

**BIOLOGICAL TECHNICAL REPORT**

**FOR**

**TENTATIVE TRACT MAP NO. 36647**

**EAST BASIN**

**LOCATED IN THE CITY OF PERRIS**

**RIVERSIDE CALIFORNIA**

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## **1.0 INTRODUCTION**

### **1.1 Background and Scope of Work**

This document provides the results of general and focused biological surveys for the approximately 50.80-acre development area for Tentative Tract Map (TTM) 36647 and the Offsite Basin (the Project) located in the City of Perris, 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.

The scope of this report includes a discussion of existing conditions for the approximate 50.80-acre Project, all methods employed regarding the general 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 reconnaissance survey and vegetation mapping; (2) general biological surveys; (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) pursuant to Section 404 of the Clean Water Act (CWA), Santa Ana Regional Water Quality Control Board (Regional Board) jurisdiction pursuant to Section 401 of the CWA and Section 13260 of the California Water Code (CWC), 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 general biological surveys and are included as Appendix A: Floral Compendium and Appendix B: Faunal Compendium.

### **1.2 Project Location**

The Project is approximately 50.80 acres in the City of Perris, Riverside County, California [Exhibit 1 – Regional Map] and is located within Section 5 of Township 4 South, Range 3 West of the U.S. Geological Survey (USGS) 7.5” quadrangle map Perris, California (dated 1967 and photorevised in 1979) [Exhibit 2 – Vicinity Map]. The Project site is generally bounded by TTM 36647 to the north, Ramona Expressway to the south, Evans Road to the east, and the Perris

Valley Storm Channel (PVSC) to the west. The Project site includes Assessor's Parcel Numbers (APN) 302-140-007, 302-140-008 and 302-150-009 through 302-150-019.

### **1.3 Project Description**

The proposed Project consists of three elements: (1) the future development of 90 single-family residential lots on 24 gross acres (TTM 36647), (2) excavation of site soils from the 26.80 acres south of and adjacent to TTM 36647 to support the development of Tracts 36647, 36648 and 36648-1, and (3) construction of an approximately 26-acre basin with a single temporary storm drain that outlets into the PVSC. The Tract Development Projects are located easterly of the PVSC and northerly/northeasterly of the Project in the City of Perris

Soil and sediment will be excavated and placed into a dump truck or other heavy equipment, then transported to Tracts 36647, 36648 and 36648-1.

Once construction within Tracts 36647, 36648 and 36648-1 has been completed and soils have been excavated from the southern portion of the property, a collection basin will be constructed for future development. The completed collection basin will drain to the existing PVSC through a single temporary (up to 2 years) storm drain connection. A 20-foot buffer has been applied to the storm drain to encompass the area needed to construct it.

The northern boundary of the property abuts the southernmost portions of two temporary catch basins. These basins occur outside the Project and have been approved for impact by the Tract 36648 and 36648-1 Development Projects.

The term *Project site* is defined as the 50.80 acres and includes all permanent and temporary impacts and all areas studied for the project [Exhibit 3 – Project Site]. The only exception to this, is that a visual buffer of 500 feet was applied to the Project site for the burrowing owl study (refer to Section 2.0 for additional detail).

### **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 Habitat Evaluation and Acquisition Negotiation Strategy (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 Regional Conservation Authority (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 Mead Valley Area Plan of the MSHCP but it not located within the MSHCP Criteria Area. As such, the HANS and JPR processes do not apply to the Project. The proposed temporary storm drain would be placed into the PVSC, a water feature that is mapped as Public/Quasi-Public (PQP) Conserved Lands and is owned by Riverside County Flood Control [Exhibit 4 – MSHCP Overlay Map]. As illustrated, PQP lands also occur just beyond the southern boundary of the Project site, which is outside of the limits of the Project.

The Project site is located within the MSHCP Criteria Area Plant Species Survey Area (CAPSSA), the Narrow Endemic Plant Species Survey Area (NEPSSA), and the burrowing owl survey area [Exhibit 4 – MSHCP Overlay Map]. Target species associated with CAPSSA include Coulter’s goldfields (*Lasthenia glabrata* ssp. *coulteri*), Davidson’s saltscale (*Atriplex serenana* var. *davidsonii*), little mousetail (*Myosurus minimus* ssp. *apus*), mud nama (*Nama stenocarpum*), Parish’s brittlescale (*Atriplex parishii*), round-leaved filaree (*California*

*macrophylla*), San Jacinto valley crownscale (*Atriplex coronate* var. *notatior*), smooth tarplant (*Centromadia pungens* var. *laevis*), and thread-leaved brodiaea (*Brodiaea filifolia*). The target species associated with the NEPSSA include California Orcutt grass (*Orcuttia californica*), San Diego ambrosia (*Ambrosia pumilla*), spreading navarretia (*Navarretia fossalis*), and Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*). The Project site does not occur within MSHCP survey areas for amphibians or small mammals, and does not occur within or adjacent to an MSHCP Core or Linkage.

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.

## **2.0 METHODOLOGY**

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:

- Delineation of aquatic resources (including wetlands and riparian habitat) subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), CDFW, and MSHCP riparian/riverine areas and vernal pools;
- 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 a focused survey for rare plants; and
- Performance of a focused survey for burrowing owl.

The focus of the biological surveys was determined through initial site reconnaissance, a review of the CNDDDB [CDFW 2018 CNPS 8<sup>th</sup> edition online inventory (CNPS 2018)], Natural Resource Conservation Service soil data (NRCS 2018), 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 Project site were conducted on foot in the proposed development areas for each target plant or animal species identified below. Table 2-1 provides a summary list of survey dates, survey types and personnel.

## 2.1 Summary of Surveys

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

<b>SURVEY TYPE</b>	<b>2018 SURVEY DATES</b>	<b>BIOLOGIST(S)</b>
General Biological Survey	3/27	TB, AN
Focused Habitat Evaluations	3/27, 5/10	TB, AN, JS
Focused Burrowing Owl Surveys	3/27, 5/5, 5/17, 5/25	TB, AN, DS
Vegetation Mapping	3/27	TB, AN

TB = Tony Bomkamp; AN = April Nakagawa; DS = David Smith; JS = Jillian Stephens

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);
- Occurrence in the CNPS Rare Plant Inventory (Rank 1A/1B, 2A/2B, 3, or 4); and/or
- Occurrence in the CNDDB inventory.

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

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

## 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 according to Holland (1986); and (5) habitat assessments and focused 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:

- CNPS, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39) (CNPS 2018); and
- CNDDDB for the USGS 7.5' quadrangles: Perris, Riverside East, Sunnymead, El Casco, Lakeview, Winchester, Romoland, Lake Elsinore, and Steele Peak. (CDFW 2018).

### **2.2.2 Vegetation Types/Land Use**

Vegetation communities within the Project site were mapped according to Holland (1986) when possible. The majority of the Project site does not meet the parameters of any natural vegetation classification system and was instead mapped as disturbed ruderal. Plant communities were mapped in the field directly onto a 200-scale (1"=200') aerial photograph. A vegetation map is included as [Exhibit 6 – Vegetation Map]. Representative site photographs are included as [Exhibit 7 – Site Photographs].

### **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 CNDDDB 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 (2018) 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): California Orcutt grass, Coulter's goldfields, Davidson's saltscale, little mousetail, mud nama, Parish's brittlescale, round-leaved filaree, San Diego ambrosia, San Jacinto valley crownscale, smooth tarplant, spreading navarretia, thread-leaved brodiaea, and Wright's trichocoronis.

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 biologists visited the site on March 27 and May 10, 2018 to conduct focused habitat evaluations for sensitive plants, the results of which indicated that focused botanical surveys would not be necessary (refer to Section 4.0, Table 4-2 for supporting information). 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. The focused evaluations were conducted by walking the Project site and reviewing site disturbances, soils, hydrology (or lack thereof). All plant species encountered



during the field evaluations 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 survey(s) 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 visit. 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 6<sup>th</sup> Edition, Collins and Taggart (2009) for amphibians and reptiles, and the American Ornithologists' Union Checklist 7<sup>th</sup> Edition (2009) for birds. The methodology (including any applicable survey protocols) utilized to conduct general surveys, habitat assessments, and/or focused surveys for special-status animals are included below.

### **2.3.1 General Biological 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 two factors,

including: 1) species identified by the CNDDDB 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.

### **2.3.2 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. GLA biologists Tony Bomkamp, April Nakagawa, and David Smith conducted focused surveys for the burrowing owl for all suitable habitat areas within the Project site and visually surveyed out to a 500-foot buffer beyond the Project site [refer to Exhibit 8 – Burrowing Owl Survey Results Map]. 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 March 27, 2018. Focused burrowing owl surveys were conducted on March 27, April 5, April 7, and April 25, 2018. 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.

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 2-1 in Section 2.0 above for survey condition details.

Surveys were conducted by walking meandering transects throughout areas of suitable habitat within the Project site. Exhibit 8 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. Exhibit 8 also provides locations of suitable burrows mapped during the transect surveys. Table 2-2 summarizes the burrowing owl survey visits. The results of the burrowing owl surveys are documented in Section 4.0 of this report.

**Table 2-2. Summary of Burrowing Owl Surveys**

<b>SURVEY DATE</b>	<b>BIOLOGIST(S)</b>	<b>START/END TIME</b>	<b>START/END TEMPERATURE (°F)</b>	<b>START/END WIND SPEED (MPH)</b>	<b>CLOUD COVER (%)</b>
03/27/18	TB/AN	5:00A.M./8:00A.M.	46/64	0/3-5	Clear/Clear

SURVEY DATE	BIOLOGIST(S)	START/END TIME	START/END TEMPERATURE (°F)	START/END WIND SPEED (MPH)	CLOUD COVER (%)
04/05/18	AN/DS	5:30A.M./8:00A.M.	49/65	0/0	Fog/Clear
04/17/18	AN	5:30A.M./8:00A.M.	40/50	0/0	Clear/Clear
04/25/18	AN	5:30A.M./8:00A.M.	49/58	0/0	Partially Cloudy/Clear

TB = Tony Bomkamp; AN = April Nakagawa; DS = David Smith

## 2.4 Jurisdictional Delineation

Prior to beginning the field delineation, a 200-scale color aerial photograph and the previously cited USGS topographic maps were examined to determine the locations of potential areas of Corps/Regional Board/CDFW jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Potential wetland habitats at the subject site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual<sup>1</sup> (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement)<sup>2</sup>. The presence of an Ordinary High Water Mark (OHWM) was determined using the 2008 Field Guide to Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States<sup>3</sup> in conjunction with the Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.<sup>4</sup> While in the field the limits of the OHWM, wetlands (if applicable), and CDFW jurisdiction were recorded using GPS technology and/or on copies of the aerial photography [Exhibit 9 – Jurisdictional Delineation Map]. Other data were recorded onto the appropriate datasheets.

## 2.5 MSHCP Riparian/Riverine Areas and Vernal Pools

GLA surveyed the Project site for riparian/riverine areas and vernal pool/seasonal pool habitat. *Volume I, Section 6.1.2* of the MSHCP describes the process through which protection of riparian/riverine areas and vernal pools would occur within the 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

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

<sup>2</sup> U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Version 2.0). Ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

<sup>3</sup> Lichvar, R. W., and S. M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TR-08-12. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. (<http://www.crrel.usace.army.mil/library/technicalreports/ERDC-CRREL-TR-08-12.pdf>).

<sup>4</sup> Curtis, Katherine E. and Robert Lichevar. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TN-10-1. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory.

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 indicators of hydrology and/or vegetation during the drier portion of the growing season.*

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

### **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 USFWS and the CDFW, the MSHCP designates 146 special-status animal and plant species that receive some level of coverage under the plan. Of the 146 “Covered Species” designated under the MSHCP, the majority of these species have no additional survey/conservation requirements. In addition, through project participation with the MSHCP, the MSHCP provides mitigation for project-specific impacts to Covered Species so that the impacts would be reduced to below a level of significance pursuant to CEQA. As noted above, project-specific survey requirements exist for species designated as “Covered Species not yet adequately conserved”. These include Narrow Endemic Plant Species, as identified by the NEPSSA; 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 CWA 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

#### **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 CNDDDB project. Informally listed taxa are not protected but warrant consideration in the preparation of biotic assessments. For some species, the CNDDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

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

- SE                State-listed as Endangered
- ST                State-listed as Threatened
- SR                State-listed as Rare
- SCE              State Candidate for listing as Endangered
- SCT              State Candidate for listing as Threatened
- SFP              State Fully Protected
- SP                State Protected
- SSC              State Species of Special Concern

### 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**

<b>CNPS Rank</b>	<b>Comments</b>
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.
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.
<b>Extension</b>	<b>Comments</b>
.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 (WoUS). The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a)<sup>5</sup> 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.*

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<sup>5</sup> On October 9, 2015, the U.S. 6<sup>th</sup> District Circuit Court of Appeals ordered a nationwide stay on the Corps and EPA's definition of waters of the United States under the Clean Water Rule ("Clean Water Rule: Definition of 'Waters of the United States'; Final Rule," 80 Federal Register 124 (29 June, 2015), pp. 37054-37127). As a result, the Corps' regulations that were in effect prior to the August 28, 2015 Clean Water Rule is again in effect until such a time as the Court order is satisfied, if this occurs. In addition, President Trump signed an Executive Order on February 28, 2017 that instructs the EPA and Corps to formally reconsider the Rule, which could lead to a re-write of the law or a complete repeal.

(8) *Waters of the United States do not include prior converted cropland.*<sup>6</sup>  
*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.*

**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:

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<sup>6</sup> 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.

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

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

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

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.

### **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<sup>78</sup>);
- 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.

### **3.3.2 Regional Water Quality Control Board**

Section 401 of the CWA requires any applicant for a Section 404 permit to obtain certification from the State that the discharge (and the operation of the facility being constructed) will comply

<sup>7</sup> 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.

<sup>8</sup> 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.

with the applicable effluent limitation and water quality standards. In California this 401 certification is obtained from the Regional Board. The Corps, by law, cannot issue a Section 404 permit until a 401 certification is issued or waived.

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.<sup>9</sup> 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 WoUS is to be considered equivalent to "waste" and therefore subject to the authority of the Porter Cologne Water Quality Act.<sup>10</sup>

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<sup>9</sup> Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

<sup>10</sup> On June 17, 2016, the SWRCB issued a draft "Procedures for Discharges of Dredged or Fill Materials to Waters of the State" which provides definitions for wetlands, procedures for jurisdictional delineations, and procedures for obtaining permits for impacts to waters of the State.

### **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 plants and animals, an assessment for MSHCP riparian/riverine areas and vernal pools, and a jurisdictional delineation for WoUS (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 is very flat overall, exhibiting only a very slight shift in elevation from approximately 1,450 feet to approximately 1,460 feet in the northeastern portion of the property. The Project site previously consisted of primarily agricultural lands and is heavily disturbed due to frequent disking dating back to at least January 2006, as visible on historical aerial imagery. The perimeter of the site is disturbed and largely unvegetated while the interior of the site is comprised of ruderal vegetation.

The northern boundary of the Project site abuts the southernmost portions of two temporary catch basins constructed in the uplands and draining wholly upland areas. These basins have been approved for impact by the Tract 36648 and 36648-1 Development Projects [Appendix C – TTM 36648 Notice of Determination]. Refer to Section 4.6 for additional details on jurisdictional resources.

The PVSC is an engineered flood control channel that is mowed and maintained on an annual basis by the Riverside County Flood Control and Water Conservation District (Flood Control). The PVSC is tributary to the San Jacinto River, which is ultimately tributary to Lake Elsinore, which is ultimately tributary to the Santa Ana River, which is tributary to the Pacific Ocean, a Traditionally Navigable Water (TNW). The PVSC is mapped as PQP Conserved Lands under the MSHCP.

The Soil Conservation Service (SCS)<sup>11</sup> has mapped the following soil types as occurring in the general vicinity of the project site [Exhibit 5 – Soils Map]:

### **Domino Silt Loam, Saline Alkali**

This soil type is mapped on roughly 75 percent of the Project site, including the portion within the PVSC. The Domino series consists of moderately well drained to somewhat poorly drained soils in basins and on alluvial fans. These soils formed in alluvium from granitic materials. Vegetation usually associated with Domino soils includes annual grasses and forbs. In a typical profile, the surface layer is grayish-brown silt loam about 14 inches thick. Below this is light brownish-gray silt loam and silty clay loam.

### **Exeter Sandy Loam**

Soils of the Exeter series lie in basins and on alluvial fans. These well-drained soils developed in alluvium from moderately coarse granitic materials. Vegetation usually associated with Exeter soils includes annual grasses and forbs. In a typical profile, the surface layer is brown sandy loam about 16 inches thick. The subsoil is brown heavy loam.

The SCS's publication, Hydric Soils of the United States<sup>12</sup> identified Domino Silt Loam as hydric for the local Hydric Soils List of Western Riverside County where it occurs as an unnamed depression that is poorly drained or very poorly drained and has a frequently occurring water table at less than 1.5 feet from the surface for a significant period (usually more than 2 weeks) during the growing season if permeability is less than 6.0 in/hr in any layer within 20 inches.

It is important to note that under the Arid West Region Supplement, the presence of mapped hydric soils is no longer dispositive for the presence of hydric soils. Rather, the presence of hydric soils must now be confirmed in the field.

## **4.1 Vegetation Mapping**

The Project site supports the following vegetation types: disturbed/developed, ruderal, and emergent marsh. Table 4-1 provides a summary of the vegetation types and their corresponding acreages. Descriptions of each vegetation type follow the table. A Vegetation Map is attached as Exhibit 6. Photographs depicting the Project site are included in Exhibit 7.

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<sup>11</sup> SCS is now known as the National Resource Conservation Service or NRCS.

<sup>12</sup> 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.)

**Table 4-1. Summary of Vegetation/Land Use Types for the Project Site**

VEGETATION TYPE	PROJECT SITE (ACRES)
Disturbed/Developed	1.33
Ruderal	49.41
Emergent Marsh	0.07
<b>TOTAL*</b>	<b>50.80</b>

\*- sum of above may not equal total due to rounding error.

#### **4.1.1 Disturbed/Developed**

Approximately 1.33 acres of the Project site consist of disturbed/developed lands such as dirt roads and refuse piles. Weedy species occur along the edges of the dirt roads and among the refuse piles, including cheeseweed mallow (*Malva parviflora*), common fiddleneck (*Amsinckia intermedia*), prickly lettuce (*Lactuca serriola*), ripgut brome (*Bromus diandrus*), Russian thistle (*Salsola tragus*), stinknet (*Oncosiphon piluliferum*), and summer mustard (*Hirschfeldia incana*) [Exhibit 7 – Photograph 1].

#### **4.1.2 Ruderal**

Approximately 49.41 acres of the Project site consist of ruderal species dominated by common barley (*Hordeum vulgare*), London rocket (*Sisymbrium irio*), red-stemmed filaree (*Erodium cicutarium*), stinknet, and Russian thistle. Silver puffs (*Uropappus lindleyi*) and white horehound (*Marrubium vulgare*) are also present [Exhibit 7 – Photographs 2 and 3]. This part of the Project site is routinely disked.

#### **4.1.3 Emergent Marsh**

Approximately 0.07 acre of the Project site consists of the portion of the PVSC that will be impacted by construction of the temporary single storm drain. This portion of the PVSC consists of species associated with mesic to wet conditions, including arroyo willow (*Salix lasiolepis*), Australian saltbush (*Atriplex semibaccata*), black willow (*Salix gooddingii*), broadleaf cattail (*Typha latifolia*), common knotweed (*Persicaria lapathifolia*), English plantain (*Plantago lanceolata*), rabbitsfoot grass (*Polypogon monspeliensis*), salt cedar (*Tamarix ramosissima*), Spanish false fleabane (*Pulicaria paludosa*), tall flatsedge (*Cyperus eragrostis*), and yerba santa (*Anemopsis californica*). Of these species, only the willows, cattail, knotweed, tall flatsedge, and yerba santa are native species. The willows are saplings.

Several species that do not need mesic conditions to thrive are also present within the PVSC, including common sunflower (*Helianthus annuus*), pineapple weed (*Matricaria discoidea*), red-stemmed filaree, Russian thistle, stinknet, and white sweet clover (*Melilotus albus*) (Exhibit 7 – Photograph 4). Of these, only common sunflower is a native species.



## 4.2 Special-Status Vegetation Communities

The CNDDDB identifies the following special-status vegetation communities for the Perris, Riverside East, Sunnymead, El Casco, Lakeview, Winchester, Romoland, Lake Elsinore, and Steele Peak quadrangle maps: southern coast live oak riparian forest, southern cottonwood willow riparian forest, southern riparian scrub, and southern sycamore alder riparian woodland. The Project site does not contain these special-status vegetation types identified by the CNDDDB; however, the emergent marsh would generally be classified as a “sensitive” vegetation community under CEQA and is classified as such by the MSHCP (riparian/riverine). There is 0.07 acre of emergent marsh within the Project site.

## 4.3 Special-Status Plants

No special-status plants were detected at the Project site. A focused habitat evaluation was performed and no plants with special-status were judged to have potential to occur.

Table 4-2 provides a list of special-status plants evaluated for the Project site through focused habitat assessments. Species were evaluated based on the following factors: 1) species identified by the CNDDDB as occurring (either currently or historically) on or in the vicinity of the Project Site, 2) MSHCP survey areas, 3) planning species identified by the Mead Valley Area Plan, and 4) any other special-status plants that are known to occur within the vicinity of the property, or for which potentially suitable habitat occurs on site.

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

<b>Species Name</b>	<b>Status</b>	<b>Habitat Requirements</b>	<b>Occurrence</b>
Buxbaum's sedge <i>Carex buxbaumii</i>	Federal: None State: None CNPS: Rank 4.2	Bogs and fens, Meadows and seeps (mesic) and marshes and swamps.	This sedge is known from only one location in southern California. There is no potential for the species to be present in the uplands of the Project site. In the area of the proposed storm drain, the conditions are wet, but the saline/alkaline soils and the high-energy riverine environment of the PVSC make conditions unsuitable for the species.
California Orcutt grass <i>Orcuttia californica</i>	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(b)	Vernal pools	Does not occur onsite due to a lack of suitable habitat. No ponding or low-lying features are present.
California screw moss <i>Tortula californica</i>	Federal: None State: None CNPS: Rank 1B.2	Sandy soil in chenopod scrub, and valley and foothill grassland.	Does not occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Chaparral ragwort <i>Senecio aphanactis</i>	Federal: None State: None CNPS: Rank 2B.2	Chaparral, cismontane woodland, coastal scrub. Sometimes associated with alkaline soils.	Does not occur onsite due to a lack of suitable habitat. Agricultural use and routine disking have removed any potential for suitable habitat within the upland areas of the site; additionally, this species is not associated with high-energy riverine environments such as the PVSC.
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	Federal: None State: None CNPS: Rank 1B.1	Sandy soils in chaparral, coastal sage scrub.	Does not occur onsite due to a lack of suitable soils and habitat.
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Playas, vernal pools, marshes and swamps (coastal salt).	The Project site uplands lack mesic or vernal pool conditions to support this species. The area of the PVSC is a high-energy riverine system that is not suitable for this species. No potential to occur.
Coulter's matilija poppy <i>Romneya coulteri</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Often in burns in chaparral and coastal scrub.	Does not occur onsite due to a lack of suitable habitat.
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	Federal: None State: None CNPS: Rank 1B.2 MSHCP(d)	Alkaline soils in coastal sage scrub, coastal bluff scrub.	The Project uplands have been routinely mowed for years and lacks suitable conditions for this species. The PVSC is too wet. No potential to occur.
Heart-leaved pitcher sage <i>Lepechinia cardiophylla</i>	Federal: None State: None CNPS: Rank 1B.2 MSHCP(d)	Closed-cone coniferous forest, chaparral, and cismontane woodland.	Does not occur onsite due to a lack of suitable habitat
Intermediate mariposa-lily <i>Calochortus weedii</i> var. <i>intermedius</i>	Federal: None State: None CNPS: Rank 1B.2 MSHCP	Rocky soils in chaparral, coastal sage scrub, valley and foothill grassland.	Does not occur onsite due to a lack of suitable habitat
Jaeger's (bush) milk-vetch <i>Astragalus pachypus</i> var. <i>jaegeri</i>	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 onsite due to a lack of suitable habitat
Little mousetail <i>Myosurus minimus</i> ssp. <i>apus</i>	Federal: None State: None CNPS: Rank 3.1 MSHCP(d)	Valley and foothill grassland, vernal pools (alkaline soils).	The Project site uplands lack mesic or vernal pool conditions to support this species. The area of the PVSC is a high-energy riverine system that is not suitable for this species. No potential to occur.
Long-spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Federal: None State: None CNPS: Rank 1B.2 MSHCP	Clay soils in chaparral, coastal sage scrub, meadows and seeps, and valley and foothill grasslands	Does not occur onsite due to a lack of suitable habitat

Species Name	Status	Habitat Requirements	Occurrence
Many-stemmed dudleya <i>Dudleya multicaulis</i>	Federal: None State: None CNPS: Rank 1B.2 MSHCP(b)	Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils.	Does not occur onsite due to a lack of suitable habitat
Marsh sandwort <i>Arenaria paludicola</i>	Federal: FE State: SE CNPS: Rank 1B.1	Bogs and fens, freshwater marshes and swamps.	There is no potential for the species to be present in the uplands of the Project site. In the area of the proposed storm drain, the conditions are wet, but the high-energy riverine environment of the PVSC make conditions unsuitable for the species.
Mud nama <i>Nama stenocarpum</i>	Federal: None State: None CNPS: Rank 2B.2 MSHCP(d)	Marshes and swamps	There is no potential for the species to be present in the uplands of the Project site. In the area of the proposed storm drain, the conditions are wet, but the high-energy riverine environment of the PVSC make conditions unsuitable for the species.
Munz's sage <i>Salvia munzii</i>	Federal: None State: None CNPS: Rank 2B.2	Chaparral and coastal sage scrub.	Does not occur onsite due to a lack of suitable habitat
Nevin's barberry <i>Berberis nevinii</i>	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(d)	Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub.	Does not occur onsite due to a lack of suitable habitat
Palmer's grapplinghook <i>Harpagonella palmeri</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral, coastal sage scrub, valley and foothill grassland. Occurring in clay soils.	Does not occur onsite due to a lack of suitable habitat
Paniculate tarplant <i>Deinandra paniculata</i>	Federal: None State: None CNPS: Rank 4.2	Usually in vernal mesic, sometimes sandy soils in coastal scrub, valley and foothill grassland, and vernal pools.	Not expected to occur on Project site due to low habitat quality. While marginally suitable habitat occurs onsite, this species is highly detectable and was confirmed absent during focused habitat assessments.
Parish's brittlescale <i>Atriplex parishii</i>	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Chenopod scrub, playas, vernal pools.	No potential to occur. Although the soils are alkaline on the Project site, the uplands lack alkali flats and vernal pool features and is routinely disked. The high-energy system within the PVSC would not support this species.
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	Federal: None State: None CNPS: Rank 1B.1 MSHCP	Sandy or rocky soils in open habitats of chaparral and coastal sage scrub.	Does not occur onsite due to a lack of suitable habitat

Species Name	Status	Habitat Requirements	Occurrence
Payson's jewelflower <i>Caulanthus simulans</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Sandy or granitic soils in chaparral and coastal scrub.	Does not occur onsite due to a lack of suitable habitat
Peninsular spineflower <i>Chorizanthe leptotheca</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Alluvial fan, granitic. Chaparral, coastal scrub, lower montane coniferous forest.	Does not occur onsite due to a lack of suitable habitat
Plummer's mariposa lily <i>Calochortus plummerae</i>	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.	Does not occur onsite due to a lack of suitable habitat
Robinson's pepper grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	Federal: None State: None CNPS: Rank 4.3	Chaparral, coastal sage scrub	Does not occur onsite due to a lack of suitable habitat
Salt marsh bird's-beak <i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	Federal: FE State: SE CNPS: Rank 1B.2	Coastal dune, coastal salt marshes and swamps.	There are no known occurrences for this species outside of the Santa Ana River for this species. The Project site does not provide suitable habitat.
Salt Spring checkerbloom <i>Sidalcea neomexicana</i>	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.	Although the Project site supports saline/alkaline soils, there are no natural vegetation communities present and all portions of the site are routinely mowed or disked.
San Bernardino aster <i>Symphyotrichum defoliatum</i>	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).	There is no potential for the species to be present in the uplands of the Project site. In the area of the proposed storm drain, the conditions are wet, but the saline/alkaline soils and the high-energy riverine environment of the PVSC make conditions unsuitable for the species.
San Diego ambrosia <i>Ambrosia pumila</i>	Federal: FE State: None CNPS: Rank 1B.1 MSHCP(b)	Chaparral, coastal sage scrub, valley and foothill grassland, vernal pools. Often in disturbed habitats.	The Project site lacks natural vegetation communities in the uplands and the uplands are routinely disked. The PVSC is too wet to support this species. There is no potential for this species to be present.

Species Name	Status	Habitat Requirements	Occurrence
San Diego sagewort <i>Artemisia palmeri</i>	Federal: None State: None CNPS: Rank 4.2	Sandy and mesic soils in chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland.	Natural vegetation communities are absent from the uplands and the PVSC high-energy system is not conducive to supporting this perennial. In addition, this species is only known from two records in all of Riverside County that are in question as to their identification.
San Jacinto Valley crownscale <i>Atriplex coronata</i> var. <i>notatior</i>	Federal: FE State: None CNPS: Rank 1B.1 MSHCP(d)	Alkaline soils in chenopod scrub, valley and foothill grassland, vernal pools.	The Project site supports alkaline soils but does not support the floodplain dynamics this species requires. Although the PVSC supports wet alkaline soil conditions, the high-energy flows are not conducive to this species.
Slender-horned spineflower <i>Dodecahema leptoceras</i>	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(b)	Sandy soils in alluvial scrub, chaparral, cismontane woodland.	Does not occur onsite due to a lack of suitable habitat
Small-flowered microseris <i>Microseris douglasii</i> ssp. <i>platycarpa</i>	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 onsite due to a lack of suitable habitat
Small-flowered morning-glory <i>Convolvulus simulans</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral (openings), coastal sage scrub, valley and foothill grassland. Occurring on clay soils and serpentinite seeps.	Does not occur onsite due to a lack of suitable habitat
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	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 onsite due to a lack of suitable habitat as the site consists of mostly uplands and does not exhibit the appropriate hydrology associated with seeps, playas, and/or riparian woodland. Additionally, this species is not associated with high-energy riverine environments such as the PVSC.
Snake cholla <i>Cylindropuntia californica</i> var. <i>californica</i>	Federal: None State: None CNPS: Rank 1B.1	Chaparral, coastal sage scrub.	Does not occur onsite due to a lack of suitable habitat
South coast saltscale <i>Atriplex pacifica</i>	Federal: None State: None CNPS: Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal sage scrub, playas.	The Project site supports alkaline soils but does not support the floodplain dynamics this species requires. Although the PVSC supports wet alkaline soil conditions, the high-energy flows are not conducive to this species.
Southern California black walnut <i>Juglans californica</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral, cismontane woodland, coastal sage scrub, alluvial surfaces.	Does not occur onsite due to a lack of suitable habitat

Species Name	Status	Habitat Requirements	Occurrence
Spreading navarretia <i>Navarretia fossalis</i>	Federal: FT State: None CNPS: Rank 1B.1 MSHCP(b)	Vernal pools, playas, chenopod scrub, marshes and swamps (assorted shallow freshwater).	The Project site uplands lack mesic or vernal pool conditions to support this species. The area of the PVSC is a high-energy riverine system that is not suitable for this species. No potential to occur.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	Federal: FT State: SE CNPS: Rank 1B.1 MSHP(d)	Clay soils in chaparral (openings), cismontane woodland, coastal sage scrub, playas, valley and foothill grassland, vernal pools.	Does not occur onsite due to a lack of suitable habitat
Vernal barley <i>Hordeum intercedens</i>	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 onsite due to a lack of suitable habitat as the site consists of mostly uplands and does not exhibit the appropriate hydrology. Additionally, this species is not associated with high-energy riverine environments such as the PVSC.
Woven-spored lichen <i>Texosporium sancti-jacobi</i>	Federal: None State: None CNPS: Rank 3	On soil, small mammal pellets, dead twigs, and on <i>Selaginella</i> spp. Chaparral (openings).	Does not occur onsite due to a lack of suitable habitat, as the site does not exhibit woody vegetation or <i>Selaginella</i> spp. Required by this species. Additionally, this species is not associated with high-energy riverine environments such as the PVSC.
Yucaipa onion <i>Allium marvinii</i>	Federal: None State: None CNPS: Rank 1B.1 MSHCP(b)	Chaparral (clay, openings).	Does not occur onsite due to a lack of suitable habitat

## **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)

Species Name	Status	Habitat Requirements	Occurrence
<b>MSHCP</b> 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			
<b><u>OCCURRENCE</u></b> <ul style="list-style-type: none"> <li>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.</li> <li>Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.</li> <li>Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.</li> <li>Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.</li> <li>Confirmed present – The species was detected onsite incidentally or through focused surveys</li> </ul>			

#### 4.3.1 Special-Status Plants Detected at the Project Site

No special-status plant species were detected at the Project site during focused habitat assessments.

#### 4.4 Special-Status Animals

The following special-status animals were detected at the Project site: loggerhead shrike (*Lanius ludovicianus*) and northern harrier (*Circus cyaneus*). 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 CNDDDB 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
<b>Invertebrates</b>			
Quino checkerspot butterfly <i>Euphydryas editha quino</i>	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 <i>Plantago erecta</i> and <i>Castilleja exserta</i> .	Not expected to occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
		Adults occur on sparsely vegetated rounded hilltops and ridgelines, and are known to disperse through disturbed habitats to reach suitable nectar plants.	
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	Federal: FE State: None MSHCP(a)	Restricted to deep seasonal vernal pools, vernal pool-like ephemeral ponds, and stock ponds.	Does not occur onsite due to a lack of suitable habitat. The Project site does not support shallow ponds or vernal pools.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	Federal: FT State: None MSHCP(a)	Seasonal vernal pools	Does not occur onsite due to a lack of suitable habitat. The Project site does not support shallow ponds or vernal pools.
<b>Amphibians</b>			
Western spadefoot <i>Spea hammondi</i>	Federal: None State: SSC MSHCP	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Does not occur onsite due to a lack of suitable habitat.
<b>Reptiles</b>			
California glossy snake <i>Arizona elegans occidentalis</i>	Federal: None State: SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Does not occur onsite due to a lack of suitable habitat.
Coast horned lizard <i>Phrynosoma blainvillii</i>	Federal: None State: SSC MSHCP	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Does not occur onsite due to a lack of suitable habitat.
Coast patch-nosed snake <i>Salvadora hexalepis virgulata</i>	Federal: None State: SSC	Occurs in coastal chaparral, desert scrub, washes, sandy flats, and rocky areas.	Does not occur onsite due to a lack of suitable habitat.
Coastal whiptail <i>Aspidoscelis tigris stejnegeri (multiscutatus)</i>	Federal: None State: SSC MSHCP	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	Not expected to occur onsite due to a lack of suitable habitat.
Red-diamond rattlesnake <i>Crotalus ruber</i>	Federal: None State: SSC MSHCP	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	Does not occur onsite due to a lack of suitable habitat.
San Diego banded gecko <i>Coleonyx variegatus abbotti</i>	Federal: None State: SSC	Primarily a desert species, but also occurs in cismontane chaparral, desert scrub, and open sand dunes.	Does not occur onsite due to a lack of suitable habitat.
Western pond turtle <i>Emys marmorata</i>	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,	Does not occur onsite due to a lack of suitable habitat. The PVSC is a high-energy system that would not support this species.



Species Name	Status	Habitat Requirements	Occurrence
		including logs, rocks, submerged vegetation, and undercut banks.	
<b>Birds</b>			
Bald eagle (nesting & wintering) <i>Haliaeetus leucocephalus</i>	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 onsite due to a lack of suitable habitat.
Burrowing owl (burrow sites & some wintering sites) <i>Athene cunicularia</i>	Federal: None State: SSC MSHCP(c)	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Confirmed absent from the Project site through focused surveys.
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	Federal: FT State: SSC MSHCP	Low elevation coastal sage scrub and coastal bluff scrub.	Does not occur onsite due to a lack of suitable habitat.
Golden eagle (nesting & wintering) <i>Aquila chrysaetos</i>	Federal: None State: FP MSHCP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Low potential to occur onsite for foraging.
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	Federal: FE State: SE MSHCP(a)	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Does not occur onsite due to a lack of suitable habitat.
Loggerhead shrike (nesting) <i>Lanius ludovicianus</i>	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.	Confirmed present (foraging) onsite during biological surveys; however, the site does not contain suitable nesting habitat (e.g. shrubs, trees).
Long-eared owl (nesting) <i>Asio otus</i>	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.	Does not occur onsite due to a lack of suitable habitat.

<b>Species Name</b>	<b>Status</b>	<b>Habitat Requirements</b>	<b>Occurrence</b>
Northern harrier (nesting) <i>Circus cyaneus</i>	Federal: None State: SSC MSHCP	A variety of habitats, including open wetlands, grasslands, wet pasture, old fields, dry uplands, and croplands.	Confirmed present (foraging) onsite during biological surveys; however, the site does not contain suitable nesting habitat (grasslands, very low levels of human disturbance).
Southwestern willow flycatcher (nesting) <i>Empidonax traillii extimus</i>	Federal: FE State: SE MSHCP(a)	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Does not occur onsite due to a lack of suitable habitat.
Tricolored blackbird (nesting colony) <i>Agelaius tricolor</i>	Federal: None State: Candidate Endangered MSHCP	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	Not expected to occur onsite due to a lack of suitable habitat.
Western snowy plover (nesting) <i>Charadrius alexandrinus nivosus</i>	Federal: FT State: SSC	Sandy or gravelly beaches along the coast, estuarine salt ponds, alkali lakes, and at the Salton Sea.	Does not occur onsite due to a lack of suitable habitat.
Western yellow-billed cuckoo (nesting) <i>Coccyzus americanus occidentalis</i>	Federal: FT State: SE MSHCP(a)	Dense, wide riparian woodlands with well-developed understories.	Does not occur onsite due to a lack of suitable habitat.
White-tailed kite (nesting) <i>Elanus leucurus</i>	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.	Low potential to occur onsite for foraging. No shrubs or trees for nesting.
Yellow warbler (nesting) <i>Setophaga petechia</i>	Federal: None State: SSC MSHCP	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Does not occur onsite due to a lack of suitable habitat.
Yellow-breasted chat (nesting) <i>Icteria virens</i>	Federal: None State: SSC MSHCP	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Does not occur onsite due to a lack of suitable habitat.
Yellow-headed blackbird (nesting) <i>Xanthocephalus xanthocephalus</i>	Federal: None State: SSC	Breed and roost in freshwater wetlands with dense, emergent vegetation such as cattails. Often forage in fields, typically	Does not occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
		wintering in large, open agricultural areas.	
<b>Mammals</b>			
American badger <i>Taxidea taxus</i>	Federal: None State: SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	Does not occur onsite due to a lack of suitable habitat. The entire site was surveyed for burrowing owl burrows and badger burrows were confirmed absent.
Dulzura pocket mouse <i>Chaetodipus californicus femoralis</i>	Federal: None State: SSC	Coastal scrub, grassland, and chaparral, especially at grass-chaparral edges	Does not occur onsite due to a lack of suitable habitat.
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	Federal: None State: SSC MSHCP(c)	Fine, sandy soils in coastal sage scrub and grasslands.	Does not occur onsite due to a lack of suitable habitat. Project site occurs outside of the MSHCP survey area for this species.
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	Federal: None State: SSC MSHCP	Coastal sage scrub, sage scrub/grassland ecotones, and chaparral.	Does not occur onsite due to a lack of suitable habitat.
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	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 onsite due to a lack of suitable habitat.
San Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>	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 onsite due to a lack of suitable habitat.
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	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.	Moderate potential to occur onsite.
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	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.	Does not occur onsite due to a lack of suitable habitat.
Southern grasshopper mouse <i>Onychomys torridus ramona</i>	Federal: None State: SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	Does not occur onsite due to a lack of suitable habitat.
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	Federal: FE State: ST MSHCP	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	Low potential to occur as this species has a high tolerance for routine disturbances.
Western mastiff bat <i>Eumops perotis californicus</i>	Federal: None State: SSC WBWG: H	Occurs in many open, semi-arid to arid habitats, including conifer and	Not expected to occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
		deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	
Western yellow bat <i>Lasiurus xanthinus</i>	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 onsite due to a lack of suitable habitat.
<b><u>STATUS</u></b>  <div style="display: flex; justify-content: space-between;"> <div> <b>Federal</b>  FE – Federally Endangered  FT – Federally Threatened  FPT – Federally Proposed Threatened  FC – Federal Candidate  BGEPA– Bald and Golden Eagle Protection Act </div> <div> <b>State</b>  SE – State Endangered  ST – State Threatened  SC– State Candidate  CFP – California Fully-Protected Species  SSC – Species of Special Concern </div> </div>			
<b>MSHCP</b> 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			
<b>Western Bat Working Group (WBWG)</b> H – High Priority LM – Low-Medium Priority M – Medium Priority MH – Medium-High Priority			
<b><u>OCCURRENCE</u></b>  <ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.</li> <li>▪ Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.</li> <li>▪ Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.</li> <li>▪ Confirmed present – The species was detected onsite incidentally or through focused surveys</li> </ul>			

#### **4.4.1 Special-Status Wildlife Species Observed within the Project Site**

##### **Loggerhead Shrike (*Lanius ludovicianus*)**

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

The loggerhead shrike is known to forage over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs (Unitt 1984; Yosef 1996). Individuals like to perch on posts, utility lines and often use the edges of denser habitats (Zeiner, *et al.* 1990). In some parts of its range, pasture lands have been shown to be a major habitat type for this species, especially during the winter season (Yosef 1996) and breeding pairs appear to settle near isolated trees or large shrubs (Yosef 1994). The highest density occurs in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats; it occurs only rarely in heavily urbanized areas but is often found in open cropland (Zeiner *et al.* 1990). In many regions, indices of the loggerhead shrike abundance correlate with the percentage of pastureland available (Gawlik and Bildstein 1993).

The loggerhead shrike was once widely distributed and common over most of North America, occupying an exclusive breeding range with no other shrikes (Cade and Woods 1997). Although it occurs in a wide variety of plant associations, this shrike is generally found in landscapes characterized by widely spaced shrubs and low trees interspersed with short grasses, forbs, and bare ground, habitat conditions which are currently being developed (Cade and Woods 1997). Most populations along the coastal plains of Southern California have been displaced by urban development, although the subspecies occupying the region (*L. l. gambeli*) is not yet in danger of extirpation (Morrison 1981). The loggerhead shrike is a covered species under the MSHCP with no survey conditions. The species was observed during the field studies on the Project site but no nesting habitat is present. The Project site supports approximately 49.41 acres of potential foraging habitat for loggerhead shrike in the form of ruderal vegetation.

##### **Northern Harrier (*Circus cyaneus*)**

The northern harrier is designated as a CDFW California Species of Special Concern when nesting. 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 is a permanent resident of the northeastern plateau and coastal areas; it is a less common resident of the Central Valley. It is a widespread winter resident and migrant in suitable habitat. Some individuals migrate into California; others migrate through to Central America or northern South America (Garrett and Dunn 1981).

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

The destruction of wetland habitat, native grassland, and moist meadows, and burning and plowing of nesting areas during early stages of the breeding cycle, are major reasons for the decline of the northern harrier (Remsen 1978). MacWhirter and Bildstein (1996) summarize the threats as follows. The continued widespread destruction of freshwater and estuarine wetlands in the United States poses a threat to the breeding and wintering populations. Conversion of native grassland prairies for monotypic farming has contributed to local population declines. In upland areas, mechanized agriculture and early mowing have increased the threat of nest destruction. Overgrazing of pastures, and the advent of larger crop fields and fewer fence rows, together with the widespread use of insecticides and rodenticides, have reduced prey availability and thus the amount of appropriate Habitat for the species. The northern harrier is a covered species under the MSHCP with no survey conditions. This species was observed foraging on the Project site during field studies but no potential for nesting to occur. This species requires very low levels of disturbance for nesting. The Project site supports 49.41 acres of potential foraging habitat (ruderal vegetation) for this species.

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

##### **Golden Eagle (*Aquila chrysaetos*)**

This bird of prey occurs widely in California, and forages in grassland and open savannah of many types. It tolerates considerable variation in topography and elevation. It prefers to hunt moderate-sized prey, especially California Ground Squirrels and rabbits, but will occasionally take larger prey, such as Mule Deer (*Odocoileus hemionus*) fawns. It is very sensitive to human disturbance. Species occurs in the region as a migrant and winter visitor. The project site appears to provide suitable foraging habitat, although the amount of small mammal prey is limited due to existing agricultural and land management activities. There is no potential for this

species to nest on or adjacent to the Project site as it is sensitive to human disturbance and the site lacks ledges used for nest placement. Approximately 49.41 acres of potential foraging habitat (ruderal vegetation) is present for golden eagle.

#### **White-tailed Kite (*Elanus leucurus*)**

This species hunts in open lands vegetated with grasses and low-growing shrubs. This species has no potential to nest as it requires low trees and/or large shrubs, which the site lacks. This species has a moderate potential to occur during the fall and spring months as a migrant and may forage on the site over winter. There is an estimated 49.41 acres of potential foraging habitat in the form of ruderal vegetation.

#### **San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)**

This subspecies of the black-tailed jackrabbit is distributed along the coastal slope from around Point Conception south into Baja California. It requires extensive open spaces, such as grasslands or open sage scrub, usually in fairly level situations. The presence of substantial available cover, either dense grasses or shrubs, appears to be important for day roosts and is often adjacent to more open foraging areas. This species was not observed during the field studies, but based on site conditions, may be present. This species is a fully covered MSHCP species with no survey requirements. The Project site supports approximately 49.41 acres of potential habitat (ruderal vegetation) for this species.

#### **Stephens' Kangaroo Rat (*Dipodomys stephensi*; SKR)**

This species of kangaroo rat is a small, nocturnal rodent of Riverside and San Diego counties. Its current range is a discontinuous patchwork covering much of the lowlands of western Riverside County, Norco south and east to the Anza Valley. Substantial extensions into San Diego County occur on Camp Pendleton, the adjacent Fallbrook Naval Weapons Station, and sites around Lake Henshaw in northern San Diego County. The species formerly ranged across the San Bernardino County line at least a small distance, but is now believed to be extirpated there (RCHCA 1996).

The SKR is a burrowing, grain-eating inhabitant of arid lands. Diet consists of seeds from a variety of plants, especially grasses and forbs. Breeding can extend through nearly the entire year, but peaks in April and May.

Habitat for SKR reflects four criteria: vegetation, soils, slope, and elevation. Vegetation most often associated with this species is California Sagebrush (*Artemisia californica*), California Buckwheat (*Eriogonum fasciculatum*), and filaree (*Erodium* spp.). This species is often found in ecotones, or boundaries between habitat types (especially grasslands and sage scrub), and clearly prefers areas with less than 50% perennial cover. Soil requirements include the ability to support the required vegetation types and densities, and compaction characteristics suitable to burrowing (i.e., stable, but not too difficult to dig). Occupied habitat has slopes typically in the range of 7 to 10%, but can range at least from 0 to 50%. Most SKR occur below about 2000 feet (600 meters), but individuals can occur at least as high as 3600 feet (1100 meters).

SKR was not confirmed on the Project site but potentially suitable habitat is present; approximately 49.41 acres composed of ruderal vegetation.

#### **4.4.3 Special-Status Wildlife Species Confirmed Absent Through Focused Surveys at the Project Site**

##### **Burrowing Owl (*Athene cunicularia*)**

The burrowing owl is designated as a CDFW California Species of Special Concern at burrow sites and some wintering sites. Zeiner *et al.* (1990) describe the distribution, abundance, and seasonality of the burrowing owl within California as follows. It is a year-long resident formerly common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains. In California, burrowing owls are restricted to the central valley extending from Redding south to the Grapevine, east through the Mojave Desert and west to San Jose, the San Francisco Bay area, the outer coastal foothills area which extend from Monterey south to San Diego and the Sonoran desert (Grinnell and Miller 1944). It is a resident in the open areas of the lowlands over much of the Southern California region (Garrett and Dunn 1981).

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

Threats to the burrowing owl include conversion of grassland to agriculture, other habitat destruction, predators, collisions with vehicles, and pesticides/poisoning of ground squirrels (Grinnell and Miller 1944, Zarn 1974, Remsen 1978). A ranking by the resource agencies of the most important threats to the species included loss of habitat, reduced burrow availability due to rodent control, and pesticides (James and Espie 1997).

The burrowing owl was formerly common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains. Population numbers have markedly reduced in recent decades (James and Ethier 1989; Zeiner *et al.* 1990). The primary threats to the species include the loss of natural habitat due to urban development and agriculture and the expressed effects of insecticides and rodenticides within occupied habitat. The loss of burrowing



mammal colonies (due to rodenticides or other means) and the crushing of burrows by heavy equipment and ground maintenance machinery remain problematic. This species is usually associated with flat or shallow slopes on loamy soils; these areas are also attractive to agriculture, as well as residential and industrial development. Shooting losses may be significant (Remsen 1978).

The burrowing owl received official status as Endangered in Canada as of 1986. Burrowing owls have gone from locally common to virtually extirpated in Minnesota in 50 years (Johnsgard 1988). The number of burrowing owl breeding pairs in central, western, and Southern California have drastically declined in the last 50 years; during the 1980's the decline was probably greater than 70 percent (DeSante and Ruhlen 1995). The species appears to be seriously threatened with extirpation from central, western, and Southern California because of the extent and intensity of development (DeSante and Ruhlen 1995).

The burrowing owl was confirmed absent from the Project site based on focused surveys for this species. Refer to [Exhibit 8 – Burrowing Owl Survey Results Map] for the locations of potential burrowing owl burrows that were found absent of burrowing owl. No sign or detection of burrowing owl was made during any field work performed for this Project.

#### **4.4.4 Raptor Use**

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 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.

It is important to understand that the MSHCP does not provide MBTA and/or Fish and Game Code take for raptors covered under the Plan.

Appendix B (faunal compendium) provides a list of the hawks and falcons detected over the course of the field studies. These species include American kestrel (*Falco sparverius*), northern harrier (*Circus cyaneus*), and red-tailed hawk (*Buteo jamaicensis*). The Project site lacks potential nesting habitat (e.g., mature trees, shrubs) but is expected to provide foraging habitat for all of these species in the form of insects, spiders, lizards, snakes, small mammals, and other birds. Additional raptor species with potential to forage in the area include but are not limited to Cooper's hawk (*Accipiter cooperii*) and white-tailed kite (*Elanus leucurus*).

The Project site provide approximately 49.41 acres of potential foraging habitat for raptors composed of ruderal vegetation.

#### **4.4.5 Nesting Birds**

The Project site contains minimal habitat suitable for nesting native birds. Mortality of native birds (including eggs) is prohibited under the California Fish and Game Code.<sup>13</sup>

Birds anticipated to nest on the Project site would be those that are common to ruderal, agricultural lands that are routinely mechanically disturbed such as killdeer (*Charadrius vociferus*) and mourning dove (*Zenaida macroura*).

#### **4.4.6 Critical Habitat**

The Project site does not contain any lands mapped as Critical Habitat by the USFWS.

### **4.5 Jurisdictional Delineation**

#### **4.5.1 Army Corps of Engineers**

The Project Study Area contains 0.03 acre and 67 linear feet of Corps jurisdiction, all of which consists of jurisdictional wetlands and occurs entirely within the PVSC. Refer to [Exhibit 9A – Corps/RWQCB Jurisdictional Delineation Map] for the location of this resource.

#### **4.5.2 Regional Water Quality Control Board**

The Project Study Area contains 0.03 acre and 67 linear feet of Regional Board jurisdiction, all of which consists of jurisdictional wetlands. This is the same amount as that regulated by the Corps under CWA Section 404. Refer to [Exhibit 9A – Corps/RWQCB Jurisdictional Delineation Map] for the location of this resource.

#### **4.5.3 CDFW Jurisdiction**

The Project Study Area contains 0.07 acre and 67 linear feet of CDFW jurisdiction, all of which consists of riparian streambed vegetated by emergent marsh. Refer to [Exhibit 9B – CDFW/MSHCP Jurisdictional Delineation Map] for the location of this resource within the PVSC.

### **4.6 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-

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<sup>13</sup> 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.

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 states that “riparian/riverine areas are natural lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.”. 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. For this analysis, all features that qualify as state streambeds are considered MSHCP riparian/riverine resources.

MSHCP riparian/riverine jurisdiction in the Project site occurs wholly within the PVSC and is identical to that of CDFW jurisdiction. MSHCP riparian/riverine areas total 0.07 acre, all of which consists of riparian vegetation [Exhibit 9B – CDFW/MSHCP Jurisdictional Delineation Map]. The riparian vegetation is mapped as emergent marsh with species richness and absolute cover dominated by non-native species. The PVSC receives water input routinely and to a level supportive of wetland conditions. However, high-energy hydrological activity within the PVSC combined with routine maintenance reduces the quality of this resource. Refer to Section 4.2 for a full summary including Table 4-1 that summarizes the vegetation present within the PVSC.

#### **4.7 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 can 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.

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.

There is no potential for wildlife nurseries to be present on the Project site. The PVSC could provide wildlife movement habitat but lacks the typical structure needed such as riparian trees and/or shrubs which provide cover and protection to animals as they move through an area. As discussed in Section 1.4.2, there are no MSHCP Cores or Linkages adjacent to or within the Project site. The PVSC is owned by Riverside County Flood Control and is mapped as PQP Conserved Lands under the MSHCP. The proposed temporary storm drain would encroach into

0.07 acre of PVSC PQP lands. Additionally, the Project site is directly adjacent to PQP Conserved Lands to the west and to the south, owned by the State of California.

## **5.0 IMPACT ANALYSIS**

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

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

Cumulative impacts 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)**

#### **5.1.1 Thresholds of Significance**

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

*“Prevent the elimination of fish or wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities...”*

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

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

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

### **5.1.2 Criteria for Determining Significance Pursuant to CEQA**

Appendix G of the 2017 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

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

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

*c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal*

*pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

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

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

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

## **5.2 Impacts to Vegetation/Land Uses**

The proposed Project would impact the entire Project site and hence all of the vegetation present on it. All of the vegetation on the Project site is non-native, dominated by non-native species in composition and absolute percent cover. The Proposed Project would permanently impact 49.41 acres of non-native vegetation comprised of ruderal vegetation. The Project will also temporarily impact approximately 0.07 acre of emergent marsh (dominated by non-native species) within the PVSC due to the proposed storm drain. See Table 5-1 for a summary of impacts to vegetation types and land uses.

**Table 5-1. Summary of Impacts to Vegetation/Land Use Types for the Project Site**

<b>VEGETATION TYPE</b>	<b>IMPACTS (ACRES)</b>
Disturbed/Developed	1.33
Ruderal	49.41
Emergent Marsh	0.07
<b>TOTAL</b>	<b>50.80</b>

Impacts to 49.41 acres of ruderal vegetation (in the uplands) would be a less-than-significant under CEQA as the Project site is heavily disturbed, regularly disked, and the ruderal vegetation is composed of non-native plant species, some of which are classified as invasive. The proposed temporary impact to the 0.07 acre of emergent marsh within the PVSC would be a significant impact under CEQA because the emergent marsh is wetlands and as such supports important hydrological functions and values. The marsh is not expected to support high value biological functions and values due to the high cover of non-native plant species and the routine mowing which does not allow complex vegetation structure to occur.

## **5.3 Impacts to Special-Status Plants**

The proposed Project would not result in impacts to special-status plants as no special-status plants are present within the Project site.

## **5.4     Impacts to Special-Status Animals**

### *Federal and/or State Listed Animals*

The Project site has low potential to support SKR in the ruderal uplands (49.41 acres in extent). This species is listed as Endangered by the federal government and listed as Threatened by the state of California. The Project would permanently removal 49.41 acres of potential habitat. This would be a potentially significant impact under CEQA. However, the Project site occurs within the SKR Habitat Conservation Plan (RCHCA 1996) and with fee payment to this HCP, these potentially significant impacts would be fully mitigated.

### *Non-Listed Special-Status Animals*

The Project would result in the loss of foraging habitat for golden eagle, loggerhead shrike, white-tailed kite, and northern harrier as well as live-in habitat for San Diego black-tailed jackrabbit. The Project would permanently remove 49.41 acres of habitat for these species. As discussed, the lands are routinely disked and support ruderal non-native vegetation. The proposed impacts would be less than significant due to the heavily disturbed condition of the property and the relatively low level of sensitivity of the species. Additionally, all of these species are Covered Species under the MSHCP, with any potential impacts mitigated under the Plan.

As documented in Section 4.5.3, the Project site is not currently occupied by burrowing owl and based on this, the Project would not impact this species. However, the site has the potential to support burrowing owls in the future based on the presence of numerous suitable burrows and expansive foraging habitat and the mercurial nature of burrowing owl. The MSHCP requires a preconstruction survey for burrowing owls to ensure that projects would not result in the direct harm of owls. Section 6.0 of this report provides a measure to ensure consistency with the MSHCP and to ensure no direct impact to burrowing owl would occur by the Project.

## **5.5     Impacts to Raptors**

Raptors (Birds of Prey) include owls, hawks, eagles, and falcons. Common species of raptors (e.g. Red-tailed hawk, American kestrel) as well as less common special-status species (i.e. northern harrier, white-tailed kite, golden eagle) have potential to forage on the Project site. The proposed Project would remove an estimated 49.41 acres of potential foraging habitat (ruderal vegetation). The Project site does not support potential nesting habitat for raptors (no shrubs or trees). The loss of 49.41 acres of potential foraging habitat would not be a significant impact under CEQA given the amount of potential habitat proposed for removal and the level of ongoing disturbances that reduce the prey base.

## **5.6 Impacts to Critical Habitat**

The proposed Project would not impact lands designated as critical habitat by the USFWS, as none are present within the Project site.

## **5.7 Impacts to Nesting Birds**

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 MBTA and California Fish and Game Code.

Although impacts to native birds are prohibited by MBTA and similar provisions of California Fish and Game Code, impacts to native birds by the proposed Project 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. A recommended measure is identified in Section 6.0 of this report to avoid impacts to nesting birds.

## **5.8 Impacts to Wildlife Linkages/ Corridors and Nursery Sites**

The Project site does not occur within MSHCP Cores or Linkages and lacks wildlife nursery sites. However, the PVSC may support wildlife movement and during construction of the temporary storm drain, wildlife may avoid use of the PVSC. However, the PVSC is not expected to support regional movement due to the routine maintenance that occurs that eliminates shrub/tree cover that is needed by moving wildlife. Any potential impacts to wildlife movement would be less than significant under CEQA. In addition, any potential impacts to wildlife movement would be mitigated by the MSHCP.

## **5.9 Impacts to Jurisdictional Waters**

The Project would temporarily remove 0.03 acre and 67 linear feet of wetland WoUS, subject to the jurisdiction of the Corps and the Regional Board, and 0.07 acre and 67 linear feet of vegetated streambed subject to the jurisdiction of CDFW [Exhibits 9A and 9B]. In addition, flows would enter into the PVSC through the temporary storm drain and potentially degrade water quality. No permanent impacts are proposed. The proposed temporary impacts would be a potentially significant impact under CEQA because these resources are wetlands and as such potentially provide important hydrological functions and values. Refer to Section 6.0 for measures to address this impact.

## **5.10 Impacts to MSHCP Riparian/Riverine Areas and Vernal Pools**

The Proposed Project would result in temporary removal of MSHCP Riparian vegetation totaling 0.07 acre [Exhibit 9B]. In addition, flows from the east basin would enter into the PVSC and potentially degrade water quality. The riparian vegetation is emergent marsh that is wetlands. As such, the 0.07 acre of marsh may provide potentially important hydrological functions and



values and the proposed impacts would be potentially significant under CEQA. The marsh is not expected to provide important biological functions and values typically associated with marsh vegetation because of the routine mechanical disturbance to the PVSC, which supports non-native plant species and eliminates growth of complex vegetation structure.

Pursuant to Volume I, Section 6.1.2 of the MSHCP, if avoidance or riparian/riverine resources are infeasible, then the unavoidable impacts must be mitigated and a Determination of Biologically Equivalent or Superior Preservation (DBESP) is required. Refer to Section 6.0 for details.

### **5.11 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. Potential indirect effects associated with development include water quality impacts from associated with drainage into adjacent open space/downstream aquatic resources; lighting effects; noise effects; invasive plant species from landscaping; and effects from human access into adjacent open space, such as recreational activities (including off-road vehicles and hiking), pets, dumping, etc. Temporary, indirect effects may also occur as a result of construction-related activities.

The proposed Project would develop a basin adjacent to the PVSC, construct a temporary storm drain in the PVSC, and serve as a material source for construction of nearby Tract developments. The PVSC, owned by Riverside County Flood Control, is classified as PQP conservation lands by the MSHCP, but the PVSC is not MSHCP conservation land.

During construction of the temporary storm drain, there would be potential for significant impacts to occur to adjacent emergent marsh (wetlands) through degraded water quality, introduction of invasive plant species, dust, and noise. In addition, there would be potential for water quality degradation due to the flows reaching the PVSC from the east basin. However, with implementation of avoidance and minimization measures provided in Section 6.0, potential indirect impacts to this resource would be reduced to a level of less than significant under CEQA.

During construction, there is potential for indirect impacts to occur to wildlife that may be adjacent to the Project site. The adjacent lands are either developed or are similar to those on the Project site. Any potential indirect impacts to these species would be less than significant under CEQA.

### **5.12 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.

Anticipated cumulative impacts are addressed by the MSHCP, which, as currently adopted, addresses 146 “Covered Species” that represent a broad range of habitats and geographical areas within western Riverside County, including threatened and endangered species and regionally- or locally-sensitive species that have specific habitat requirements and conservation and management needs. The MSHCP addresses biological impacts for take of Covered Species within the MSHCP area. Impacts to Covered Species and establishment and implementation of a regional conservation strategy and other measures included in the MSHCP are intended to address the federal, state, and local mitigation requirements for these species and their habitats. Specifically, Section 4.4 of the MSHCP states that:

*The MSHCP was specifically designed to cover a large geographical area so that it would protect numerous endangered species and habitats throughout the region. It is the projected cumulative effect of future development that has required the preparation and implementation of the MSHCP to protect multiple habitats and multiple endangered species.*

SKR is listed as Endangered/Threatened and the Project would remove up to 49.41 acres of potential habitat with the potential habitat being judged low in value. However, given the status of the species, the removal of this potential habitat could make a cumulatively considerable contribution to the regional decline of the species. The species is fully covered under the SKR HCP with both potential project-specific and cumulative effects mitigated to a level of less than significant under CEQA through fee payment to the RCHCA.

The proposed removal of 49.41 acres of potential live-in habitat for San Diego black-tailed jackrabbit would not make a cumulatively contribution to the regional decline to this species because the species remains common throughout the open lands in western Riverside County. The removal of 49.41 acres of potential foraging habitat for loggerhead shrike, northern harrier, golden eagle, and white-tailed kite could potentially be a cumulatively significant impact. However, each of these species is a fully covered species by the MSHCP and as such any potential cumulative impacts would be mitigated by the Plan.

The Project has the potential to impact native bird nests if vegetation is removed during the nesting season (January 15 to September 15). Impacts to nesting native birds are prohibited by the MBTA and California Fish and Game Code. Although impacts to native birds are prohibited by MBTA and similar provisions of California Fish and Game Code (FGC), impacts to native birds by the proposed Project would not make a cumulatively considerable contribution to the regional decline of native nesting birds. The native birds with potential to nest in the Project footprint would be those that are common to the region. The number of individuals potentially affected by the Project would not significantly affect regional populations of such species. A recommended measure is identified in Section 6.2 of this report to comply with MBTA and FGC.

The Project would temporarily remove federal and state jurisdictional waters (refer to Section 5.9), 0.03 acre of Corps/Regional Board wetlands and 0.07 acre of CDFW riparian streambeds/MSHCP riparian resources (Section 5.10). These resources have declined appreciably over the past several decades and there is potential the Project could make a cumulatively considerable contribution to the regional decline of these resources. Refer to Section 6.0 for measures to address this impact.

There is no potential for cumulative impacts to occur to wildlife migration or wildlife nurseries, as the Project does not support these resources.

## **6.0 PROJECT AVOIDANCE MEASURES**

The following discussion provides project-specific 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:

- A qualified biologist will conduct a pre-construction presence/absence survey for burrowing owls within 30 days prior to site disturbance. If burrowing owls are detected onsite, the owls will be relocated/excluded from the site outside of the breeding season following accepted protocols, and subject to the approval of the RCA and wildlife agencies.

### **6.2 Nesting Birds**

The Project site contains minimal 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 August 31. 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.

### **6.3 Jurisdictional Waters**

The Project would temporarily impact 0.03 acre of wetland WoUS and 0.07 acre of CDFW jurisdiction (consisting of emergent marsh). The following mitigation measure will occur to reduce impacts to a level of less than significant:

The Project will purchase wetland/riparian habitat establishment, re-establishment, and/or rehabilitation credits from an approved mitigation bank/in-lieu fee program at a minimum 1:1 ratio for temporary impacts. Approved mitigation banks and/or in-lieu fee programs include, but are not limited to, the Riverpark Mitigation Bank, the Inland Empire Resource Conservation District In-Lieu Fee Program, and the Riverside-Corona Resource Conservation District In-Lieu Fee Program. Mitigation for temporary impacts are proposed off site because the proposed future storm drain would remain in the PVSC for up to two years, thus impacting any on site vegetation restoration efforts.

The Project would temporarily impact 0.07 acre of MSHCP Riparian resources (consisting of emergent marsh). The removal of 0.07 acre of MSHCP riparian resources triggers the requirement under the MSHCP that a DBESP be drafted and approved by the Wildlife Agencies. The DBESP details the type of resource proposed for impact, why avoidance was not feasible, and the compensation provided to ensure biologically equivalent or superior preservation. The Wildlife Agencies are provided the DBESP for review by the City and they have 60 days to review the DBESP and provide comments. If no comments are provided by the Wildlife Agencies within 60 days, the DBESP is considered approved. If comments are received, the comments will be addressed until the City and the Wildlife Agencies are in agreement.

The mitigation that will be presented in the DBESP will be that proposed above for CDFW riparian mitigation: purchase wetland/riparian habitat establishment, re-establishment, and/or rehabilitation credits from an approved mitigation bank/in-lieu fee program at a minimum 1:1 ratio. Approved mitigation banks and/or in-lieu fee programs include, but are not limited to, the Riverpark Mitigation Bank, the Inland Empire Resource Conservation District In-Lieu Fee Program, and the Riverside-Corona Resource Conservation District In-Lieu Fee Program.

The riparian/riverine resources compensation can be coordinated with compensation required under Section 1602 Streambed Alteration Agreement (SAA) and CWA Sections 401 and 404 authorizations to ensure duplicate compensation does not occur.

#### **6.4     Invasives**

The Project 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.

#### **6.5     Water Quality**

The Project's contractor will develop a Stormwater Pollution Prevention Plan (SWPPP) to prevent impacts to water quality during construction. A Water Quality Management Plan (WQMP) will be developed to prevent pollutants from entering the PVSC during construction activities (placement of the storm drain and removal of the storm drain) and during operation of the east basin (i.e. flows reaching the PVSC through the storm drain).

## **6.6 Night Lighting**

If the Project is to have lighting during night hours, it shall be directed away from the PVSC. If night lighting is required during construction (during placement or removal of the storm drain), shielding shall be incorporated to ensure ambient lighting in the adjacent PVSC lands is not increased.

## **6.7 Monitoring**

Orange silt fencing will be placed to demarcate the limits of disturbance in the PVSC. Its placement will be overseen by a biological monitor and all preliminary vegetation removal and initial grading will be monitored by a biologist to ensure no encroachment beyond the Limits of Disturbance in the PVSC will occur.

## **6.8 Post Construction Grading**

Once the storm drain in the PVSC is constructed, the area of disturbance beyond the drain will be returned to natural elevation contours. The same requirement applies for when the storm drain is removed.

## **6.9 Post Construction Seeding**

The disturbance area surrounding the storm drain will be seeded using a native seed mix appropriate to the PVSC hydric conditions. The seed mix will be applied within one month of completion of the storm drain and within one month following the removal of the storm drain.

## **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 Western Riverside County 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 does not occur within the MSHCP Criteria Area and therefore the acquisition of lands for the MSHCP Conservation Area is not required. Furthermore, the Project is not subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) or the Joint Project Review (JPR) process.

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

The proposed Project would temporarily impact 0.07 acre of riparian resources during the placement and removal of the storm drain. As stated in Section 6.0, a DBESP will be required to ensure that remaining riparian/riverine resources on the Project site are avoided and protected and that compensation for the temporary impacts to 0.07 acre of riparian resources will be replaced at a minimum 1:1 ratio off-site through an in-lieu fee program and the area disturbed during the placement and removal of the storm drain will be seeded with a native seed mix.

No vernal pools are present on or directly adjacent to 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 Project is located in the NEPSSA but will not result in impacts to NEPSSA target species as the habitat evaluation for this plant species concluded that habitat for NEPSSA target species was absent from the site. As such, the Project will be consistent with *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.

The Project is not adjacent to MSHCP conservation lands; however, Section 6.0 requires the Project implement the necessary measures consistent with that required by the MSHCP to ensure indirect impacts to the PVSC is avoided and minimized.

## **7.5     Additional Survey Needs and Procedures**

The Project site occurs within the CAPSSA but will not impact CAPSSA target species as suitable habitat for CAPSSA target species is absent from the site. In addition, the Project site occurs within the burrowing owl survey area but will not result in impacts to burrowing owls based on the results of focused surveys. As noted in Section 6.0 of this report, the Project will implement pre-construction surveys to ensure the Project will not result in the direct harm of burrowing owls that could occur onsite in the future. The Project will be consistent with *Section 6.3.2* of the MSHCP.

## **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).

## 8.0 REFERENCES

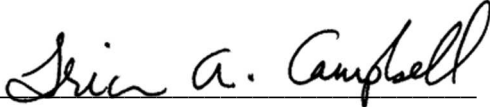
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## 9.0 CERTIFICATION

*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: July 13, 2018

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## EXHIBITS



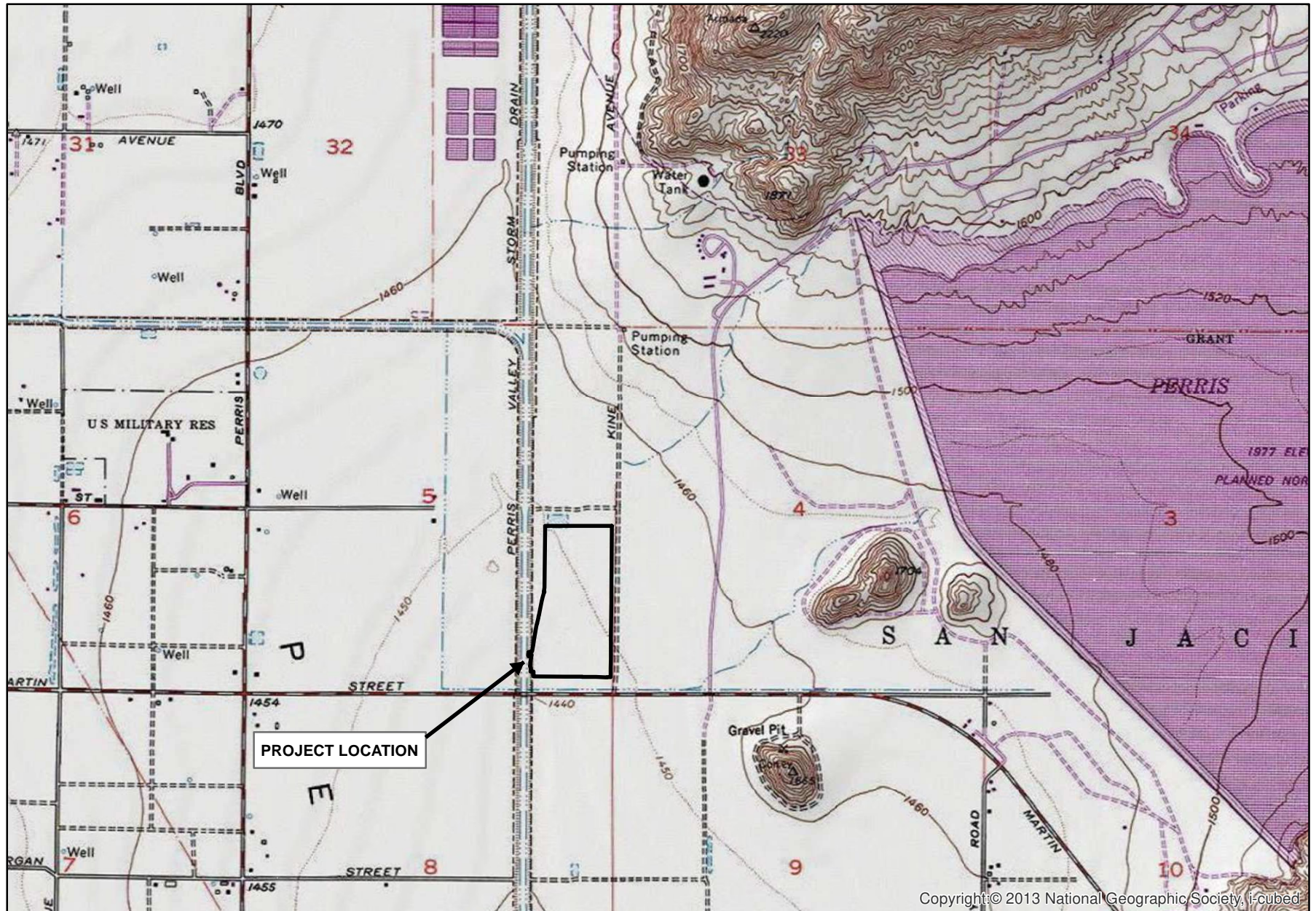




Adapted from USGS Perris, CA quadrangle



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**TTM 36647 - EAST BASIN**

Vicinity Map





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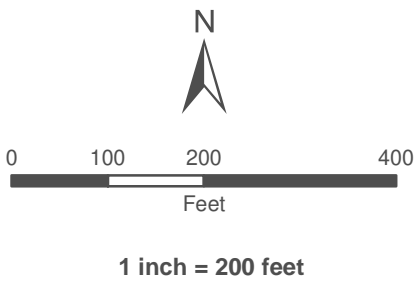


Exhibit 2





-  Project Study Area
-  Project Site Plan
-  Permanent
-  Temporary



Coordinate System: State Plane 6 NAD 83 Map Prepared by: K. Kartunen, GLA  
Projection: Lambert Conformal Conic Date Prepared: February 12, 2018  
Datum: NAD83

## TTM 36647 - EAST BASIN PROJECT

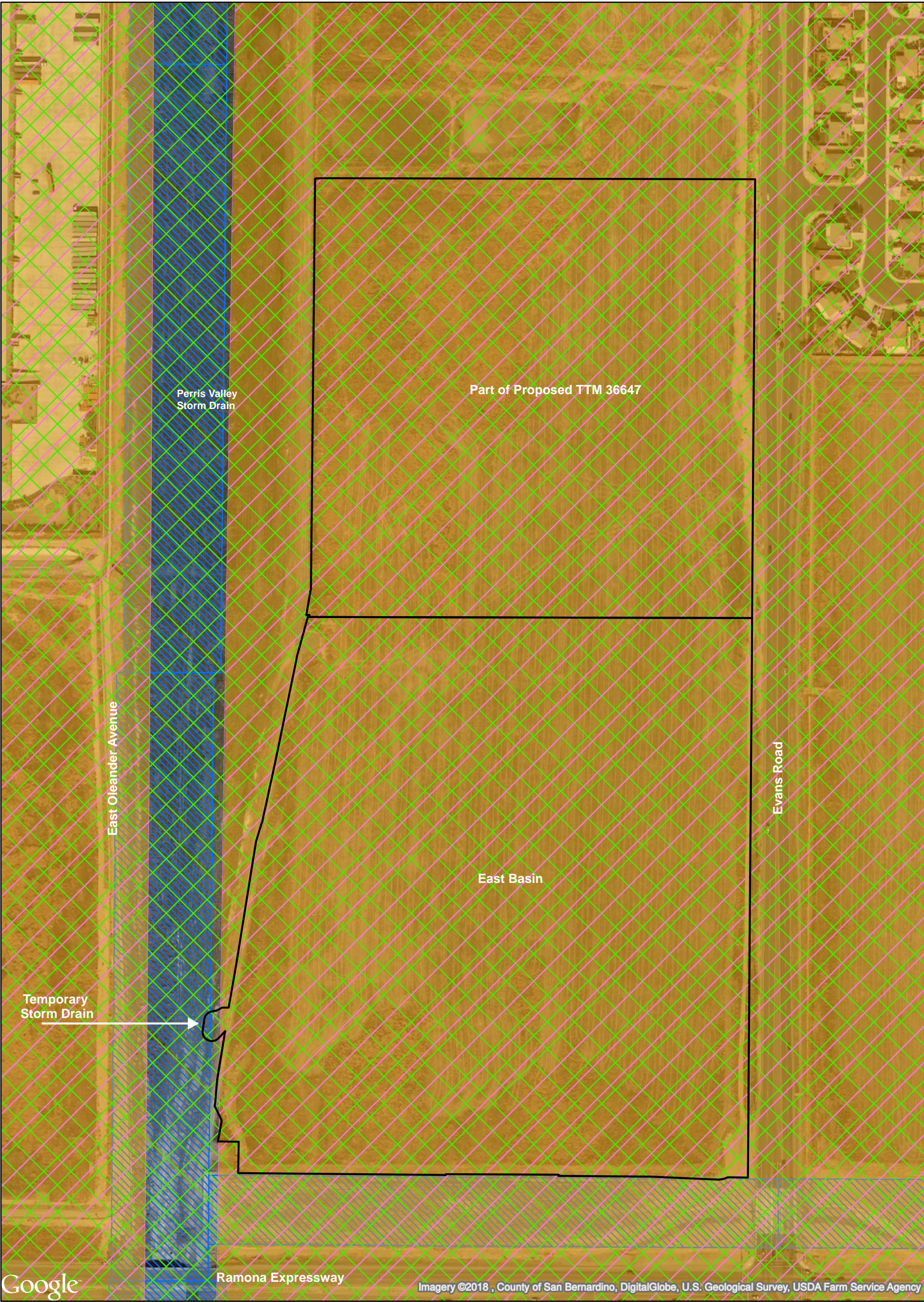
Project Site Plan






GLENN LUKOS ASSOCIATES

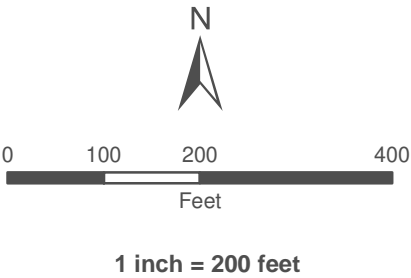


Exhibit 3





-  Project Study Area
-  MSHCP Burrowing Owl Survey Area
-  Criteria Area Species Survey Area
-  Narrow Endemic Plants Survey Area
-  Public/Quasi-Public (PQP) Conserved Lands



**TTM 36647 - EAST BASIN PROJECT**  
MSHCP Overlay Map

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Exhibit 4





Project Study Area

Dv - Domino silt loam, saline-alkali

EpA - Exeter sandy loam, deep, 0 to 2 percent slopes

W - Water

N

0

100

200

400

Feet

1 inch = 200 feet

TTM 36647 - EAST BASIN PROJECT

Soils Map

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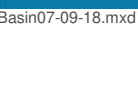





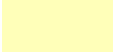
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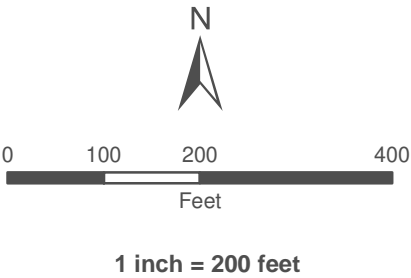


X:\0363-THE REST\0616-12PERR\616-12\_GIS\Soils\GIS\616-12SoilsEastBasin07-09-18.mxd





-  Project Study Area
-  Disturbed/Developed
-  Emergent Marsh
-  Ruderal



**TTM 36647 - EAST BASIN PROJECT**  
Vegetation Map

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Photograph 1: View facing approximately westerly depicting disturbed/developed conditions onsite with ruderal vegetation visible to the right.



Photograph 2: : View facing approximately easterly depicting ruderal vegetation that covers the majority of the Project site.



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Exhibit 7

**EAST BASIN PROJECT**

Site Photographs



Photograph 3: View facing approximately south depicting ruderal vegetation characteristic of the Project site.



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Exhibit 7

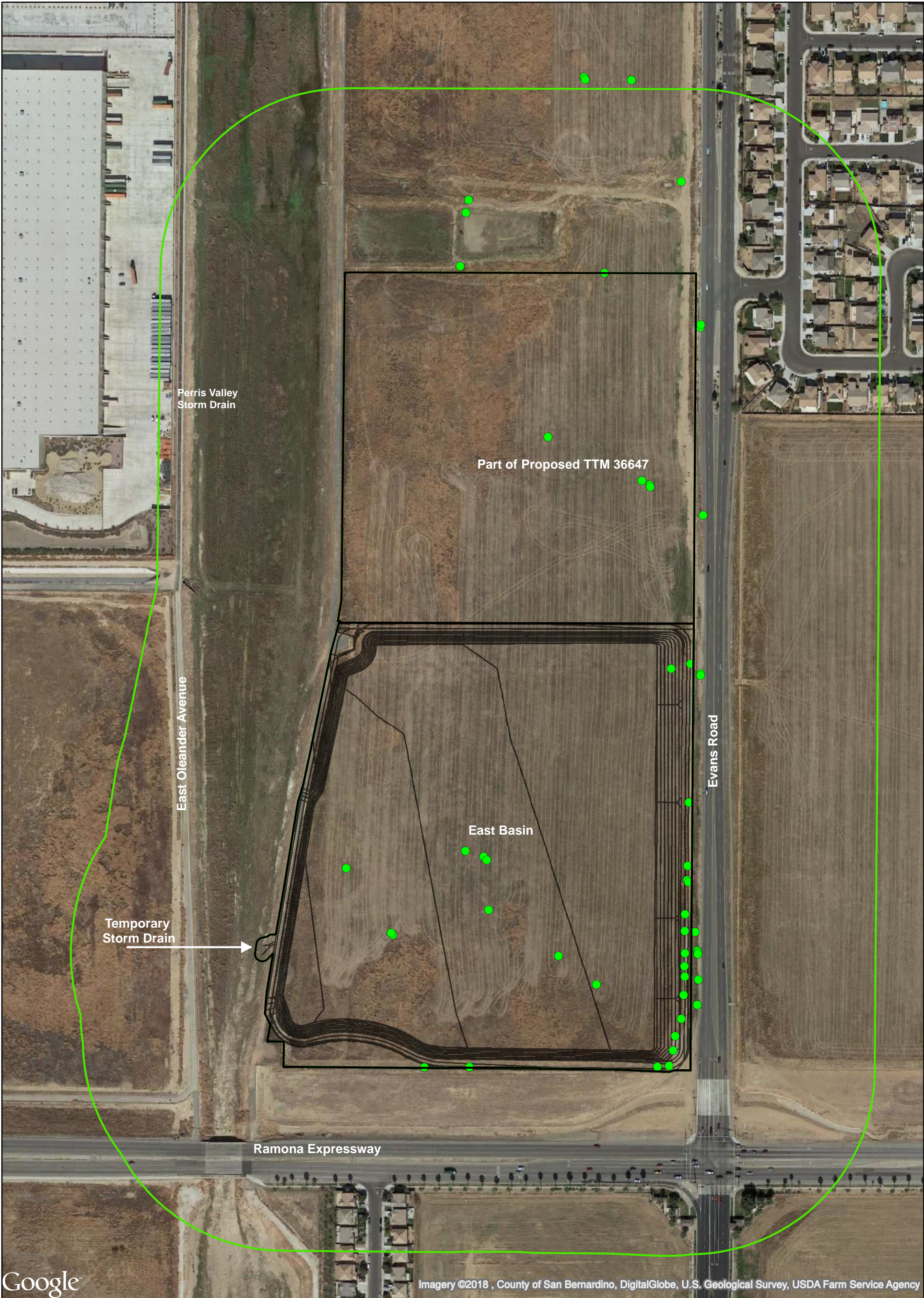






Photograph 4: View of Perris Valley Storm Drain (PVSD) facing approximately northwest depicting emergent marsh.

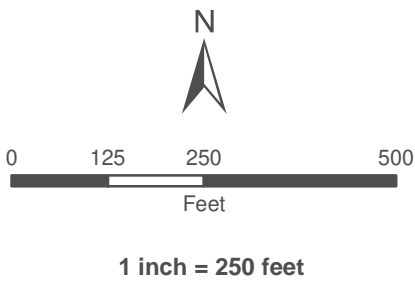
**EAST BASIN PROJECT**

Site Photographs





-  Project Study Area
-  500ft Survey Buffer
-  Project Site Plan
-  Burrow Location



**TTM 36647 - EAST BASIN PROJECT**  
Burrowing Owl Survey Results Map






GLENN LUKOS ASSOCIATES

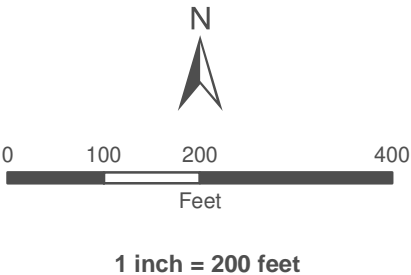


Exhibit 8





-  Project Study Area
-  Corps/RWQCB Wetland Waters
-  Non-Jurisdictional Temporary Catch Basins
-  Soil Pit Location
-  Width in Feet



**TTM 36647 - EAST BASIN PROJECT**  
Corps/RWQCB Jurisdictional Delineation Map





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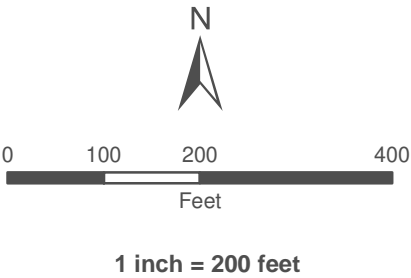


Exhibit 9A





-  Project Study Area
-  CDFW Riparian Streambed
-  Non-Jurisdictional Temporary Catch Basins
-  Soil Pit Location



**TTM 36647 - EAST BASIN PROJECT**  
CDFW Jurisdictional Delineation Map

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Exhibit 9B







## APPENDICES



# 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 Jepson Flora Project (2013)<sup>1</sup>. An asterisk (\*) denotes a non-native species.

## EUDICOTS

### Asteraceae – Sunflower Family

- \* *Cirsium vulgare*, Bull thistle
- Helianthus annuus*, Common Sunflower
- \* *Lactuca serriola*, Prickly Lettuce
- Lasthenia gracilis*, Coastal Goldfields
- Matricaria discoidea*, Pineapple Weed
- \* *Oncosiphon piluliferum*, Stinknet
- \* *Pulicaria paludosa*, Spanish False Fleabane
- \* *Sonchus oleraceus*, Common Sow Thistle
- Uropappus lindleyi*, Silver Puffs

### Boraginaceae – Borage Family

- Amsinckia intermedia*, Common Fiddleneck

### Brassicaceae – Mustard Family

- \* *Brassica nigra*, Black Mustard
- \* *Hirschfeldia incana*, Summer Mustard
- \* *Sisymbrium irio*, London Rocket

### Chenopodiaceae – Goosefoot Family

- \* *Atriplex semibaccata*, Australian Saltbush
- \* *Salsola tragus*, Prickly Russian-thistle

### Cyperaceae – Sedge Family

- Cyperus eragrostis*, Tall Flatsedge

### Fabaceae – Pea Family

- \* *Melilotus albus*, White Sweet Clover

### Geraniaceae – Geranium Family

- \* *Erodium cicutarium*, Red-stemmed Storksbill

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<sup>1</sup> Jepson Flora Project (B. D. Baldwin, D. J. Keil, S. Markos, B. D. Mishler, R. Patterson, T. J. Rosatti, and D. H. Wilken, eds.) [JFP]. 2013. *Jepson Flora Project*. Accessed through 31 Oct 2014. Facets of this extensive online resource include the Jepson eFlora, available at <http://ucjeps.berkeley.edu/IJM.html> and Jepson Online Interchange (JOI), available at <http://ucjeps.berkeley.edu/interchange.html>. The latter enables searches of the Index to California Plant Names (ICPN) for nomenclature, status, and relationships, often with links to helpful details and discussion. All information incorporated here was accessed after, or confirmed accurate through, inclusion of the “Errata and Small Changes” at [http://ucjeps.berkeley.edu/JM12\\_errata.html](http://ucjeps.berkeley.edu/JM12_errata.html) (dated 01 Jul 2013) and “Supplement 1 to” TJM2 at [http://ucjeps.berkeley.edu/IJM\\_suppl\\_summary.html](http://ucjeps.berkeley.edu/IJM_suppl_summary.html), (dated Jul 2013).

**Lamiaceae – Mint Family**

- \* *Marrubium vulgare*, White Horehound

**Malvaceae – Mallow Family**

- \* *Malva parviflora*, Cheeseweed

**Plantaginaceae – Plantain Family**

- \* *Plantago lanceolata*, English Plantain

**Polygonaceae – Buckwheat Family**

- Persicaria lapathifolia*, Common Knotweed
- \* *Rumex crispus*, curly dock

**Salicaceae – Willow Family**

- Salix gooddingii*, Gooding's Black Willow
- Salix lasiolepis*, Arroyo Willow

**Saururaceae – Lizard Tails Family**

- Anemopsis californica*, Yerba Santa

**Solanaceae – Nightshade Family**

- \* *Nicotiana glauca*, Tree Tobacco

**Tamaricaceae – Tamarisk Family**

- \* *Tamarix ramosissima*, Salt Cedar

**Typhaceae – Cattail Family**

- Typha latifolia*, Broadleaf Cattail

**MONOCOTS**

**Poaceae – Grass Family**

- \* *Avena fatua*, Wild Oats
- \* *Bromus diandrus*, Ripgut Brome
- \* *Hordeum vulgare*, Common Barley
- \* *Polypogon monspeliensis*, Annual Beard Grass

# APPENDIX B: FAUNAL COMPENDIUM

The faunal compendium lists species that were either observed within or adjacent to the Project site. Taxonomy and common names are taken from Pelham (2008)<sup>2</sup> for butterflies, \*\* for other invertebrates, AOU (1998 et seq.)<sup>3</sup> for birds, Crother (2012)<sup>4</sup> for amphibian, turtle, and reptile taxonomy, and Wilson and Reeder (2005)<sup>5</sup> for mammals.

## DRAGONFLIES AND DAMSELFLIES

### Coenagrionidae – Narrow-Winged Damselflies

*Argia vivida*, Vivid Dancer

## HOPPERS, ROACHES, KATYDIDS, MANTIDS, WALKING STICKS

### Acrididae – Short-Horned Grasshoppers

*Dissosteira pictipennis*, California Rose-winged Grasshopper

*Lactista gibbosus*, Banded-winged Grasshopper

### Gryllidae – Crickets

*Gryllus* sp., Field Cricket

### Tettigoniidae - Katydids

*Neoconocephalus robustus*, conehead katydid

## EARWIGS

### Forficulidae – Earwigs

*Euborellia annulipes*, Ring-legged Earwig

## BEETLES

### Tenebrionidae – Darkling Beetles

*Coelocnemis* sp., Stink Beetle

## ANTS

### Formicidae – Ants

\* *Linepithema humile*, Argentine Ant

*Pogonomyrmex californicus subnitidus*, Harvester Ant

## BUTTERFLIES

### Pieridae - Whites and Sulphurs

\* *Pieris rapae*, cabbage white

## FLIES

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<sup>2</sup> Jonathan Pelham. 2008. Catalogue of the Butterflies of the United States and Canada. Journal of Research on the Lepidoptera 40: xiv + 658 pp.

<sup>3</sup> American Ornithologists' Union 1998. The A.O.U. Checklist of North American Birds, seventh edition. American Ornithologists' Union, Washington D.C.; and 2000, 2002, 2003, and 2004 supplements.

<sup>4</sup> Crother, B. L., ed. 2012. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding, 7th Edition*. SSAR Herpetological Circular 39:1-92. Shoreview, MN: Society for the Study of Amphibians and Reptiles, Committee On Standard English And Scientific Names.

<sup>5</sup> Wilson, D. E., and D. M. Reeder, eds. 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference, 3rd Edition*. Baltimore, MD: Johns Hopkins University Press. Available online at <http://www.bucknell.edu/msw3/browse.asp>. No separate corrigenda or updates since initial publication.

**Chloropidae – Frit and Grass Flies**

*Thaumatomyia* sp., Frit Fly

**CRUSTACEANS**

**Armadillidiidae – Wood Lice**

\* *Armadillidium vulgare*, Wood Louse

**SPIDERS**

**Araneidae – Orb-Weavers**

*Metopeira foxi*, Orb Weaver

**Thomisidae – Crab Spiders**

*Misumenops* sp., Crab Spider

**REPTILES**

**Phrynosomatidae – Spiny Lizard Family**

*Sceloporus occidentalis*, Western Fence Lizard

**BIRDS**

**Anatidae – Duck, Geese, and Swan Family**

*Branta canadensis*, Canada Goose

*Anas platyrhynchos*, Mallard

**Ardeidae – Herons, Bitterns, and Allies**

*Egretta thula*, Snowy Egret

**Accipitridae – Hawk Family**

*Circus cyaneus*, Northern Harrier

*Buteo jamaicensis*, Red-tailed Hawk

**Falconidae – Caracara and Falcon Family**

*Falco sparverius*, American Kestrel

**Charadriidae – Plover Family**

*Charadrius vociferus*, Killdeer

**Columbidae – Pigeon and Dove Family**

\* *Columba livia*, Rock Pigeon

\* *Streptopelia decaocto*, Eurasian collared dove

*Zenaida macroura*, Mourning Dove

**Trochilidae – Hummingbird Family**

*Calypte anna*, Anna's Hummingbird

**Tyrannidae – Tyrant Flycatcher Family**

*Sayornis nigricans*, Black Phoebe

*Sayornis saya*, Say's Phoebe

*Tyrannus verticalis*, Western Kingbird

**Laniidae – Shrike Family**

*Lanius ludovicianus*, Loggerhead Shrike

**Corvidae – Jay and Crow Family**

*Corvus brachyrhynchos*, American Crow

*Corvus corax*, Common Raven

**Hirundinidae – Swallow Family**

*Hirundo rustica*, Barn Swallow

*Stelgidopteryx serripennis*, Northern Rough-winged Swallow

**Mimidae – Thrasher Family**

*Mimus polyglottos*, Northern Mockingbird

**Sturnidae – Starling Family**

\* *Sturnus vulgaris*, European Starling

**Emberizidae – Sparrow Family**

*Passerculus sandwichensis*, Savannah Sparrow

*Melospiza melodia*, Song Sparrow

*Zonotrichia leucophrys*, White-crowned Sparrow

**Icteridae – Blackbird Family**

*Sturnella neglecta*, Western Meadowlark

*Agelaius phoeniceus*, Red-winged Blackbird

*Euphagus cyanocephalus*, Brewer's Blackbird

**Fringillidae – Finch Family**

*Haemorhous mexicanus*, House Finch

**Passeridae – Old World Sparrow Family**

\* *Passer domesticus*, House Sparrow

**MAMMALS**

**Canidae – Canid Family**

*Canis familiaris*, Domestic Dog

*Canis latrans*, Coyote

**Sciuridae – Squirrel Family**

*Otospermophilus beecheyi*, California Ground Squirrel

**Leporidae – Hare and Rabbit Family**

*Sylvilagus audubonii*, Desert Cottontail