species	Pine
POLYGONACEAE	BUCKWHEAT FAMILY
Eriogonum fasciculatum	California buckwheat
* *Eriogonum* species	Buckwheat
RHAMNACEAE	BUCKTHORN FAMILY
Ceanothus crassifolius	Hoary leaf Ceanothus
Rhamnus crocea	Spiny redberry
ROSACEAE	ROSE FAMILY
Adenostoma fasciculatum	Chamise
Heteromeles arbutifolia	Toyon
SALICACEAE	WILLOW FAMILY
Salix lasiolepis	Arroyo willow
Populus fremontii	Western cottonwood
SCROPHULARIACEAE	SNAPDRAGON FAMILY
Mimulus species	Monkey flower
SOLANACEAE	NIGHTSHADE FAMILY
Datura wrightii	Jimsonweed
* *Nicotiana glauca*	Tree tobacco
TAMARICACEAE	TAMARISK FAMILY
* *Tamarix* species	Tamarisk
ARECACEAE	PALM FAMILY
* *Washingtonia* species	Palm
LILIACEAE	LILY FAMILY
Yucca whipplei	Chaparral yucca
POACEAE	GRASS FAMILY
* *Avena barbata*	Slender wild oat
* *Bromus madritensis ssp. rubens (B. rubens)*	Foxtail Chess
Schismus barbatus	Mediterranean grass
* *Arundo donax*	Giant reed

VERTEBRATE ANIMALS

REPTILIA	REPTILES
IGUANIDAE	IGUANID LIZARDS
Uta stansburiana	Side-blotched lizard

AVES	BIRDS
ACCIPITRIDAE	HAWKS, EAGLES, HARRIERS
** *Circus cyaneus*	Northern harrier
** *Accipiter cooperii*	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
FALCONIDAE	FALCONS
Falco sparverius	American kestrel
CHARADRIIDAE	PLOVERS
Charadrius vociferus	Killdeer
COLUMBIDAE	PIGEONS AND DOVES
Columba livia	Rock dove
Zenaida macroura	Mourning dove
TROCHILIDAE	HUMMINGBIRDS
Calypte anna	Anna's hummingbird
PICIDAE	WOODPECKERS
Colaptes auratus	Northern flicker
TYRANNIDAE	TYRANT FLYCATCHERS
Tyrannus verticalis	Western kingbird
ALAUDIDAE	LARKS
Eremophila alpestris	Horned lark
CORVIDAE	CROWS AND JAYS
Aphelocoma californica	Western scrub jay
Corvus brachyrhynchos	American crow
Corvus coraxclarionensis	Common raven
MUSCICAPIDAE	THRUSHES AND ALLIES
Chamaea fasciata	Wrentit
MIMIDAE	MOCKINGBIRDS AND THRASHERS
Mimus polyglottos	Northern mockingbird
EMBERIZIDAE	SPARROWS, WARBLERS, TANAGERS
Dendroica coronata	Yellow-rumped warbler
Pipilo crissalis	California towhee
Zonotrichia leucophrys	White-crowned sparrow
FRINGILLIDAE	FINCHES
Carpodacus mexicanus	House finch
Carduelis psaltria	Lesser goldfinch
PASSERIDAE	WEAVERS
* *Passer domesticus*	House sparrow
MAMMALIA	MAMMALS
LEPORIDAE	HARES AND RABBITS
Sylvilagus audubonii	Audubon cottontail
SCIURIDAE	SQUIRRELS
Spermophilus beecheyi	California ground squirrel
CANIDAE	FOXES, WOLVES AND COYOTES
Canis latrans	Coyote

APPENDIX B.

Riverside County Required Documentation

CERTIFICATION

Certification: I hereby certify that the statements furnished above and in the attached exhibits present the 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.

DATE: 6/8/05 SIGNED: _____

Leslie Irish, L&L Environmental, Inc.

Photo 1: Wetland within Channel 2 where water is present.

Photo 2: View from Channel 3 looking south. Shows southern portion of the site and typical vegetation within the Channel.

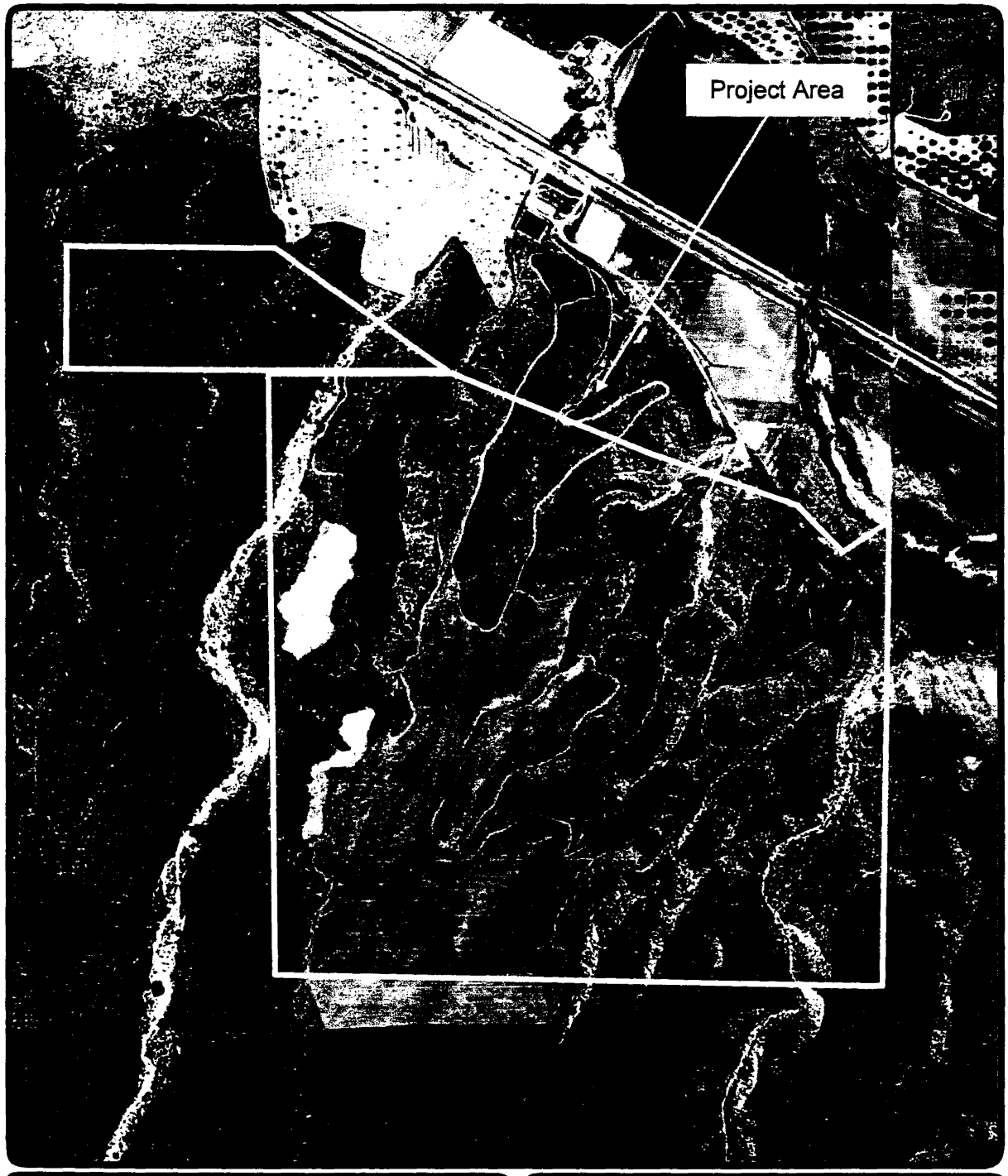
Photo 3: View from Channel 3 looking north. Shows middle portion of the site.

Photo 4: Channel 4 looking north towards I-15.

Photo 5: Channel 5 on the northend facing south at property line

Photo 6: Channel 6a looking into channel 6 at merger of the two channels

Photo 7: Channel 6 at the northeastern side of the project.



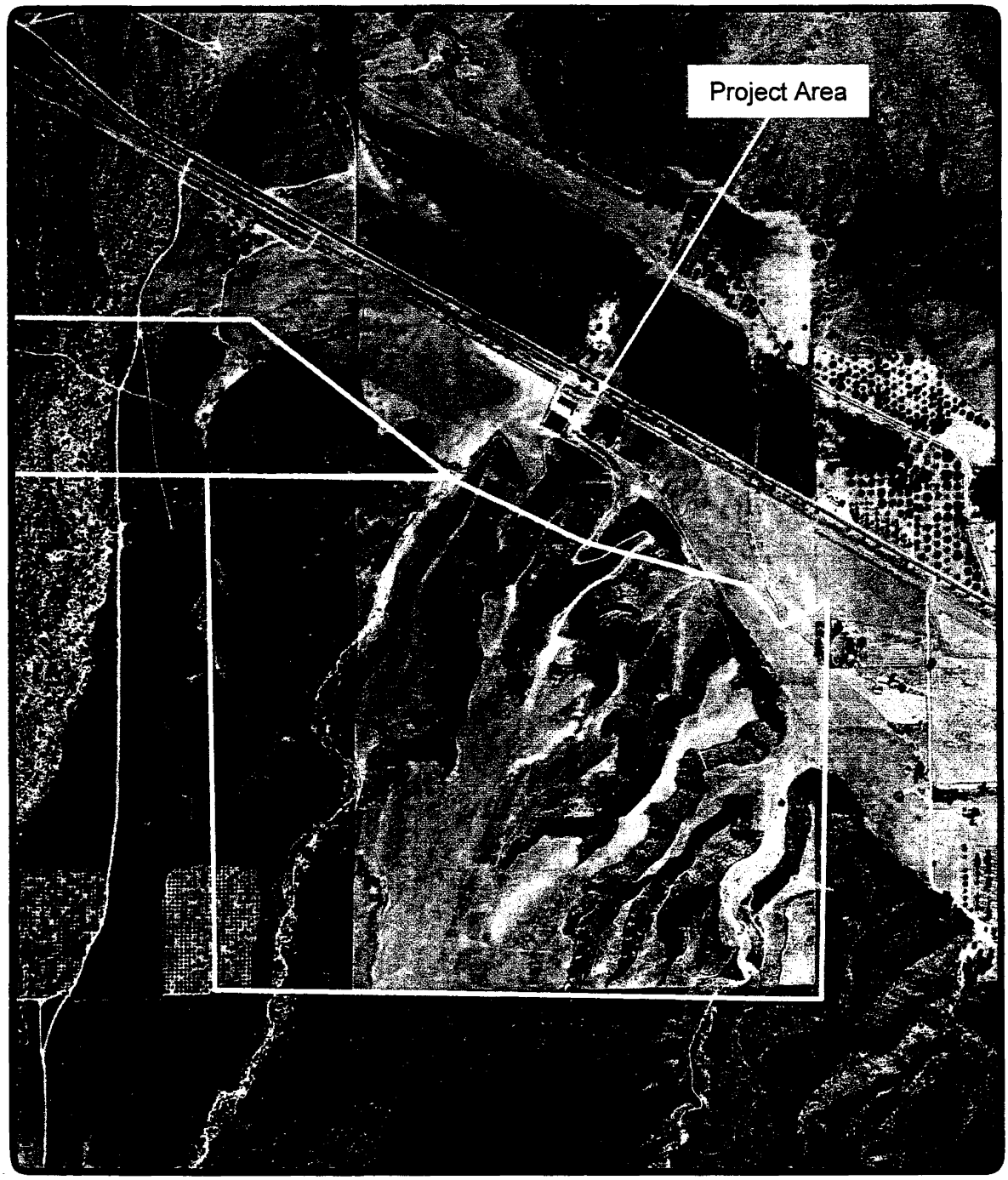
L&L Environmental, Inc.

BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RDC-02-181
May 2005

Historic Aerial Photograph
(taken 1938)

Renaissance Development
County of Riverside, California



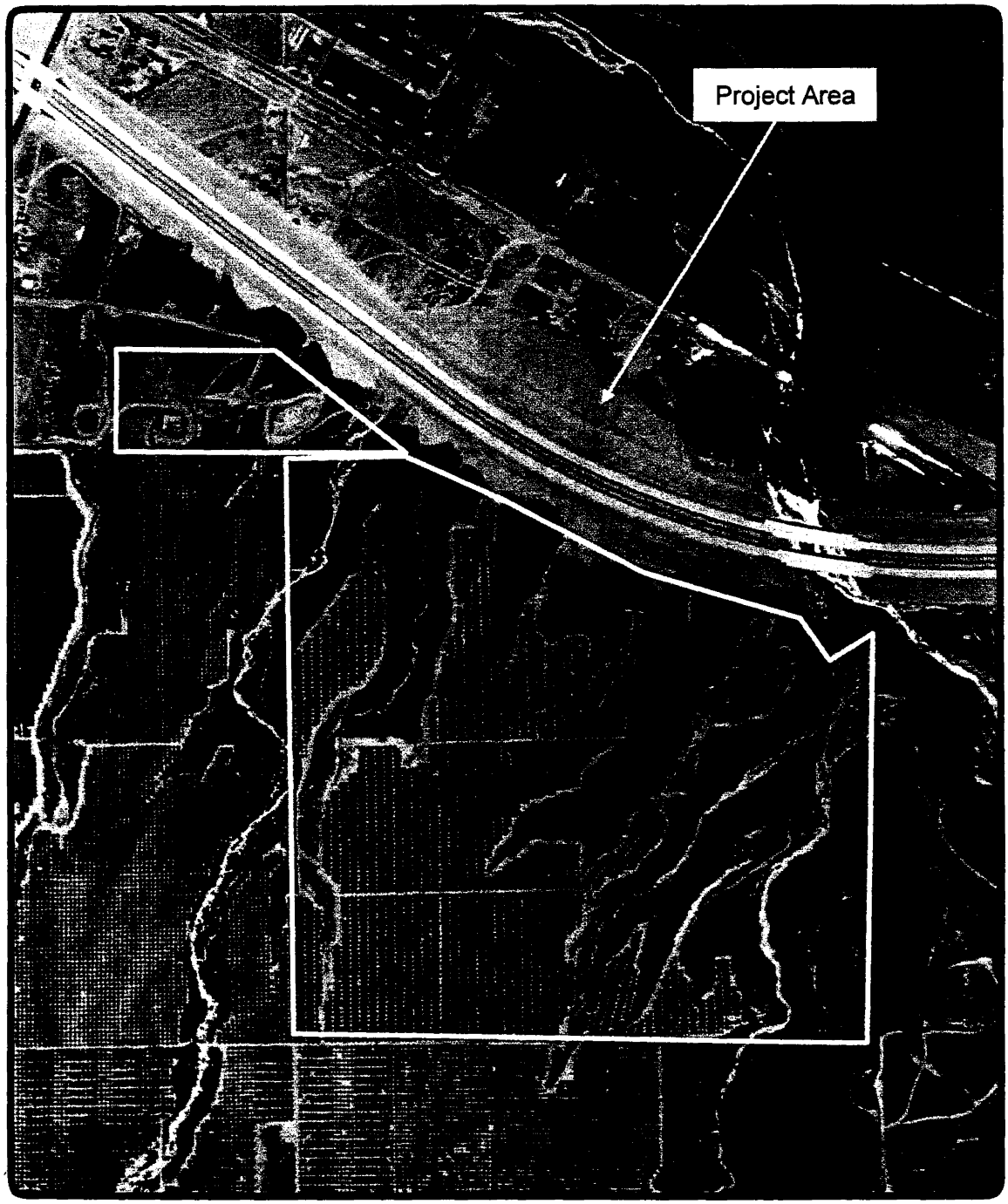
L&L Environmental, Inc.

BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RDC-02-181
May 2005

Historic Aerial Photograph
(taken September 22, 1953)

Renaissance Development
County of Riverside, California



L&L Environmental, Inc.

BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RDC-02-181
May 2005

Historic Aerial Photograph
(taken June 8, 1980)

Renaissance Development
County of Riverside, California

BIOLOGICAL REPORT SUMMARY SHEET

Applicant Name: Dave Schaffer
Assessor's Parcel Number(s): 391-140-006, 391-480-019, and 391-100-025
Section, Township and Range: Section 17, Township 5 South, Range 5 West
Building and Safety Log Number: _____
Case Number: _____ Lot/Parcel _____ EA Number _____

MARK ITEM(S) SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE of CONCERN	*(Mark Yes, No, or N/A regarding species findings on the referenced site)*		
		Yes	**No**	**n/a**
	Arroyo Southwestern Toad	Yes	No	n/a
X	Blueline Stream(s)	[redacted]	No	n/a
	Burrowing Owl	Yes	No	n/a
	Coachella Valley Fringed-toed Lizard	Yes	No	n/a
	Coastal California Gnatcatcher	Yes	No	n/a
X	Coastal Sage Scrub	[redacted]	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 Woolystar	Yes	No	n/a
	San Bernardino Kangaroo Rat	Yes	No	n/a
	Slender-horned Spineflower	Yes	No	n/a
	Stephens' Kangaroo Rat	Yes	No	n/a
	Vernal Pools	Yes	No	n/a
X	Wetlands	[redacted]	No	n/a

MARK ITEM(S) SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE of CONCERN	*(Mark Yes, No, or N/A regarding species findings on the referenced site)*		
	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 (CNDDB).

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 or habitat assessment.

L & L Environmental, Inc. — June 3, 2005
Signature and Company Name — Date

10(a) Permit Number (if applicable) — Permit Expiration Date

County Use Only

Received By: _____ Date: _____
PD-B# _____

Attachment E-4

LEVEL OF SIGNIFICANCE CHECKLIST

For Biological Resources
(Submit two copies to the County)

Case Number: _____ Lot/Parcel No. _____ EA Number _____

Assessor's Parcel Number(s): Section 17, Township 5 South, Range 5 West

Date: June 3, 2005

Wildlife & Vegetation:

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

Biological Resources
Would the Project?:

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?**

☐ ☐ ☐ ☐

LEVEL OF SIGNIFICANCE CHECKLIST

For Biological Resources

(Submit two copies to the County)

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 the 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 pools, coastal, etc.) through direct removal, filling, hydrological interruption)**

☐ ■ ☐ ☐

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

☐ ☐ ☐ ☐

Findings of Fact:

State and Federal jurisdictional waters do occur on the project site.

Proposed Mitigation:

Monitoring Recommended:

Source: **CGP Fig. VI.36-VI.40**
Revised October 1999

GLENN LUKOS ASSOCIATES
Regulatory Services

April 5, 2006

Barbara Darracq
KB Home Coastal, Inc.
3 Jenner, Suite 100
Irvine, California 92618

SUBJECT: Jurisdictional Delineation of Off Site Impact Areas for the Renaissance Ranch Project (Tracts 31210 & 31485), Located in an Unincorporated Portion of Riverside County, California.

Dear Ms. Darracq:

This letter report summarizes our preliminary findings of U.S. Army Corps of Engineers (Corps) and California Department of Fish and Game (CDFG) jurisdiction for the above-referenced property.

The Renaissance Ranch project site located in northwestern Riverside County [Exhibit 1] comprises approximately 158 acres, and contains a single blue-line drainage (as depicted on the U.S. Geological Survey [USGS] topographic map Alberhill, California [dated 1954 and photorevised in 1973]) [Exhibit 2]. A jurisdictional delineation was previously conducted for the project site by L&L Environmental, Inc., identifying six drainage features subject to the jurisdiction of the Corps and CDFG jurisdiction. The Corps issued an individual permit (#200401431-JPL) for the project (dated July 29, 2005) authorizing impacts to 1.87 acres of waters of the United States, including 0.17 acre of jurisdictional wetlands. In addition, CDFG issued a Streambed Alteration Agreement (#1600-2004-0093-R6, dated August 2, 2005) authorizing impacts to 4.89 acres of jurisdictional streams (and up to 0.25 acre of temporary impacts), including 3.55 acres of riparian vegetation. However, the jurisdictional delineation, and subsequent resource agency permits did not address off site impacts. The purpose of this report is to provide a jurisdictional delineation of the off site improvement areas associated with the overall Renaissance Ranch project.

On March 7, 2006, regulatory specialists of Glenn Lukos Associates, Inc. (GLA) examined the proposed off site impact areas to determine the limits of (1) Corps jurisdiction pursuant to Section 404 of the Clean Water Act, and (2) CDFG jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code. Enclosed are a series of maps [Exhibits 3 through 5], which depict the areas of Corps and CDFG jurisdiction. Photographs to document the topography, vegetative communities, and general widths of each of the waters are provided as Exhibit 6. Wetland data sheets are attached as Appendix A.

29 Orchard ▪ Lake Forest ▪ California 92630-8300
Telephone: (949) 837-0404 Facsimile: (949) 837-5834

Corps jurisdiction associated with the off site impact areas totals approximately 0.05 acre, none of which consists of jurisdictional wetlands. CDFG jurisdiction associated with the off site impact areas totals approximately 0.26 acre, of which approximately 0.23 acre consists of vegetated riparian habitat.

I. METHODOLOGY

Prior to beginning the field delineation an aerial photograph, topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential areas of Corps/CDFG 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 Manual[1] (Wetland Manual). While in the field the jurisdictional area was recorded onto a 200-scale color aerial photograph using visible landmarks. Other data were recorded onto wetland data sheets.

The Soil Conservation Service (SCS)[2] has mapped the following soil types as occurring in the general vicinity of the project site:

Gorgonio Series

The Gorgonio series consists of somewhat excessively drained to excessively drained soils on alluvial fans. These soils developed in alluvium consisting mainly of granitic materials. The vegetation commonly associated with Gorgonio soils includes annual grasses, forbs, and shrubs. Gorgonio soils occur near Hanford, Tujunga, and Soboba soils. Gorgonio soils are used for dryland pasture and range, for irrigated alfalfa and apricots, and for homesites. The upper 15 inches of a typical soil profile for the Gorgonio series consists of a brown (10YR 5/3) gravelly loamy fine sand when dry, to dark brown (10YR 3/3) when moist. Gorgonio soils mapped within the off site impact areas include:

- Gorgonio Loamy Sand, 0 to 8 percent slopes (GhC)
- Gorgonio Loamy Sand, 8 to 15 percent slopes (GhD)

None of these soil units are identified as hydric in the SCS's publication, Hydric Soils of the United States[3].

---

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

[2] SCS is now known as the National Resource Conservation Service or NRCS.

[3] 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.)

II. JURISDICTION

A. Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, 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.*[4] *Notwithstanding the determination of an area's status as prior converted cropland by*

[4] 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.]

> *any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the 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.*

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 Clean Water Act.

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..

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. In 1989 the Federal Interagency Committee for Wetland Delineation developed an updated methodology which was adopted by the Corps, U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (EPA), and SCS which replaced the 1987 Wetland Delineation Manual.[5] The use of this 1989 manual was perceived by many to excessively increase the jurisdictional limits of wetlands. After several congressional hearings, EPA, Corps, SCS, and USFWS published proposed 1991 revisions to the 1989 manual.[6] A few days afterwards, the President signed the Energy and Water Development Appropriations Act of 1992 which, in effect, prohibits the use of the 1989 manual. Because the 1991 proposed revisions to the 1989 manual have not yet been adopted, the only remaining valid methodology is the 1987 Wetland Delineation Manual.[7] The methodology set forth in the 1987 Wetland Delineation Manual generally requires 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 provides great detail in methodology and allows 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 Wetlands[8]);

- 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

- hydrologic characteristics must 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[9].

---

[5] Federal Interagency Committee for Wetland Delineation. 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands. U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and USDA Soil Conservation Service, Washington, DC Cooperative technical publication.

[6] Government Printing Office. 1991. Federal Register, "1989 Federal Manual for Identifying Jurisdictional Wetlands; Proposed Revisions." August 14, 1991, Vol. 56, No. 157, pp 40446-40480.

[7] This delineation was performed using, where appropriate, the 1987 Wetland Manual. It is unlikely that any actions will be taken on a revised wetland manual in the near future. If a new manual is adopted, it may be necessary to review our delineation to determine its compliance with any changes set forth.

[8] 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).

[9] For most of low-lying southern California, five percent of the growing season is equivalent to 18 days.

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.[10] 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:

---

[10] 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 Game

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFG 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.

CDFG 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." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG 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 [CDFG] as natural waterways...
- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions...

Thus, CDFG jurisdictional limits closely mirror those of the Corps. Exceptions are CDFG'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

Corps jurisdiction associated with the Renaissance Ranch off site impact areas total approximately 0.05 acre of waters of the United States, none of which supports jurisdictional wetlands. The boundaries of the waters of the United States are depicted on the enclosed maps. Discussion and naming of the jurisdictional areas are consistent with the previous L&L Environmental jurisdictional delineation. Table 1 provides a summary of Corps jurisdiction associated with the off site impact areas.

Table 1. Corps Jurisdiction Associated with Renaissance Ranch Off Site Areas

Channel #	Non-Wetland Waters	Wetlands	Total
1	0.01	0	0.01
3	0.01	0	0.01
7	0.03	0	0.03
Total	**0.05**	**0**	**0.05**

1. Channel 1

Approximately 0.01 acre of Corps jurisdiction is associated with the off site impact portion of Channel 1, none of which supports jurisdictional wetlands. Channel 1 (as identified in the L&L Environmental delineation) originates within the project and extends northeast to the project boundary. From the project boundary, the channel extends approximately 75 linear feet into the Interstate 15 right-of-way before terminating at a culvert pipe that conveys flows underneath the freeway and towards Temescal Canyon Wash. Within the off site portion of Channel 1, the channel is unvegetated and exhibits a three to four-foot-wide ordinary high water mark (OHWM). Adjacent upland areas consist of disturbed Riversidean sage scrub vegetated with California buckwheat (*Eriogonum fasciculatum*) and white sage (*Salvia apiana*); disturbed areas vegetated with ruderal vegetation and non-native grasses; and scrub oak chaparral vegetated with scrub oak (*Quercus berberidifolia*), chamise (*Adenostoma fasciculatum*), and sugar bush (*Rhus ovata*).

2. Channel 3

Approximately 0.01 acre of Corps jurisdiction is associated with the off site impact portion of Channel 3, none of which supports jurisdictional wetlands. Channel 3 (as identified in the L&L Environmental delineation) originates at the southwest corner of

the overall project site, and extends north/northeast to the project boundary. From the project boundary, the channel extends approximately 125 linear feet into the Interstate 15 right-of-way before terminating at a culvert pipe that conveys flows underneath the freeway and towards Temescal Canyon Wash. Within the off site portion of Channel 3, the channel is unvegetated and exhibits a four-foot-wide OHWM. Adjacent upland areas consist of disturbed areas dominated by ruderal vegetation and non-native grasses. Riversidean sage scrub dominated by California sagebrush (*Artemisia californica*); and scrub oak/chamise chaparral vegetated with scrub oak, chamise, California sagebrush, California bush poppy (*Dendromecon rigida*), and thick-leaved lilac (*Ceanothus crassifolius*).

3. Channel 7

Approximately 0.03 acre of Corps jurisdiction is associated with the off site impact portion of Channel 7, none of which supports jurisdictional wetlands. Channel 7 is associated entirely with an off site impact area, and is therefore not referenced in the L&L Environmental delineation or the resource agency permits. The channel originates at a culvert outlet in the southwest corner of the off site impact area, and then extends approximately 425 linear feet north/northeast within the off site impact area, at which point the channel then extends into the Interstate 15 right-of-way and enters a culvert pipe that conveys flows underneath the freeway and towards Temescal Canyon Wash. Much of this off site area is heavily disturbed, with maintained dirt roads and scattered debris/equipment. Undisturbed portions of the channel area support native riparian species, such as arroyo willow (*Salix lasiolepis*), mule fat (*Baccharis salicifolia*), and hoary nettle (*Urtica dioica*). In addition, the mule fat portions also contain a dominant component of non-natives, including tree tobacco (*Nicotiana glauca*), castor bean (*Ricinis communis*), and salt cedar (*Tamarix ramosissima*). However, none of these areas consist of jurisdictional wetlands. The OHWM of the channel ranges from three to six feet wide.

B. Regional Water Quality Control Board Jurisdiction

All areas identified as waters of the United States subject to the jurisdiction of the Corps are also subject to the jurisdiction of the Regional Water Quality Control Board (RWQCB). The off site impact areas do not contain any waters considered as intrastate/isolated waters outside Corps jurisdiction.

C. CDFG Jurisdiction

CDFG jurisdiction associated with the Renaissance Ranch off site impact areas total approximately 0.26 acre and includes all areas within Corps jurisdiction. Of the total amount of CDFG jurisdiction, 0.23 acre consists of riparian vegetation associated with Channel 7 (discussed above under Corps jurisdiction). Table 2 provides a summary of CDFG jurisdiction associated with the off site impact areas.

Table 2. CDFG Jurisdiction Associated with Renaissance Ranch Off Site Areas

Channel #	Unvegetated Streambed	Riparian Vegetation	Total
1	0.01	0	0.01
3	0.01	0	0.01
7	0.01	0.23	0.24
Total	**0.03**	**0.23**	**0.26**

If you have any questions about this letter report, please call me at (949) 837-0404.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.

David F. Moskovitz
Regulatory Specialist

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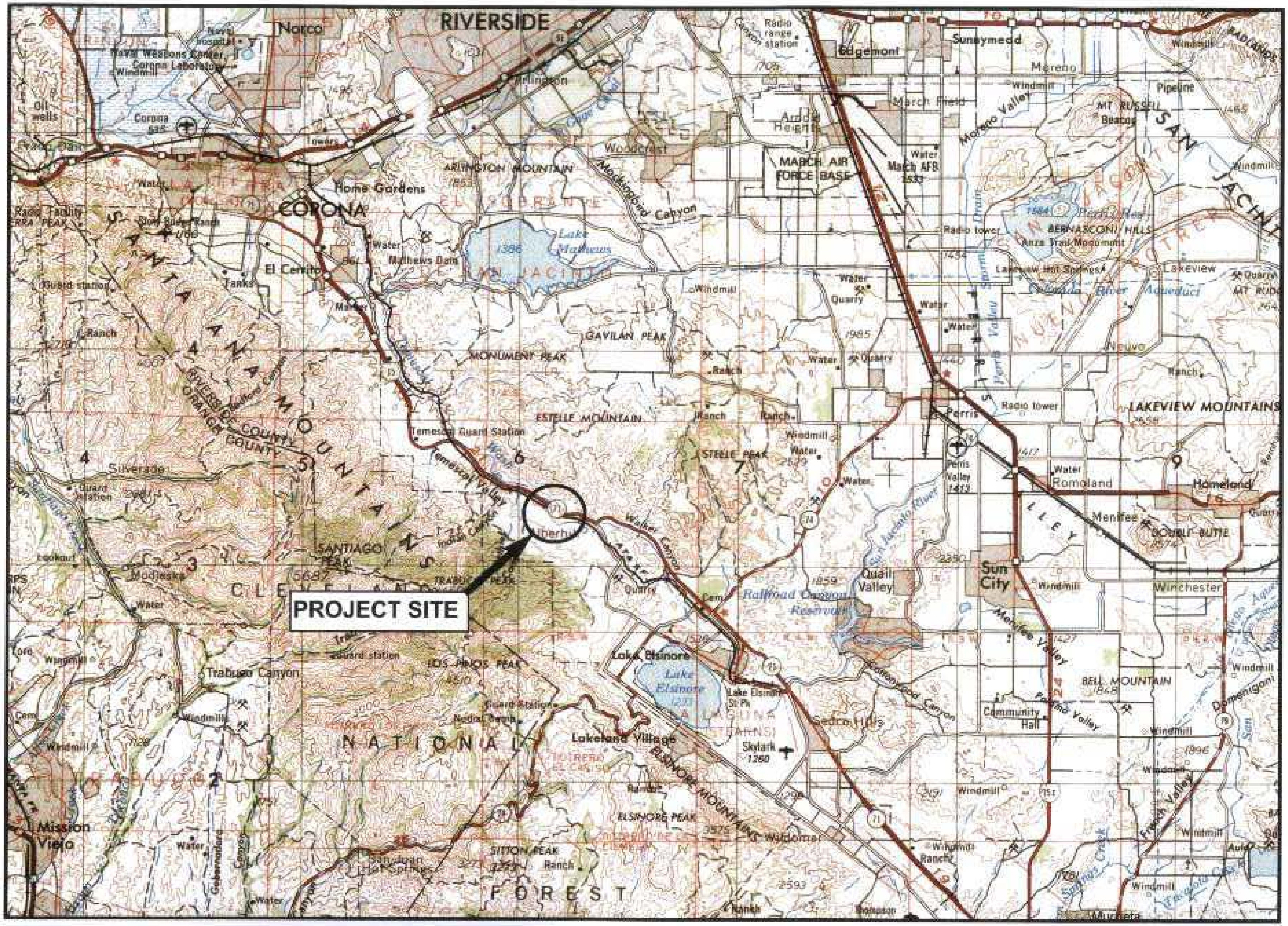


Adapted from Santa Ana Quadrangle

NORTH

0 2 4 6

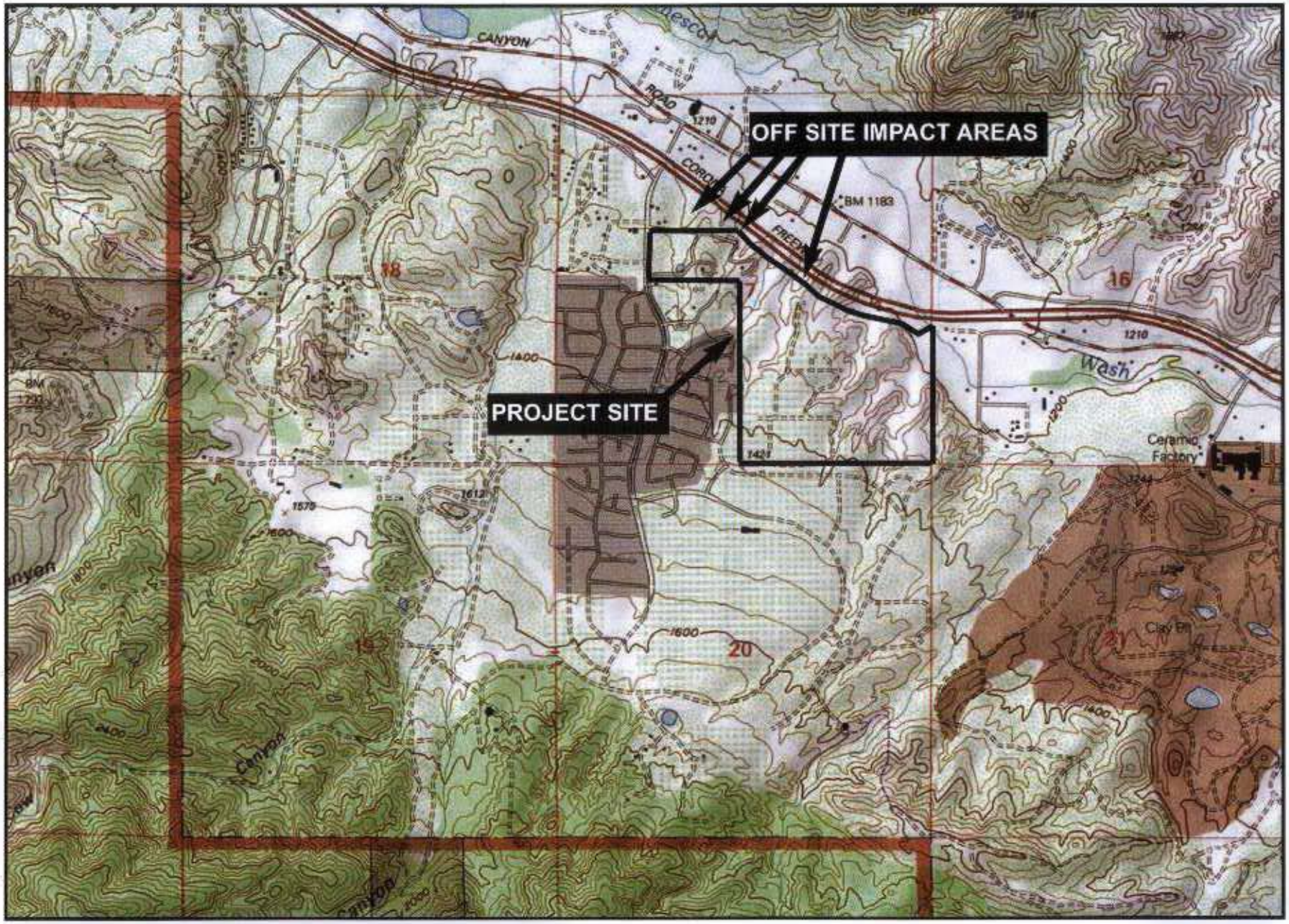
MILES

RENAISSANCE RANCH

Regional Map

GLENN LUKOS ASSOCIATES

EXHIBIT 1

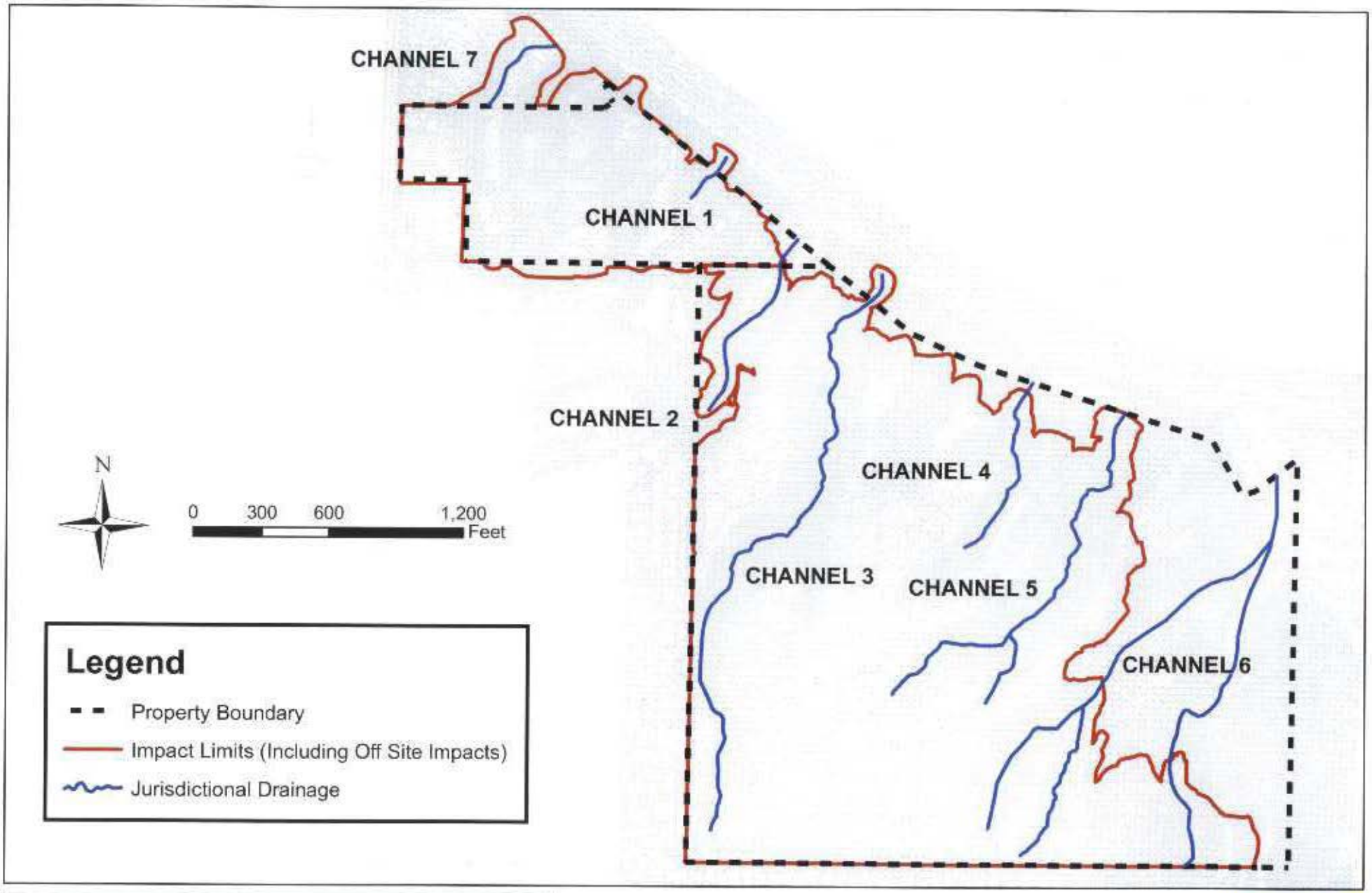


RENAISSANCE RANCH

Vicinity Map

GLENN LUKOS ASSOCIATES

EXHIBIT 2

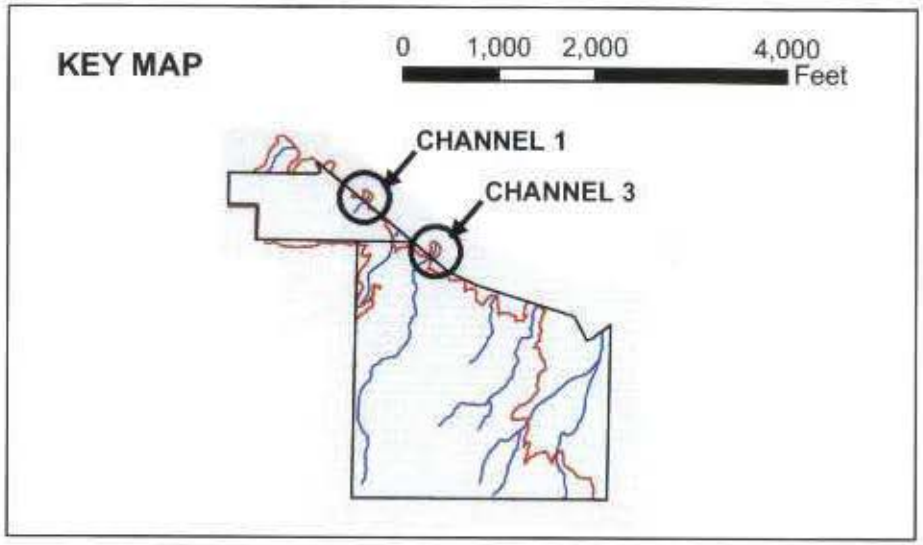


RENAISSANCE RANCH

Delineation Key Map

GLENN LUKOS ASSOCIATES

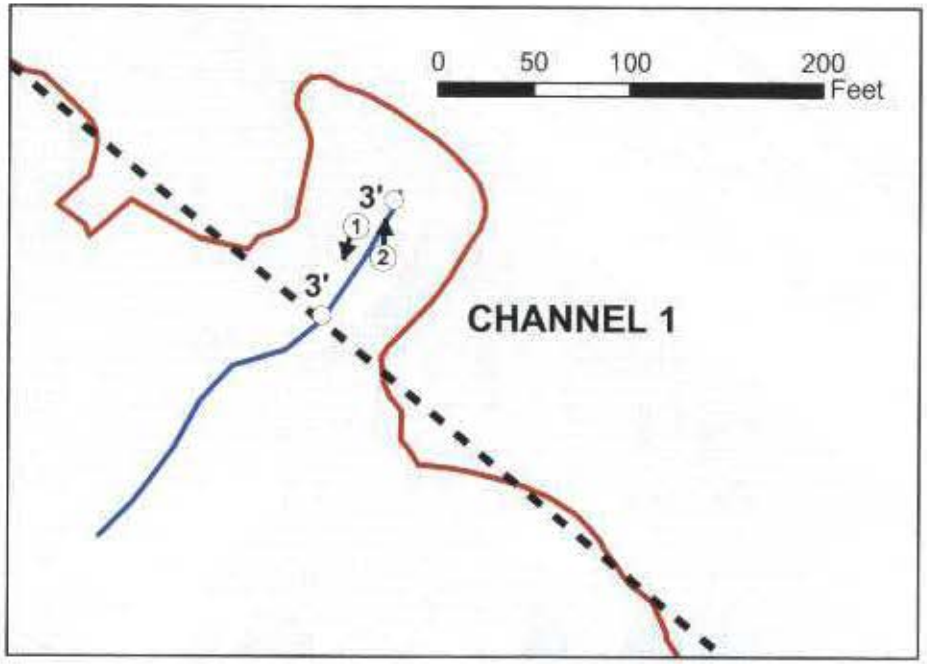
EXHIBIT 3

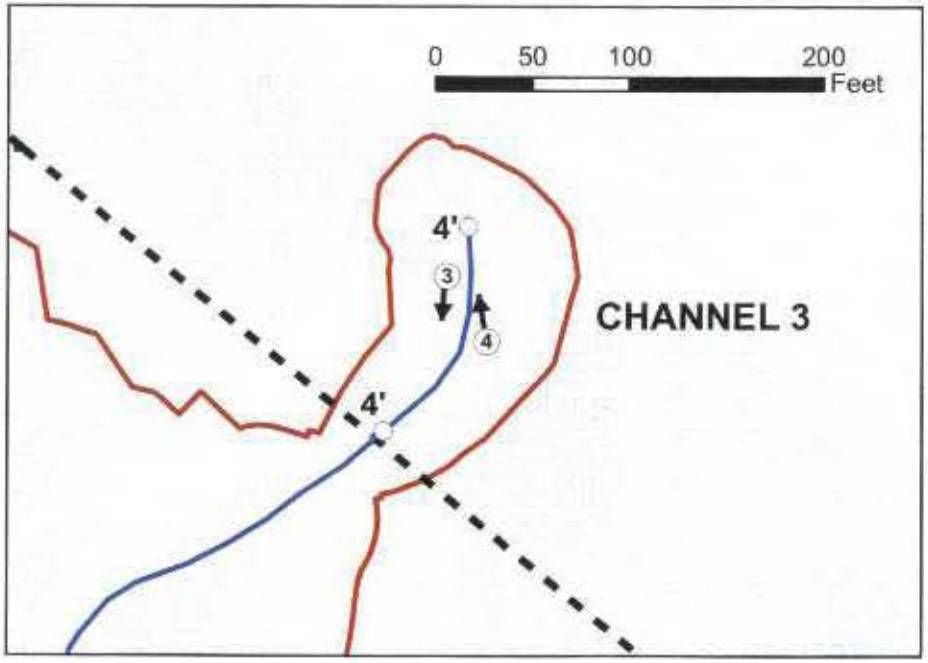


N

Legend

- Property Boundary
- Impact Limits (Including Off Site Impacts)
- Width Measurements
  3' (The number represents the width of the Corps OHWM and CFDG streambed.)
- Jurisdictional Drainage
  (Areas subject to Corps and CDFG jurisdiction.)
- ① → Photo Locations



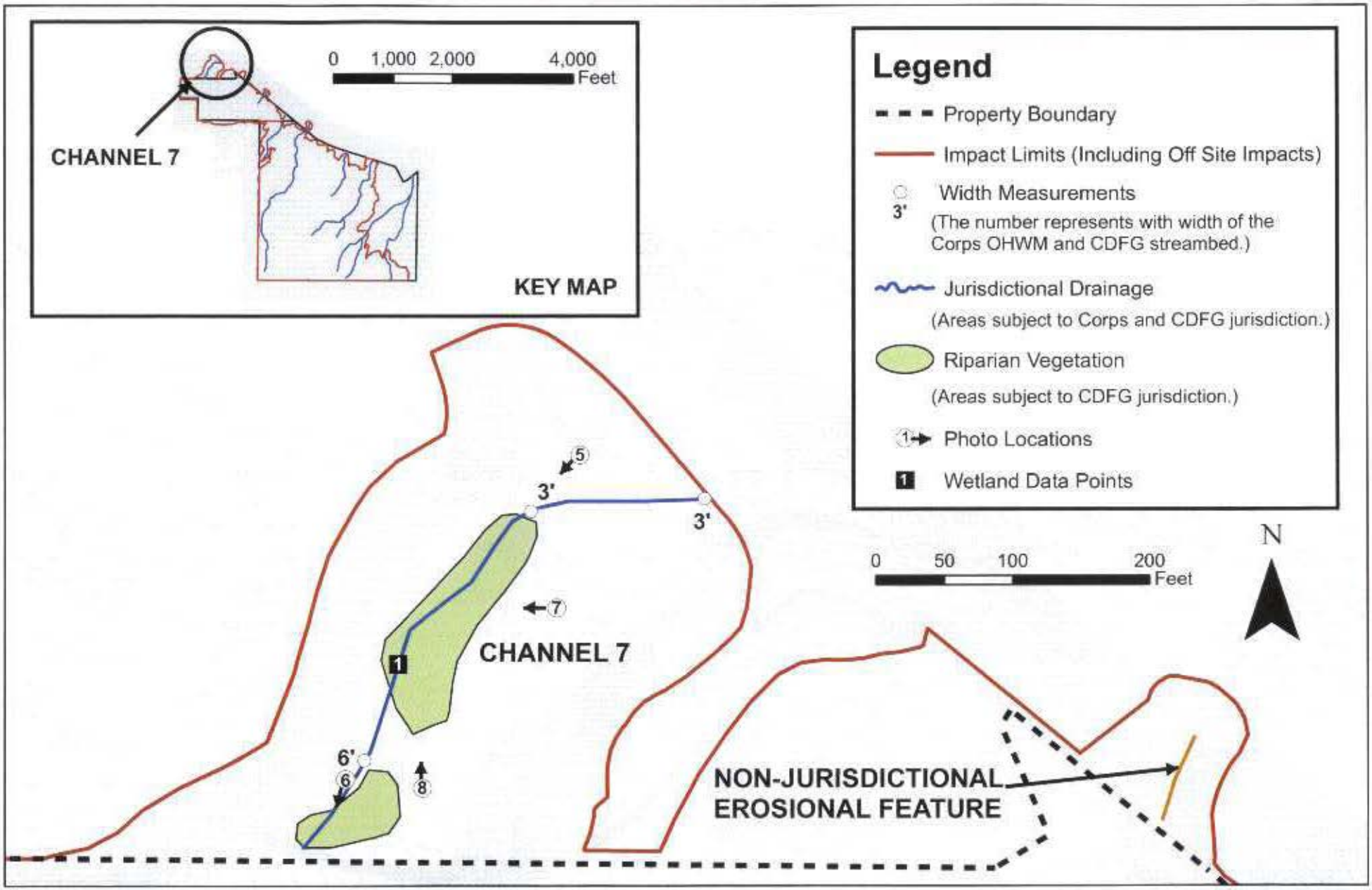


RENAISSANCE RANCH

Jurisdictional Delineation - Channels 1 and 3

GLENN LUKOS ASSOCIATES

EXHIBIT 4



RENAISSANCE RANCH

Jurisdictional Delineation - Channel 7

GLENN LUKOS ASSOCIATES

EXHIBIT 5

Photograph 1. View of Channel 1 looking south.

Photograph 2. View of Channel 1 looking north where it enters the culvert at the 15 Freeway.

GLENN LUKOS ASSOCIATES

EXHIBIT 6

RENAISSANCE RANCH

Site Photographs

Photograph 3. View of Channel 3 looking south.

Photograph 4. View of Channel 3 looking north where it enters the culvert at the 15 Freeway.

GLENN LUKOS ASSOCIATES

EXHIBIT 6

RENAISSANCE RANCH

Site Photographs

Photograph 5. View of Channel 7 looking south. The photo depicts the channel at road crossing, and the northern extent of riparian vegetation, comprised of mule fat, tree tobacco, and castor bean.

Photograph 6. View of Channel 7 looking south. The photo depicts the channel and associated southern willow and mule fat scrub vegetation.

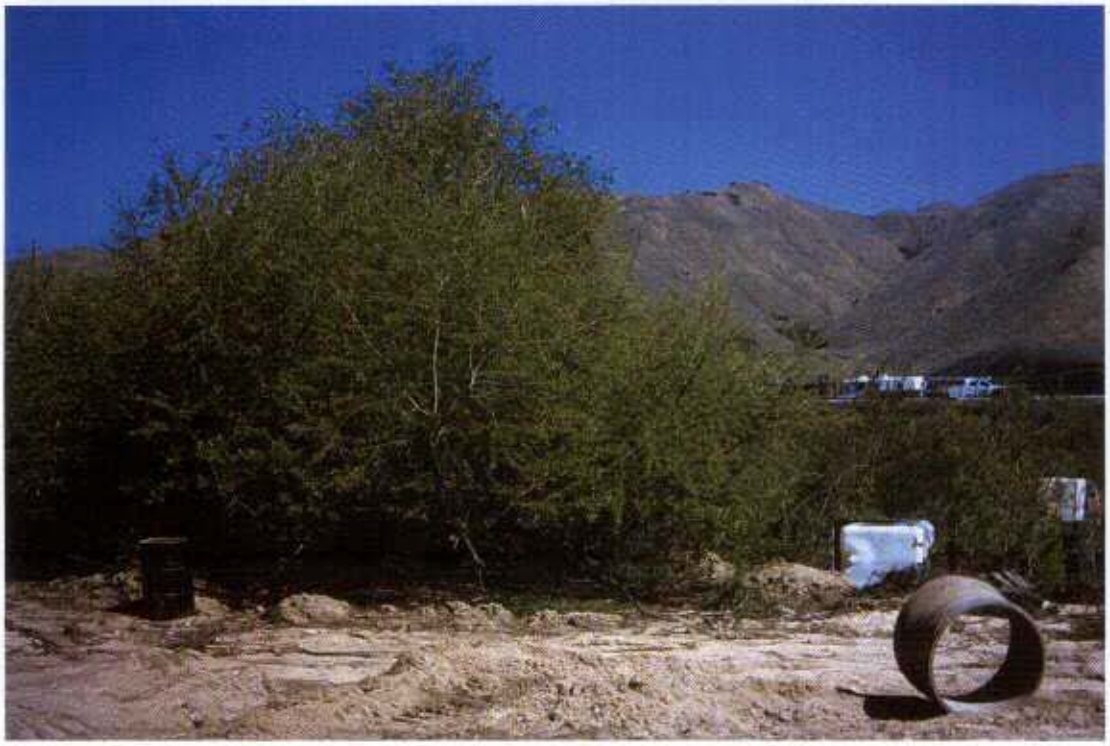
GLENN LUKOS ASSOCIATES

EXHIBIT 6

RENAISSANCE RANCH

Site Photographs

Photograph 7. View of Channel 7 riparian area. The general area is heavily disturbed, with the remnant channel portions supporting arroyo willow, mule fat, tree tobacco, salt cedar, and castor bean.



Photograph 8. View of Channel 7 riparian area, depiciting arroyo willow and mule fat surrounded by heavily disturbed areas.

GLENN LUKOS ASSOCIATES

EXHIBIT 6

RENAISSANCE RANCH

Site Photographs

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Renaissance Ranch - The Baum Property	Date: 3/8/06
Applicant/Owner: KB Homes	County: RIVERSIDE
Investigator: IC/DM	State: CA
Do Normal Circumstances exist on the site? **(Yes)** No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes **(No)**	Transect ID:
Is the area a potential Problem Area? Yes **(No)**	Plot ID: 1
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. arroyo willow		FACW	9.		
2. Urtica dioica		FACW	10.		
3. tree tobacco		FAC	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks: meets

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: ____ (in.)

Depth to Free Water in Pit: ____ (in.)

Depth to Saturated Soil: ____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: none

☐ 150ft depth of water (personal comment)?
☐ Recent 78ft

SOILS

Map Unit Name
(Series and Phase): _____ Drainage Class: _____

Taxonomy (Subgroup): _____ Field Observations
Confirm Mapped Type? Yes No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Matte Colors (Munsell Moist)	Matte Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16		10YR 3/2			Sand

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

Does not meet

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	(Circle)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	
Is this Sampling Point Within a Wetland?	Yes (No)	(Circle)

Remarks:

Does not meet all 3 parameters.

Approved by HQUSACE 3/92