

**Appendix B            Biological Resources Technical Report  
for Bear Valley Parkway Project (April  
2016)**



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**Biological Resources Technical Report for  
Bear Valley Parkway Project  
San Diego County, California**

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**APRIL 2016**



# Biological Resources Technical Report for Bear Valley Parkway Project

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## TABLE OF CONTENTS

<b><u>Section</u></b>	<b><u>Page No.</u></b>
<b>SUMMARY OF FINDINGS .....</b>	<b>V</b>
<b>1 INTRODUCTION.....</b>	<b>1</b>
1.1 Proposed Project .....	1
<b>2 PROJECT SETTING .....</b>	<b>7</b>
2.1 Environmental Setting .....	7
2.1.1 Soils.....	7
2.1.2 Hydrology .....	7
2.2 Applicable Regulations.....	8
2.2.1 Federal.....	8
2.2.2 State.....	14
2.2.3 Local/City of Escondido .....	17
<b>3 METHODS .....</b>	<b>21</b>
3.1 Literature Review.....	21
3.2 Field Reconnaissance.....	21
3.2.1 Resource Mapping .....	21
3.2.2 Flora .....	22
3.2.3 Fauna.....	22
3.2.4 Jurisdictional Wetlands Delineation .....	22
<b>4 RESULTS OF SURVEY .....</b>	<b>29</b>
4.1 Botany – Plant Communities and Floral Diversity .....	29
4.1.1 Southern Coast Live Oak Riparian Forest (61310).....	29
4.1.2 Non-native Riparian (65000) .....	30
4.1.3 Disturbed Southern Cactus Scrub .....	30
4.1.4 Disturbed Habitat (11300) .....	30
4.1.5 Developed Land (12000) .....	30
4.1.6 Floral Diversity .....	31
4.2 Zoology – Wildlife Diversity.....	31
4.2.1 Birds.....	31
4.2.2 Reptiles and Amphibians .....	31
4.2.3 Mammals.....	31
4.2.4 Invertebrates.....	32

# Biological Resources Technical Report for Bear Valley Parkway Project

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>Section</u></b>	<b><u>Page No.</u></b>
4.3	Special-Status Biological Resources/Regulated Resources..... 32
4.3.1	Special-Status Plant Species ..... 33
4.3.2	Special-Status Wildlife Species ..... 33
4.3.3	Wildlife Corridors and Habitat Linkages..... 34
4.3.4	Jurisdictional Aquatic Resources ..... 35
<b>5</b>	<b>ANTICIPATED PROJECT IMPACTS .....39</b>
5.1	Direct Impacts ..... 39
5.1.1	Vegetation Communities ..... 39
5.1.2	Special-Status Plants ..... 40
5.1.3	Special-Status Wildlife ..... 40
5.1.4	Habitat Linkages/Wildlife Corridors ..... 43
5.1.5	Jurisdictional Aquatic resources ..... 43
5.2	Indirect Impacts ..... 44
5.2.1	Vegetation Communities and Special-status Plants..... 44
5.2.2	Special-Status Wildlife ..... 46
5.2.3	Habitat Linkages/Movement Corridors ..... 48
5.2.4	Jurisdictional Aquatic Resources ..... 49
<b>6</b>	<b>ANALYSIS OF SIGNIFICANCE .....51</b>
6.1	Explanation of Findings of Significance..... 51
6.2	Vegetation Communities ..... 52
6.3	Special-Status Plants..... 53
6.4	Special-Status Wildlife ..... 53
6.5	Habitat Linkages/Wildlife Corridors ..... 54
6.6	Jurisdictional Aquatic Resources..... 54
<b>7</b>	<b>MITIGATION.....57</b>
7.1	Vegetation Communities ..... 57
7.2	Special-Status Plants..... 58
7.3	Special-Status Wildlife ..... 58
7.4	Habitat Linkages/Wildlife Corridors ..... 58
7.5	Jurisdictional Aquatic Resources..... 58
<b>8</b>	<b>ACKNOWLEDGMENTS .....61</b>
<b>9</b>	<b>LITERATURE CITED .....63</b>

# Biological Resources Technical Report for Bear Valley Parkway Project

---

## TABLE OF CONTENTS (CONTINUED)

### Page No.

### APPENDICES

A	Vascular Plant Species Observed within the Study Area
B	Cumulative List of Wildlife Species Observed within the Study Area
C	Special-Status Plant Species Potential to Occur
D	Special -Status Wildlife Potential to Occur
E	Routine Wetland Determination Forms
F	Jurisdictional Delineation Report

### FIGURES

1	Regional Map.....	3
2	Vicinity Map.....	5
3	Watershed Map.....	9
4	Subregional Plan Area .....	19
5	Biological Resources .....	25
6	Project Impacts.....	41

### TABLES

1	Vegetation Communities and Land Covers .....	29
2	Jurisdictional Aquatic Resources.....	36
3	Direct Impacts to Vegetation Communities.....	40
4	Impacts to On-site Jurisdictional Aquatic Resources .....	44
5	Preserved Vegetation Communities and Land Covers .....	57
6	Jurisdictional Aquatic Resources.....	59

# Biological Resources Technical Report for Bear Valley Parkway Project

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# Biological Resources Technical Report for Bear Valley Parkway Project

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## SUMMARY OF FINDINGS

The Bear Valley Parkway Parcel consists of approximately 41 acres of which the Bear Valley Parkway Project (Study Area) consists of 40.62 acres in the City of Escondido, California. A “Not a Part” portion, consisting of 0.65 acre is located west of Bear Valley Parkway and is not included in the project. Biological surveys of the Study Area were conducted by Dudek in 2013 and 2014 and included a reconnaissance-level field survey, and a formal jurisdictional delineation.

The purpose of the biological resource technical report is to map and assess the existing vegetation communities and, if necessary, survey for plant and animal species recognized as special-status by local, state, or federal wildlife agencies (U.S. Fish and Wildlife Service [USFWS] and California Department of Fish and Wildlife [CDFW]). Following the surveys, direct and indirect impacts to vegetation communities and special-status species, if present, were evaluated based on the proposed project. This report describes the biological characteristics of the Study Area; provides an analysis of direct and indirect impacts based on the proposed project; analyzes the biological significance of the proposed project under the California Environmental Quality Act (CEQA); and discusses mitigation measures, which will reduce significant impacts to a level below significant.

There are five vegetation communities/land covers mapped on site: southern coast live oak riparian forest, non-native riparian, disturbed southern cactus scrub, disturbed habitat, and developed land. In addition, three unvegetated stream channels are mapped on site. The southern coast live oak riparian forest, non-native riparian areas and unvegetated stream channels are regulated through Sections 401 and 404 of the Clean Water Act (CWA) and Fish and Game Code 1600-1602, and are considered jurisdictional under the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and/or CDFW.

No special-status plant species were documented on site. There are two species with moderate potential to occur, San Diego ambrosia (*Ambrosia pumila*) and smooth tarplant (*Centromadia pungens* ssp. *laevis*).

No special-status wildlife species were detected on site during the surveys, however, one coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*; a CDFW SSC<sup>1</sup>) was observed in a palm tree immediately off site and there is a small patch of disturbed cactus scrub on site that may provide potential nesting habitat.

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<sup>1</sup> SSC: Species of Special Concern

## Biological Resources Technical Report for Bear Valley Parkway Project

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There are five special-status wildlife species that have a high potential to occur based on habitat types and species' range. While some raptors are not considered special-status and are fairly common in Southern California, raptors, as a group, are considered special-status, and Section 3503.5 of the California Fish and Game Code specifically prohibits the unauthorized take of raptors and raptor nests.

Implementation of the project would result in significant direct impacts to 0.67 acres of southern live oak riparian forest (on- and off-site); 0.03 acres of jurisdictional aquatic resources; and potential impacts associated with direct or indirect impacts to nesting birds protected under the Migratory Bird Treaty Act. The impacts to 0.67 acres of southern live oak riparian forest will be mitigated through at 3:1 ratio and 0.03 acres unvegetated channel will be mitigated at a 1:1 mitigation ratio as directed by Final Multiple Habitat Conservation Plan Volume 1 (SANDAG 2003, Table 4-7) and as anticipated by the wetland regulatory agencies. These impacts will be mitigated through establishment and enhancement of 2.04 acres within the mitigation area on site. Potential impacts to nesting birds will be mitigated through pre-construction nesting bird surveys and setbacks. Impacts to disturbed habitat or developed lands are not considered significant and do not require mitigation.

# Biological Resources Technical Report for Bear Valley Parkway Project

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## 1 INTRODUCTION

The Bear Valley Parkway Parcel consists of approximately 41 acres of which the Bear Valley Parkway Project site (Study Area) consists of 40.62 acres in the City of Escondido, San Diego County, California. The Not A Part portion of the parcel, a total of 0.65 acre, is not included in the proposed project, is not part of the Study Area, and will not be discussed further in this biology report. The project is located in southeast Escondido, approximately 1.5 miles east of Interstate 15 (I-5) and south of State Route 78 (SR-78)/San Pasqual Valley Road (Figure 1). The Study Area is located on the U.S. Geological Survey (USGS) 7.5 minute Escondido quadrangle map in section 26, Township 12S, and Range 2W (Figure 2). A biological reconnaissance survey was conducted by Dudek in May 2013 and a formal jurisdictional delineation was conducted in March 2014.

The purpose of the biological resource technical report is to map and assess the existing vegetation communities and potential for plant and animal species recognized as special-status by local, state, or federal Wildlife Agencies (U.S. Fish and Wildlife Service [USFWS] and California Department of Fish and Wildlife [CDFW]). to occur in the Study Area. Following the reconnaissance survey, direct and indirect impacts to vegetation communities and special-status species were evaluated based on the proposed project. This report describes the biological characteristics of the Study Area; provides an analysis of direct and indirect impacts based on the proposed project; analyzes the biological significance of the proposed project under the CEQA; and discusses mitigation measures, which will reduce significant impacts to a level below significant.

### 1.1 Proposed Project

The project consists of a proposed subdivision of 40.62 acres into 55 residential lots, each containing a minimum of 10,000 square feet. In addition to the residential lots, the project proposes two private street lots, seven open space lots and one recreation lot. Private open space will occupy 20.04 acres. The open space lots will include any necessary mitigation areas related to upland or wetland habitat. Two drainage basins are proposed at the entry locations.

A main recreation area will be constructed near the secondary access point. Pedestrian linkages will be via non-curb adjacent private streets where walkways are separated from vehicle traffic by privately maintained parkways. This system will tie into the public Bear Valley Parkway sidewalk system.

The project will take access from Bear Valley Parkway at the intersection of Zlatibor Ranch Road and Bear Valley Parkway. A secondary, gated emergency ingress and egress will be

## **Biological Resources Technical Report for Bear Valley Parkway Project**

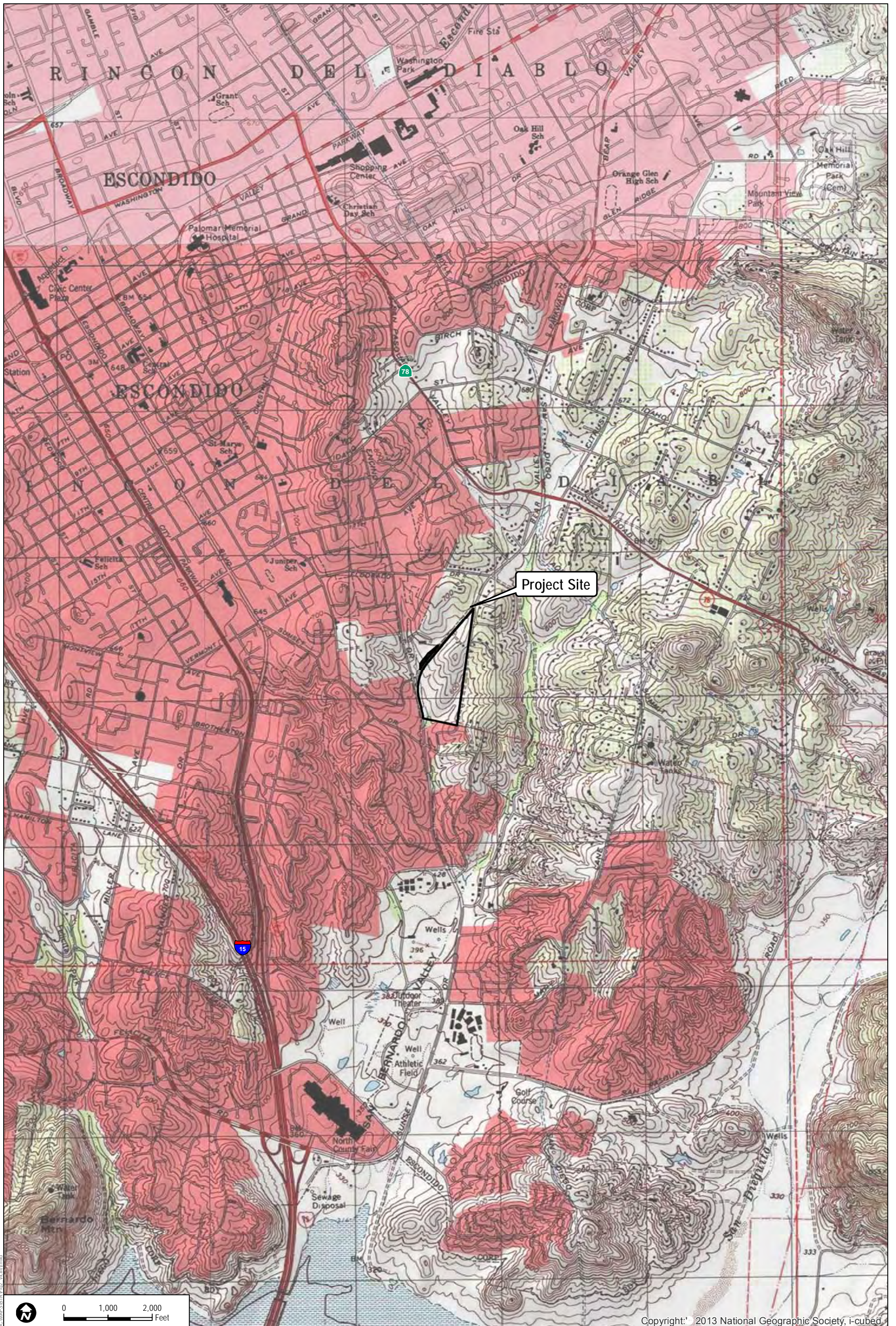
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provided on the east side of Bear Valley Parkway, northerly of the intersection of Bear Valley Parkway and Encino. The project includes frontage right of way dedication to complete a 51-foot wide right-of-way from the center line of existing Bear Valley Parkway right-of-way. In addition, the project will be obligated to construct frontage improvements along Bear Valley Parkway consisting of curb, gutter, side walk, parkway, bike lane and one full travel lane with transitions that will tie into existing improvements. A portion of these frontage improvement are located off site of the subject property. These impacts have been calculated and are displayed in the impact analysis but are not shown in the existing conditions exhibits.

The tentative map design includes balanced grading of the site with no import or export of material. Additionally the project includes a request for a grading exemption due to creation of cut slopes over 20 feet in height and fill slopes exceeding 10 feet in height.



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Project Site



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**DUDEK**

SOURCE: USGS 7.5-Minute Series Escondido Quadrangle.

**FIGURE 2**  
**Vicinity Map**

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# Biological Resources Technical Report for Bear Valley Parkway Project

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## 2 PROJECT SETTING

### 2.1 Environmental Setting

The majority of the Study Area was once an avocado orchard; however, the orchard was removed and now is considered disturbed habitat. There is one residence on site in the central portion of the property that is currently occupied. The remaining portions of the site are undeveloped. An unnamed intermittent stream channel, within an overstory of oak riparian, traverses the southwestern portion of the Study Area. The Study Area is adjacent to Bear Valley Parkway near Zlatibor Ranch Road. The property is located in a more rural part of Escondido (Figure 2).

The Study Area slopes upward from approximately 590 feet above mean sea level (AMSL) to 680 feet AMSL at the top of the hill. Much of the site is gently sloping or relatively flat.

#### 2.1.1 Soils

Soils on the site are mapped as Fallbrook sandy loam, 9% to 15% slopes, eroded; Fallbrook sandy loam, 15% to 30% slopes, eroded; Ramona sandy loam, 2% to 5% slopes; Ramona sandy loam, 9% to 15% slopes, eroded; and steep gullied land (USDA 2013).

According to the Natural Resource Conservation Service (NRCS), the Fallbrook series consists of deep, well-drained soils formed from weathered granitic rock. These soils occur on rolling hills and steeper slopes, and have a mean annual precipitation of approximately 15 inches (USDA 2013).

The Ramona series consists of mixed “fine-loamy” soils (USDA 2013). Ramona soils are found on flat to moderately steep slopes, with an annual precipitation of approximately 20 inches (USDA 2013).

Steep gullied land is described as “strongly sloping to steep areas that are actively eroding into old alluvium or decomposed rock” and supporting sparse vegetation (Bowman 1973).

#### 2.1.2 Hydrology

The Study Area lies within the San Dieguito Hydrologic Unit (905.00), a rectangular-shaped area of approximately 350 square miles. This Hydrologic Unit lies between the San Luis Rey and Carlsbad Hydrologic Units to the north and San Diego River and Penasquitos Hydrologic Units to the south. The Study Area lies within the Hodges Hydrologic Area (905.20) within the Del Dios (905.21) and Bear Hydrologic Subareas (905.24). The Study Area is located on border of the two Subareas (Figure 3).

# Biological Resources Technical Report for Bear Valley Parkway Project

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The San Dieguito Hydrologic Unit includes the San Dieguito River and its tributaries, including Santa Ysabel and Santa Maria creeks. The San Dieguito Hydrologic Unit contains two major reservoirs, Lake Hodges and Sutherland Reservoir. The San Dieguito Lagoon is located at the mouth of the San Dieguito River and forms the northerly boundary of the City of Del Mar. The lagoon is typically closed off from the ocean by a sandbar.

The National Hydrography Dataset identifies one tributary within the Study Area running from north to south through the western portion of the Study Area (USGS 2014). The USGS 7.5-minute quadrangle identifies this feature as a blue-line stream that is tributary to the Lake Hodges-San Dieguito River, which eventually flows into the Pacific Ocean. The tributary travels south through the Study Area, joins with a second stream approximately 0.60 miles south of the Study Area and with the San Dieguito River approximately 2.70 miles south of the Study Area. The San Dieguito River then flows west into Lake Hodges and continues to the Pacific Ocean.

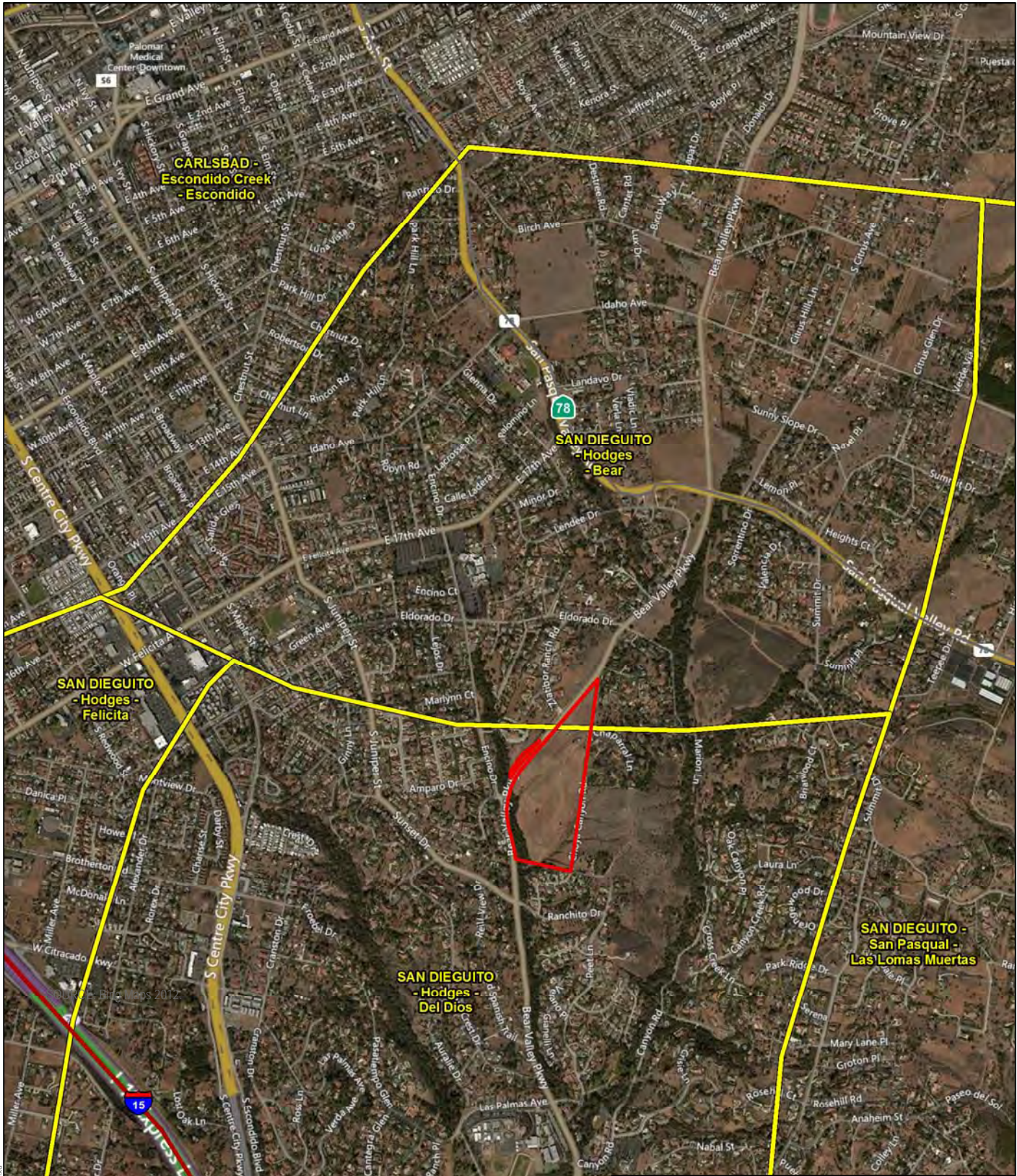
No other stream courses or water features were identified in the literature review. Section 3.2.4 describes the methods used to delineate jurisdictional aquatic resources on site, and Section 4.3.4 provides the results of these studies.

## **2.2 Applicable Regulations**

### **2.2.1 Federal**

#### **Clean Water Act**

The Clean Water Act (CWA) is intended to restore and maintain the quality and biological integrity of the nation's waters. Section 402 of the CWA prohibits the discharge of pollutants into waters of the United States from any point source, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit. The CWA, Section 402, requires an NPDES Permit for the discharge of stormwater from municipal separate storm sewer systems (MS4), serving urban areas with a population greater than 100,000, construction sites that disturb 1 acre or more, and industrial facilities. The RWQCB administers these permits with oversight provided by the SWRCB and U.S. Environmental Protection Agency (EPA) Region IX.



Project Boundary  
 Hydrologic Unit - Area - Subarea

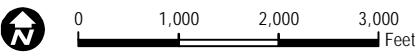


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SOURCE: National Hydrography Dataset

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**FIGURE 3**  
**Watershed Map**

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## Biological Resources Technical Report for Bear Valley Parkway Project

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Section 404 of the CWA authorizes the Secretary of the Army, acting through the ACOE, to issue permits regulating the discharge of dredged or fill materials into the “navigable waters at specified disposal sites.” CWA Section 502 further defines “navigable waters” as “waters of the United States, including territorial seas.” “Waters of the United States” are broadly defined in the Code of Federal Regulations (CFR), Title 33, Section 328.3, Subdivision (a)<sup>2</sup> to include navigable waters; perennial and intermittent streams, lakes, rivers, and ponds; and wetlands, marshes, and wet meadows. Specifically, Section 328.3(a) defines waters of the United States as follows:

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 interstate or foreign commerce including any such waters:
  - i. Which are or could be used by interstate or foreign travelers for recreational or other purposes;
  - ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - iii. Which are 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) through (4) of this section;
6. The territorial seas; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1) through (6) of this section.

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<sup>2</sup> This regulation, 33 CFR Section 328.3, and the definitions contained therein, have been the subject of recent litigation. In addition, the U.S. Supreme Court has recently addressed the scope and extent of the ACOE’s jurisdiction over navigable waters and waters of the United States under the CWA. See *Solid Waste Agency of Northern Cook Cty. v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (“SWANCC”) and *Rapanos v. United States*, 126 S. Ct. 2208 (ACOE and EPA 2008). Despite the impact of these recent decisions, the definitions continue to provide guidance to the extent that they establish an outer limit for the extent of the ACOE’s jurisdiction over waters of the United States, and therefore, are referenced here for that purpose.

## **Biological Resources Technical Report for Bear Valley Parkway Project**

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

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

The lateral limits of the ACOE's CWA Section 404 jurisdiction in non-tidal waters are defined by the "ordinary high water mark" (OHWM), unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics, such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or presence of debris (33 CFR Section 328.3I). As such, waters are recognized in the field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of the ACOE's jurisdiction will extend beyond the OHWM to the outer edge of the wetlands. The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR Section 328.4).

Section 401 of the CWA requires that an applicant for a federal license or permit to discharge into navigable waters must provide the federal agency with a water quality certification, declaring that the discharge will comply with water quality standard requirements of the CWA. The ACOE is prohibited from issuing a CWA permit until the applicant receives a CWA Section 401 water quality certification or waiver from the RWQCB.

### **Federal Endangered Species Act**

The federal Endangered Species Act (FESA) designates threatened and endangered animals and plants and provides measures for their protection and recovery. Under FESA, "take" of listed animal and plant species in areas under federal jurisdiction is prohibited without obtaining a federal permit. FESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct" (16 U.S.C. 1531). Harm includes any act that actually kills or injures fish or wildlife, including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. Activities that damage (i.e., harm) the habitat of listed wildlife species require approval from USFWS for terrestrial species. If critical habitat has been designated under FESA for listed species, impacts to areas that contain the primary

## Biological Resources Technical Report for Bear Valley Parkway Project

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constituent elements identified for the species, whether or not it is currently present, is also prohibited without obtaining a federal permit. FESA Sections 7 and 10 provide two pathways for obtaining permission to take listed species.

Under Section 7 of FESA, a federal agency that authorizes, funds, or carries out a project that “may affect” a listed species or its critical habitat must consult with USFWS. For example, the ACOE must issue a permit for projects impacting waters or wetlands under ACOE jurisdiction. In a Section 7 consultation, the lead agency (e.g., ACOE) prepares a Biological Assessment that analyzes whether the project is likely to adversely affect listed wildlife or plant species or their critical habitat, and it proposes suitable avoidance, minimization, or compensatory mitigation measures. If the action would adversely affect the species, USFWS has up to 135 days to complete the consultation process and develop a Biological Opinion determining whether the project is likely to jeopardize the continued existing species or result in adverse modification of critical habitat. If a “no jeopardy” opinion is provided, “the action agency may proceed with the action as proposed, provided no incidental take is anticipated. If incidental take is anticipated, the agency or the applicant must comply with the reasonable and prudent measures and implementing terms and conditions in the Service’s incidental take statement to avoid potential liability for any incidental take” (USFWS 1998). If a jeopardy or adverse modification opinion is provided, USFWS may suggest “reasonable and prudent alternatives for eliminating the jeopardy or adverse modification of critical habitat in the opinion” or “choose to take other action if it believes, after a review of the biological opinion and the best available scientific information, such action satisfies section 7(a)(2)” (USFWS 1998).

Under Section 10 of FESA, private parties with no federal nexus may obtain an incidental take permit to harm listed wildlife species incidental to the lawful operation of a project. To obtain an incidental take permit, the applicant must develop a habitat conservation plan (HCP) that specifies impacts to listed species, provides minimization and mitigation measures and funding, and discusses alternatives considered and the reasons why such alternatives are not being used.

If USFWS finds the HCP will not appreciably reduce the likelihood of the survival and recovery of the species, it will issue an incidental take permit. Issuance of incidental take permits requires USFWS to conduct an internal Section 7 consultation, thus triggering coverage of any listed plant species or critical habitat present on site (thus listed plants on private property are protected under FESA if a listed animal is present). Unlike a Section 7 consultation, USFWS is not constrained by a time limit to issue an incidental take permit.

# Biological Resources Technical Report for Bear Valley Parkway Project

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## Migratory Bird Treaty Act

The Migratory Bird Treaty Act implements international treaties between the United States and other nations that protect migratory birds (including their eggs and nests) from killing, hunting, pursuing, capturing, selling, and shipping, unless expressly authorized or permitted. The list of migratory birds is extensive, including American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), and northern mockingbird (*Mimus polyglottos*) (16 U.S.C. 703–712).

### 2.2.2 State

#### California Endangered Species Act

The CDFW administers the California Endangered Species Act (CESA) (California Fish and Game Code, Section 2050 et seq.), which prohibits the take of plant and animal species designated by the Fish and Game Commission as endangered or threatened in the State of California. Under CESA, Section 86, take is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA Section 2053 stipulates that state agencies may not approve projects that will “jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy”.

CESA Sections 2080 through 2085 address 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 in this chapter, the Native Plant Protection Act (California Fish and Game Code, Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001)”.

#### California Environmental Quality Act

The CEQA was enacted in 1970 to provide for full disclosure of environmental impacts to the public before issuance of a permit by state and local public agencies. Qualifying projects include zoning ordinances, issuance of conditional use permits, variances, and the approval of tentative subdivision maps. If a project is regulated under CEQA, the developer completes necessary studies and designs for the project and identifies the state lead agency for the project. The lead agency conducts an Initial Study that identifies the environmental impacts of the project and determines whether these impacts are significant. In some cases, the lead agency may skip the preparation of the Initial Study and proceed directly to the preparation



## Biological Resources Technical Report for Bear Valley Parkway Project

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of an Environmental Impact Report (EIR). The lead agency may prepare a Negative Declaration if it finds no significant impacts, a Mitigated Negative Declaration if it revises the project to avoid or mitigate significant impacts, or an EIR if it finds significant, unmitigated impacts. The EIR is subject to more extensive public comment and provides information on the potentially significant impacts, lists ways to minimize these impacts, and discusses alternatives to the project. CEQA only provides a public review process, and projects with significant impacts may be approved if the lead agency makes a finding of overriding considerations.

In addition to state-listed or federally listed species, special-status plants and animals receive consideration under CEQA. Special-status species are discussed further in Section 4.3.

### California Fish and Game Code

#### *Birds and Mammals*

According to Sections 3511 and 4700 of the California Fish and Game Code, which regulate birds and mammals, respectively, a “fully protected” species may not be taken or possessed, and “incidental takes” of these species are not authorized. However, the CDFW may authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species, and may authorize the live capture and relocation of those species pursuant to a permit for the protection of livestock. Examples of fully protected species include the white-tailed kite (*Elanus leucurus*) and ringtail (*Bassariscus astutus*).

#### *Resident and Migratory Birds*

The California Fish and Game Code provides protection for wildlife species. It states that no mammal, bird, reptile, amphibian, or fish species listed as fully protected can be “taken or possessed at any time.” In addition, CDFW affords protection over the destruction of nests and eggs of native bird species (Section 3503), and it states that no birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) can be taken, possessed, or destroyed (Section 3503.5). CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock (Section 3511). Separate from federal and state designations of species, CDFW designates certain vertebrate species as Species of Special Concern based on declining population levels, limited ranges, and/or continuing threats that have made them vulnerable to extinction.

## **Biological Resources Technical Report for Bear Valley Parkway Project**

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### ***California Native Plant Protection Act***

The Native Plant Protection Act of 1977 (California Fish and Game Code, Sections 1900–1913) directed the CDFW to carry out the legislature’s intent to “preserve, protect and enhance rare and endangered plants in this State.” The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as endangered or rare and protect these plants from take. When the California Endangered Species Act was passed in 1984, it expanded on the original Native Plant Protection Act, enhanced legal protection for plants, and created the categories of threatened and endangered species to parallel FESA. The California Endangered Species Act converted all rare animals into the act as threatened species but did not do so for rare plants, which resulted in three listing categories for plants in California: rare, threatened, and endangered. The Native Plant Protection Act remains part of the California Fish and Game Code, and mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent.

### ***California Natural Community Conservation Planning Act***

The California Natural Community Conservation Planning (NCCP) Act provides for regional planning to conserve listed and candidate species, their habitats, and natural communities through habitat-based conservation measures while allowing economic growth and development (California Fish and Game Code, Section 2800–2835). The initial application of the NCCP Act was in coastal sage scrub habitat in Southern California, home to the California gnatcatcher; it has subsequently been applied to the CALFED Bay–Delta Program and others in Northern California.

The Southern California coastal sage scrub NCCP region consists of 11 subregions, which may be further divided into subareas corresponding to the boundaries of participating jurisdictions or landowners. In each subregion and subarea, landowners, environmental organizations, and local agencies participate in collaborative planning to develop a conservation plan acceptable to USFWS and CDFW. The NCCP conservation requires threat impacts be mitigated to a level that contributes to the recovery of listed species, rather than just avoiding jeopardy.

### ***Porter-Cologne Water Quality Control Act (Water Code, Section 13000 et seq.)***

The intent of the Porter-Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resource Control Board develops statewide water quality plans, and the RWQCB develops basin plans that identify beneficial uses, water quality

## Biological Resources Technical Report for Bear Valley Parkway Project

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objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter-Cologne Water Quality Control Act include isolated waters that are no longer regulated by the ACOE. Developments with impacts to jurisdictional waters must demonstrate compliance with the goals of the act by developing Stormwater Pollution Prevention Plans, Standard Urban Storm Water Mitigation Plans, and other measures in order to obtain a CWA Section 401 certification.

### *Streambed Alteration Agreement*

CDFW must be notified prior to beginning any activity that would obstruct or divert the natural flow of, use material from, or deposit or dispose of material into a river, stream, or lake, whether permanent, intermittent, or ephemeral waterbodies under Section 1602 of the California Fish and Game Code. CDFW has 30 days to review the proposed actions and propose measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Streambed Alteration Agreement. The conditions of a Streambed Alteration Agreement and a CWA Section 404 permit often overlap.

### **2.2.3 Local/City of Escondido**

The Public Review Draft Escondido Subarea Habitat (Subarea Plan) (Ogden and CBI 2001) is intended to be consistent with the Multiple Habitat Conservation Program (MHCP) and with the plans prepared by the entities participating in the MHCP.

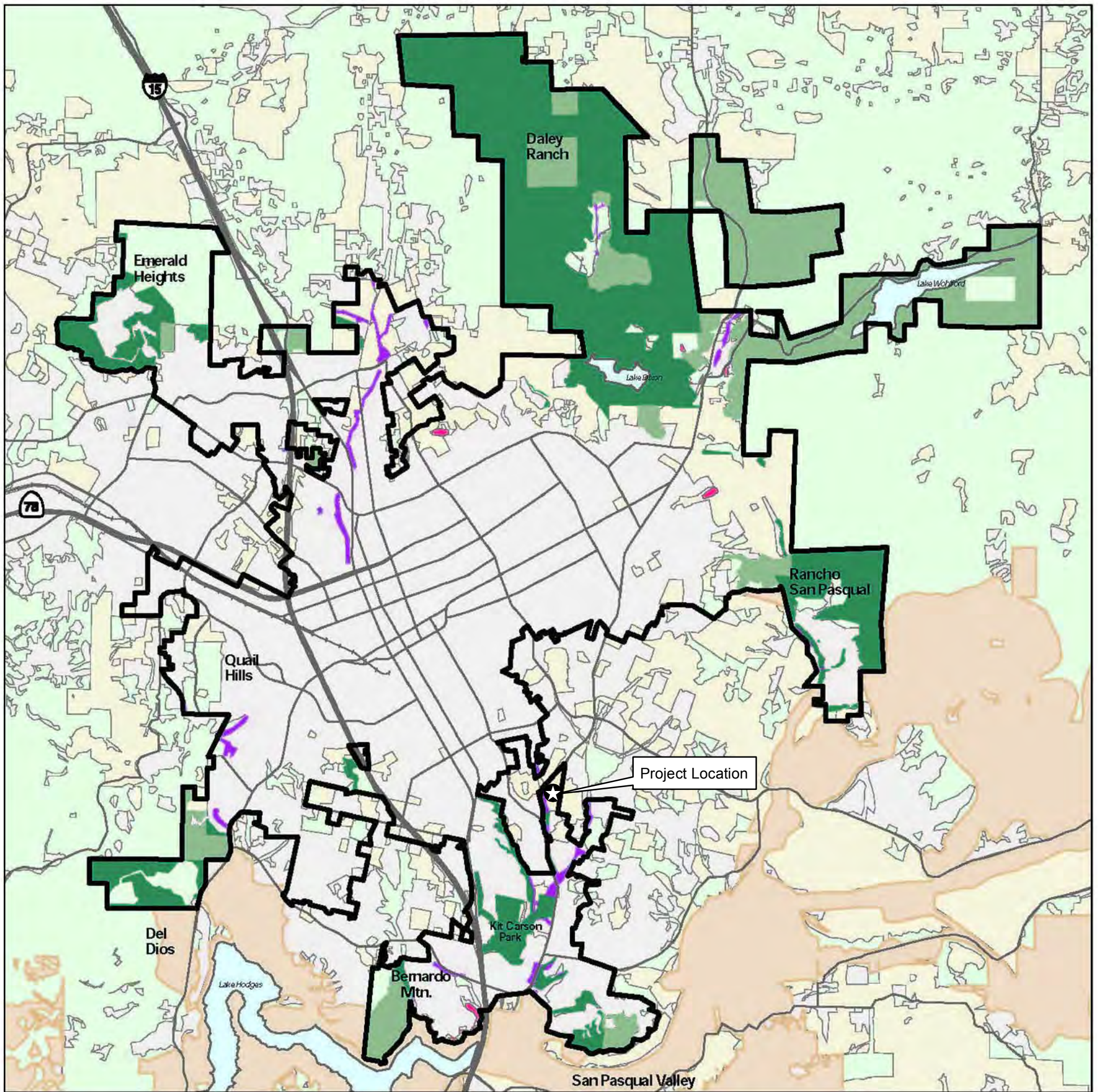
The MHCP is a comprehensive conservation planning process that addresses the needs of multiple plant and animal species in North Western San Diego County. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. Its goal is to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46%) are already in public ownership and contribute toward the habitat preserve system for the protection of more than 80 rare, threatened, or endangered species. The MHCP Subregional Plan and Final Environmental Impact Statement / Environmental Impact Report (EIS/EIR) were adopted and certified by the SANDAG Board of Directors on March 28, 2003.

The Subarea Plan comprehensively addresses how the City will conserve natural vegetation communities and special-status plant and wildlife species pursuant to the California NCCP. The Subarea Plan qualifies as a stand-alone document to implement the MHCP and forms the basis for an Implementing Agreement, which will be the legally binding agreement between the City of Escondido and the Wildlife Agencies.

## Biological Resources Technical Report for Bear Valley Parkway Project

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The Study Area is located within the southeast portion of the Subarea Plan. It is not located within the Biological Core and Linkage Area (BCLA) (see Figure 3-2 of the Subarea Plan). The Study Area is located outside of any Focused Planning Areas (FPAs); however, the stream channel that runs through the southwestern portion of the Study Area is designated as a Constrained Lands (Wetlands) Outside the FPA (see Figure 4-1 of the Subarea Plan and Figure 4). The Constrained Lands designation includes lands with steep slopes and wetlands regulated by ACOE federal wetland permitting requirements and the MHCP “no net loss of wetlands” policy (Ogden and CBI 2001). The remaining portion of the property is designated as agriculture although it has been fallow for over 20 years and does not currently support agricultural crops or production. At this time the City of Escondido is not moving forward with the Subarea Plan thus there is no take coverage afforded under the Subarea Plan or the MHCP.

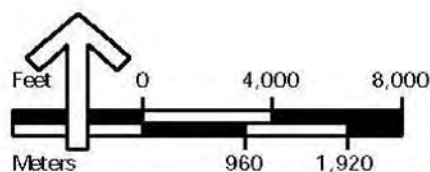


**Figure 4-1**  
**City of Escondido Subarea Plan**  
**Focused Planning Area (FPA) and Constrained Lands Outside the FPA**

- |                              |   |   |                                     |
|------------------------------|---|---|-------------------------------------|
| Natural Habitats             | Hardline Focused Planning Area (90% and greater Conservation) | Constrained Lands (Wetlands) Outside the FPA    | MSCP Habitat Preserve Planning Area |
| Agricultural Land            | Softline Focused Planning Area (Less than 90% Conservation)   | Constrained Land (Slopes > 35%) Outside the FPA |                                     |
| Developed and Disturbed Land |   |   |                                     |



San Diego  
 ASSOCIATION OF  
 GOVERNMENTS  
 May 29, 2001



**DUDEK**

SOURCE: City of Escondido, 1999

7833  
 SEPTEMBER 2015

Bear Valley Parkway Project - Biological Technical Report

**FIGURE 4**  
**Subregional Plan Area**

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# Biological Resources Technical Report for Bear Valley Parkway Project

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## 3 METHODS

Data regarding biological resources present within the Study Area were obtained through a review of pertinent literature and through field reconnaissance; both are described in detail below.

### 3.1 Literature Review

Prior to the field investigations conducted by Dudek, a review of the existing biological resources within the vicinity of the Study Area was conducted using the California Natural Diversity Data Base (CNDDB) (CDFW 2014a-c), USFWS occurrence data (USFWS 2014), and California Native Plant Society (CNPS 2013). Species included in the Public Review Draft Escondido Subarea Habitat (Subarea Plan) (Ogden and CBI 2001) Table 3-2 MHCP Species Occurring or Potentially Occurring in Escondido were also incorporated within the special-status species tables. The purpose of this review was to determine if special-status plant and wildlife species were known to occur on site or in the nearby vicinity<sup>3</sup> of the Study Area and what constraints these occurrences might have on the property.

Baseline hydrology information was obtained from the USGS 7.5-minute quadrangles, National Hydrography Dataset (USGS 2014), and California Regional Water Quality Control Board – San Diego Region (RWQCB) Water Quality Control Plan for the San Diego Region (RWQCB 2007).

### 3.2 Field Reconnaissance

A reconnaissance-level field survey of the Study Area and a formal jurisdictional delineation were conducted on May 23, 2013 and March 21, 2014, respectively, by Dudek biologists Callie Ford and Patricia Schuyler. The surveys included mapping the vegetation communities, determining potential for special-status plant species occurrences on site, and a jurisdictional delineation of aquatic resources. The project includes off-site impacts along Bear Valley Road evaluated on December 16, 2014 by Callie Ford. The purpose of the most recent survey was to confirm site conditions along the road as they related to the impact provided by the project civil engineer. These off site impacts are quantified and addressed as impact, shown in Section 5, but have not been included in the existing conditions Section 4.

#### 3.2.1 Resource Mapping

Vegetation communities were mapped in the field directly onto a 200-scale (1 inch = 200 feet) false-color digital orthographic map of the property (Bing 2013). These boundaries and

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<sup>3</sup> A search of the USGS 7.5-minute Escondido quadrangle and surrounding 8 quadrangles (San Marcos, Valley Center, Rodriguez Mtn, Rancho Santa Fe, San Pasqual, Del Mar, Poway and San Vicente Reservoir) was conducted for the CNDDB and CNPS searches; and a 3-mile radius search was conducted for the USFWS occurrence data.

## Biological Resources Technical Report for Bear Valley Parkway Project

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locations were digitized by Dudek geographic information system (GIS) technician Randy Deodat using ArcGIS software.

Vegetation community classifications used in this report follow Holland (1986) and Oberbauer et al. (2008), with modifications to accommodate the lack of conformity of the observed communities to those of Holland.

### 3.2.2 Flora

No focused rare plant surveys were conducted in the Study Area. However, all plant species encountered during the field surveys were identified and recorded. Latin and common names for plant species with a California Rare Plant Rank (CRPR) (formerly CNPS List) follow the CNPS On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2015). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2015) and common names follow the United States Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2015). A list of plant species observed on the property is presented in Appendix A.

### 3.2.3 Fauna

Wildlife species detected during the reconnaissance survey were recorded. Binoculars (10×42 power) were used to aid in the identification of observed wildlife, and any special-status species observed or detected were mapped. In addition to species actually detected, expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area. Latin and common names of animals follow Crother (2014) for reptiles and amphibians, American Ornithologists' Union (AOU) (2015) for birds, Wilson and Reeder (2005) for mammals, North American Butterfly Association (NABA) (2012) or San Diego Natural History Museum (SDNHM 2002) for butterflies, and Moyle (2002) for fish. A list of wildlife species observed on the property is presented in Appendix B.

### 3.2.4 Jurisdictional Wetlands Delineation

An assessment of jurisdictional aquatic resources was completed by Dudek biologist Callie Ford on May 23, 2013. A formal jurisdictional delineation was conducted by Dudek biologists Callie Ford and Patricia Schuyler on March 21, 2014 with an update on December 16, 2014. Ms. Ford and Ms. Schuyler delineated the extent of jurisdictional aquatic resources in the Study Area. Jurisdictional boundaries were mapped in the field directly onto a 200-foot-scale (1 inch = 200 feet) aerial photograph (Bing 2013) or using a Trimble GeoXT GPS with submeter accuracy. The delineation defined areas under the jurisdiction of the CDFW pursuant to Sections 1600–



## Biological Resources Technical Report for Bear Valley Parkway Project

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1603 of the California Fish and Game Code, under the jurisdiction of the ACOE pursuant to Section 404 of the federal CWA, and under jurisdiction of RWQCB pursuant to CWA Section 401 and the Porter-Cologne Act. The ACOE wetland delineation was performed in accordance with ACOE methodology (ACOE 1987, 2008; ACOE and EPA 2008).

Specifically, the methodology used for each jurisdiction or regulating agency, including the ACOE, CDFW, and RWQCB, is described as follows.

The ACOE wetlands delineation was performed in accordance with the 1987 *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Technical Report Y-87-1; Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2008), and guidance provided by the ACOE and EPA on the geographic extent of jurisdiction based on the U.S. Supreme Court's interpretation of the CWA (ACOE and EPA 2008). The ACOE and RWQCB, pursuant to the federal CWA, include all areas supporting all three wetlands criteria described in the ACOE manual: hydric soils, hydrology, and hydrophytic vegetation. The RWQCB may also take jurisdiction over surface waters lacking ACOE regulation pursuant to the state Porter-Cologne Act. These areas generally include areas with at least one of the three wetlands indicators but that are isolated from a tributary of navigable water through lack of evidence of surface water hydrology. Jurisdiction of the RWQCB is coincident with the ACOE in accordance with the federal CWA, except in cases where a resource is determined to be isolated from navigable waters of the United States and where the RWQCB may take jurisdiction under the state Porter-Cologne Act. A predominance of hydrophytic vegetation, where associated with a stream channel, was used to determine CDFW-regulated riparian areas. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology).

Collectively, areas under the jurisdiction of the ACOE, RWQCB, and CDFW are termed jurisdictional aquatic resources. A more detailed description of the methods is described below.

Jurisdictional determinations were made at seven sampling points (Figure 5) to determine which areas are under the jurisdiction of the regulatory agencies mentioned above. The extent of jurisdictional aquatic resources was determined by mapping the areas with similar vegetation and topography to sampled locations. See Appendix F, the Jurisdictional Delineation Report, for more details regarding jurisdictional aquatic resources.

## Biological Resources Technical Report for Bear Valley Parkway Project

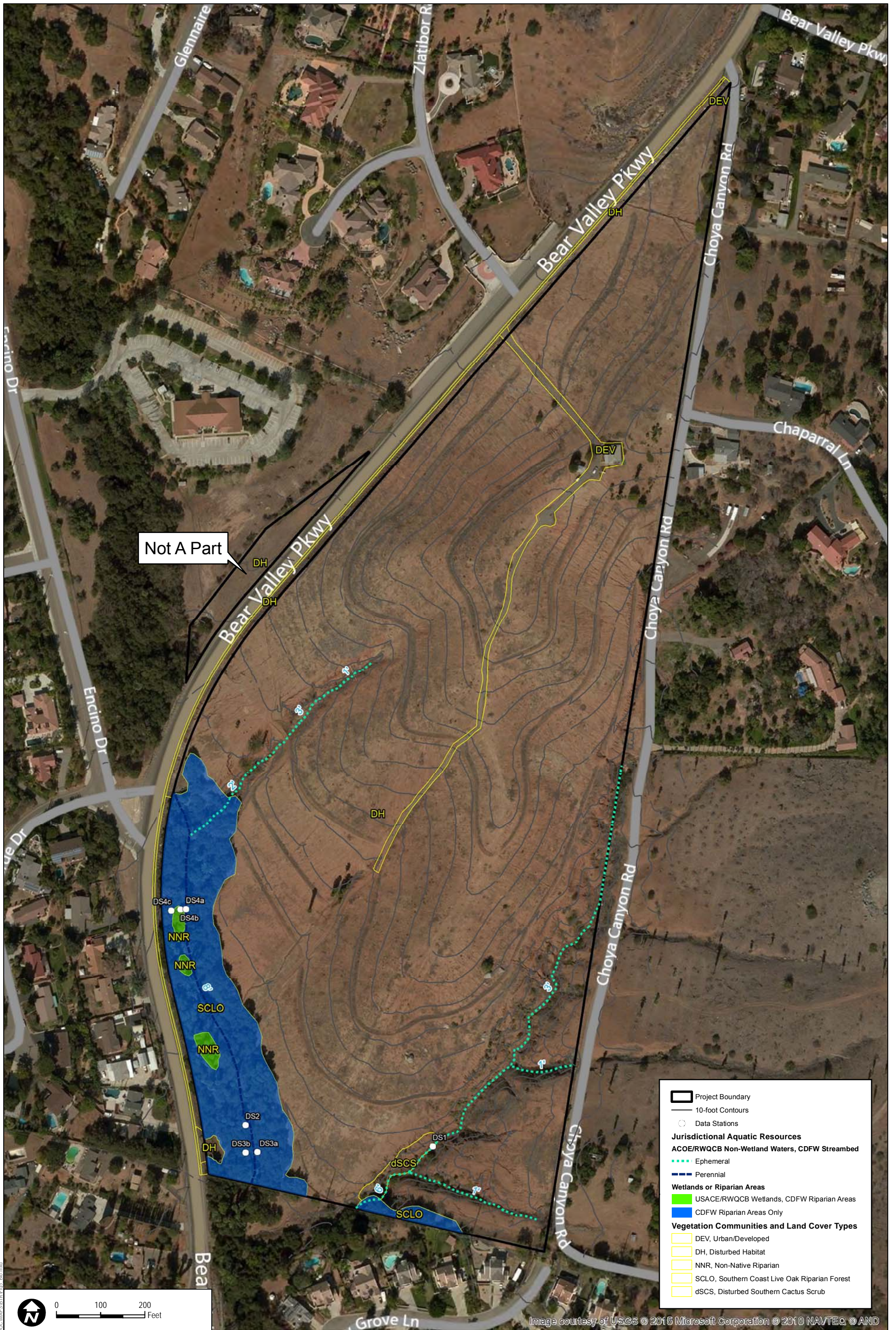
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### 3.2.4.1 *Hydrophytic Vegetation*

Seasonal changes in species composition, human land-use practices, wildfires, and other natural disturbances can adversely affect the hydrophytic vegetation determination. During the delineation, a sampling point was considered positive for hydrophytic vegetation if it passed the basic dominance test (Indicator 1), meaning that more than 50% of the dominant species sampled were characterized as either obligate, facultative wetland, and/or facultative per the *Arid West 2014 Regional Wetland Plant List* (Lichvar et al 2014). In those cases where the dominance test failed, the vegetation parameter was re-evaluated using the prevalence index (Indicator 2), which takes into account all plant species in the community, not just dominants. All plant species observed during the surveys were identified and recorded. Where plant identification could not be made in the field, a sample was taken and later identified in the laboratory.

### 3.2.4.2 *Hydric Soils*

According to the National Technical Committee for Hydric Soils, hydric soils are “soils that are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part” (U.S. Department of Agriculture (USDA) 1994). Soil pits were prepared using a “sharp shooter” shovel to determine if hydric soils were present. The presence of hydric soils was determined through consultations with the 1987 ACOE manual, *Field Indicators of Hydric Soils in the United States v. 5.01* (USDA 2003), ACOE’s *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (ACOE 2008), and Munsell Soil Color Charts. Where feasible, soil pits were prepared to depths ranging from 10 to 16 inches, and dry soils were moistened to obtain the most accurate color. Excavated soils were examined for evidence of hydric conditions, including low chroma values and mottling, vertical streaking, sulfidic odor, and high organic matter content in the upper horizon. Evidence of previous ponding or flooding was assessed along with the slope, slope shape, existing landform characteristics, soil material/composition, and hydrophytic vegetation to determine if hydric soils were present.



**FIGURE 5**  
**Biological Resources**

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## Biological Resources Technical Report for Bear Valley Parkway Project

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### 3.2.4.3 *Hydrology*

Per the guidelines prescribed in the Arid West supplement (ACOE 2008), wetland hydrology indicators are separated into four major groups: groups A, B, C, and D. Group A indicators are based on direct observations of surface flow, ponding, and soil saturation/groundwater. Group B indicators consist of evidence that the Study Area has been or is currently subjected to ponding, including, but not limited to, water marks, drift deposits, and sediment deposits. Group C indicators include signs of previous and/or current saturation, including oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur, both of which are indicative of extended periods of soil saturation. Group D indicators consist of “vegetation and soil features that are indicative of current rather than historic wet conditions and include a shallow aquitard and results of the Facultative (FAC)-Neutral test” (ACOE 2008). Each group is subdivided into primary and secondary categories based on their frequency and reliability to occur in the Arid West region. Signs of hydrology were investigated on the Study Area.

# Biological Resources Technical Report for Bear Valley Parkway Project

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# Biological Resources Technical Report for Bear Valley Parkway Project

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## 4 RESULTS OF SURVEY

### 4.1 Botany – Plant Communities and Floral Diversity

The Study Area is substantially disturbed as a result of the previous land uses as an orchard and a rural residence. Southern coast live oak riparian forest and southern cactus scrub in the southern portion of the Study Area are the only areas that support native vegetation.

Within the Study Area, there are five vegetation communities/land covers: southern coast live oak riparian forest, non-native riparian, disturbed southern cactus scrub, disturbed habitat, and developed land (Table 1; Figure 5). Off-site impacts are presented and discussed in Section 5.

**Table 1**  
**Vegetation Communities and Land Covers**

Habitat Type	Existing Acres
<i>Wetlands/Riparian Areas</i>	
Southern Coast Live Oak Riparian Forest (SCLO)	3.35
Non-native Riparian (NNR)	0.13
<i>Upland</i>	
Disturbed Southern Cactus Scrub (dSCS)	0.17
<i>Other Land Covers</i>	
Disturbed Habitat (DH)	36.43
Developed Land (DEV)	0.54
Total	40.62

#### 4.1.1 Southern Coast Live Oak Riparian Forest (61310)

Southern coast live oak riparian forest is an open to locally dense evergreen riparian woodland dominated by coast live oak (*Quercus agrifolia*). Compared to other riparian communities, southern coast live oak riparian forest is generally richer in herbs and poorer in understory shrubs. Characteristic species of this vegetation community include coast live oak, mugwort (*Artemisia douglasiana*), California blackberry (*Rubus ursinus*), California laurel (*Umbellularia californica*), and hoary nettle (*Urtica dioica* ssp. *holosericea*). This community occurs on fine-grained, rich alluvium on bottomlands and outer floodplains along larger streams.

Southern coast live oak riparian forest occurs along the perennial stream channel in the southern portion of the Study Area. On site, southern coast live oak riparian forest is dominated by coast live oak, scattered palm trees (*Washingtonia robusta* and *Phoenix dactylifera*), poison oak (*Toxicodendron diversilobum*) and edible fig (*Ficus carica*). Because it is associated with the

## Biological Resources Technical Report for Bear Valley Parkway Project

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stream channel, all southern coast live oak riparian forest within the Study Area is considered under the jurisdiction of CDFW .

### 4.1.2 Non-native Riparian (65000)

Non-native riparian areas are densely vegetated riparian thickets dominated by non-native, invasive species. According to Oberbauer et al. 2008, this designation should only be used where non-native, invasive species account for greater than 50% of the total vegetative cover within a mapping unit.

In the Study Area, non-native riparian areas are dominated by Washington fan palms interspersed with edible fig. Non-native riparian areas occur in three locations along the western boundary of the project site and adjacent to a perennial stream. The non-native riparian areas on site constitutes wetlands under the jurisdiction of ACOE, and RWQCB and is also considered a CDFW associated riparian area.

### 4.1.3 Disturbed Southern Cactus Scrub

Southern cactus scrub is not described in Holland (1986) or Oberbauer et al. (2008) but is similar to the cactus dominated habitat described in Sawyer et al (2009). It is a rare form of coastal sage scrub, occurring in relatively isolated areas throughout San Diego County (e.g., Chula Vista, San Pasqual).

In the Study Area, this community consists of 35% cover of prickly-pear cactus (*Opuntia littoralis*) and 65% cover of barbary fig (*Opuntia ficus-indica*) with ruderal species such as castor bean (*Ricinus communis*). Total vegetative cover is approximately 20%. Disturbed southern cactus scrub is mapped in portions of the southeastern Study Area.

### 4.1.4 Disturbed Habitat (11300)

Disturbed habitat typically occurs in areas where soils have been recently or repeatedly disturbed by grading or compaction resulting in the growth of very few native perennials. The disturbed habitat is a combination of the old orchard, graded lots, and cleared areas. Vegetation on the disturbed habitat areas is typically sparse, and nearly entirely dominated by non-native annual weedy species.

### 4.1.5 Developed Land (12000)

Developed land refers to areas supporting manmade structures, including homes, yards, roadways, and other highly modified lands supporting structures associated with dwellings or other permanent structures. Within the Study Area, developed land refers to existing roads and the residence.



# Biological Resources Technical Report for Bear Valley Parkway Project

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## 4.1.6 Floral Diversity

A total of 32 species of vascular plants, 13 native (41%) and 19 non-native (59%), were recorded from the site. The complete list of plant species identified on site is provided as Appendix A.

## 4.2 Zoology – Wildlife Diversity

The Study Area supports habitat for a limited number of common upland and riparian species. A small patch of disturbed cactus scrub on site may provide potential nesting habitat, especially for coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*). The southern coast live oak riparian forest provides habitat for common riparian woodland species, such as birds, nesting raptors, and small mammals. Ruderal plant species in the ephemeral unvegetated stream channel may provide some foraging and/or nesting habitat for small birds, such as house finch (*Carpodacus mexicanus*) and bushtit (*Pheucticus melanocephalus*). Twelve species of wildlife were observed during the surveys (Appendix B).

### 4.2.1 Birds

Nine species of birds were observed during the survey. Typical species observed on site include American crow (*Corvus brachyrhynchos*), California towhee (*Pipilo crissalis*), Anna's hummingbird (*Calypte anna*), and northern mockingbird (*Mimus polyglottos*). A red-shouldered hawk (*Buteo lineatus*) was observed, and other raptors may use the site. Raptors could potentially nest in the oak woodland. Coastal cactus wren may use the small patch of disturbed cactus scrub on site.

### 4.2.2 Reptiles and Amphibians

No reptile or amphibian species were recorded during surveys; however, common reptiles that likely occur on site include western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), and gopher snake (*Pituophis melanoleucus*). Treefrogs (*Pseudacris regilla*, *P. cadaverina*) may use the stream channels found within the Study Area.

### 4.2.3 Mammals

Two common species of mammals were recorded on site: California ground squirrel (*Spermophilus beecheyi*), and brush rabbit (*Sylvilagus bachmanii*). Other mammals adapted to living in areas near human disturbance, such as striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginica*), Botta's pocket gopher (*Thomomys bottae*), raccoon (*Procyon lotor*), mule deer (*Odocoileus hemionus*), and coyote (*Canis latrans*) may also occur on the site.

## Biological Resources Technical Report for Bear Valley Parkway Project

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### 4.2.4 Invertebrates

No butterflies were recorded on site; however, common butterflies that could occur on site include swallowtail (*Papilio* spp.), cabbage butterfly (*Pieris rapae*), common white (*Pontia protodice*), west coast lady (*Vanessa annabella*), painted lady (*Vanessa cardui*), and buckeye (*Junonia coenia*).

### 4.3 Special-Status Biological Resources/Regulated Resources

Endangered, rare, or threatened plant species, as defined in CEQA Guidelines Section 15380(b) (14 CCR 15000 et seq.), are referred to as “special-status plant species” in this report and include (1) endangered or threatened plant species recognized in the context of the California Endangered Species Act (CESA) and the federal Endangered Species Act (ESA); and (2) plant species with a CRPR 1 or 2 designation (CDFW 2014b-c; CNPS 2013).

Appendix C lists the special-status plant species reported in the USGS 7.5-minute Escondido quadrangle and the surrounding eight topographic quadrangles (CNPS and CNDDDB occurrences). Species included in the Public Review Draft Escondido Subarea Habitat (Subarea Plan) (Ogden and CBI 2001) Table 3-2 MHCP Species Occurring or Potentially Occurring in Escondido were also incorporated within the special-status species tables. This appendix also includes an analysis of each of these special-status species’ occurrence or potential to occur based on known range, habitat associations, preferred soil substrate, life form, elevation, and blooming period.

Endangered, rare, or threatened wildlife species, as defined in CEQA Guidelines, Section 15380(b) (14 CCR 15000 et seq.), are referred to as “special-status wildlife species” and, as used in this report, include (1) endangered or threatened wildlife species recognized in the context of the CESA and ESA; (2) California Species of Special Concern (SSC) species, as designated by the CDFW (2014d); and (3) mammals and birds that are fully protected (FP) species, as described in Fish and Game Code, Sections 4700 and 3511.

Appendix D lists occurrences of special-status wildlife species reported in the USGS 7.5-minute Escondido quadrangle and the surrounding eight topographic quadrangles resulting from a CNDDDB search (CDFW 2014b) and from Table 3-2 of the Subarea Plan (Ogden and CBI 2001). Appendix D describes these species’ potential to occur in the Study Area based on the range, presence of suitable habitat, and life history of the species.

## Biological Resources Technical Report for Bear Valley Parkway Project

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### 4.3.1 Special-Status Plant Species

No special-status plant species were detected during the May 23, 2013 reconnaissance survey or the March 21, 2014 jurisdictional delineation. A rare plant survey was not conducted, because the site supports limited suitable habitat and due to the low diversity of plant species within the Study Area, There are two special-status plant species with moderate potential to occur within the Study Area; San Diego ambrosia (*Ambrosia pumila*) and smooth tarplant (*Centromadia pungens ssp. laevis*). These species are typically found within riparian habitats or disturbed areas with sandy soils which the Study Area supports. The potential for the other special-status plants is low or not expected due to the high level of disturbance that exists on site (see Appendix C).

### 4.3.2 Special-Status Wildlife Species

Although no special-status wildlife species were observed on site during the reconnaissance survey or jurisdictional delineation, there are several that have a moderate to high potential to occur.

The areas with intact native habitat, such as southern cactus scrub and southern coast live oak riparian forest would be expected to receive general use by wildlife. The perennial stream found along the western boundary of the Study Area could provide a water source and associated habitat for a number of special-status wildlife species that could then also use the Study Area for foraging or nesting requirements or dispersal purposes.

There are five special-status species with USFWS critical habitat within a 3-mile buffer of the Study Area; arroyo toad (*Anaxyrus californicus*), southwestern willow flycatcher (*Empidonax traillii extimus*), Quino checkerspot butterfly (*Euphydryas editha quino*) and coastal California gnatcatcher (*Poliophtila californica californica*) and least Bell's vireo (*Vireo bellii pusillus*). These species all have low potential to occur on site.

### Special-Status Mammals

Two species have moderate potential to use the Study Area, western red bat (*Lasiurus blossevillii*) and San Diego blacktailed jackrabbit (*Lepus californicus bennettii*) The western red bat has potential to forage in habitat edges along riparian areas and therefore has potential to roost in trees occurring on site. The San Diego black-tailed jackrabbit prefers open and disturbed areas which the site contains.

Southern mule deer (*Odocoileus hemionus fuliginata*) is a MCHP Escondido Subarea Plan covered species with high potential to occur on site. No other special-status mammals have high potential to occur in the Study Area.

## Biological Resources Technical Report for Bear Valley Parkway Project

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### Special-Status Birds

No special-status bird species were observed on site, however, one coastal cactus wren (CDFW SSC) was observed in a palm tree immediately off site and there is a small patch of disturbed cactus scrub on site that may provide potential nesting habitat. Additional special-status bird species that have a high potential to occur include: Cooper's hawk (*Accipiter cooperii*), California horned lark (*Eremophila alpestris actia*), and western bluebird (*Sialia Mexicana*).

A number of special-status bird species have moderate or low potential to use the Study Area due to its size, connectivity to other undeveloped areas, and potential perching, roosting, and nesting locations within the coast live oak trees: these are described in Appendix D.

The major nesting opportunities for raptors are along the southwestern border of the Study Area where the riparian habitat is located; however, no special-status raptors were observed during any of the surveys.

### Special-Status Amphibians and Reptiles

There is only one area on site that provides a regular water source, the perennial stream along southwestern portion of the site. It has low potential to support special-status amphibians due to the level of disturbance surrounding the Study Area and its small size.

No special-status reptile species have high potential to occur. There are several with moderate potential, including San Diego ringneck snake (*Diadophis punctatus similis*), two-striped garter snake (*Thamnophis hammondi*; SSC species), orange-throated whiptail (*Aspidoscelis hyperythra*; SSC species), and coastal whiptail (*Aspidoscelis tigris stejnegeri*).

### 4.3.3 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires). Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping stones for dispersal.

## Biological Resources Technical Report for Bear Valley Parkway Project

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While the Study Area may provide for localized wildlife movement along the stream channel, most of the Study Area is composed of disturbed habitat. Although there is a perennial stream on site, there are no major aquatic resources on site that would be attractive for wildlife use and movement.

Analysis of wildlife movement on a regional basis is based on Figure 4-1 from the Escondido Subarea Plan. The perennial stream on site is considered a Constrained Wetlands Outside the FPA and flows south to Kit Carson Park which is a Hardline Focused Planning Area. Wildlife movement is assumed to use the areas east of the Study Area designated as Natural Lands and MSCP Habitat Preserve (Figure 4-1 Subarea Plan). Other wildlife movement could occur to the south around the Lake Hodges MSCP Habitat Preserve. The wildlife movement is somewhat fragmented but mobile species, such as birds would be able to traverse the off-site rural residential properties, connect to the drainage that flows south, and thence, connect to the regional corridor composed of Kit Carson Park and the Lake Hodges and San Dieguito River to the south and east.

### 4.3.4 Jurisdictional Aquatic Resources

In general, there are three types of potential jurisdictional aquatic resources that were evaluated during the delineation. The first type includes natural canyon drainages in the southeast, northwest, and western boarder of the Study Area containing both ephemeral and perennial channels. Each of these areas exhibit characteristics of ACOE/RWQCB waters and CDFW streambeds (i.e., defined bed and bank). The channels continue to flow from the project site through off-site drainage courses or storm drains into San Dieguito River and are, therefore, hydrologically connected to navigable waters of the U.S. and jurisdictional under ACOE, RWQCB, and CDFW regulations.

The second type of potential jurisdictional aquatic resource studied as part of the survey includes southern coast live oak riparian forest occurring along the perennial stream channel in the southwestern portion of the Study Area. The southern coast live oak riparian forest did not show signs of wetland hydrology, hydric soils, or hydrophytic vegetation (see sampling point 3a). However, since this vegetation community is associated with the stream channel, it is considered under the jurisdiction of CDFW.

The third type of jurisdictional aquatic resource on site is wetlands/associated riparian areas located within the southern coast live riparian forest. These areas are mapped as non-native riparian due to the presence of non-native vegetation, including Washington fan palm and edible fig. The wetlands/associated riparian areas are located immediately adjacent to the perennial stream channel, and are surrounded by oak woodlands. All three indicators were present within

## Biological Resources Technical Report for Bear Valley Parkway Project

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the representative sampling point associated with these areas. Therefore, these patches of non-native riparian are under the jurisdiction of ACOE, RWQCB, and CDFW.

Wetlands and non-wetland waters under the jurisdiction of ACOE/ RWQCB and streambeds and associated riparian areas under CDFW jurisdiction in the Study Area total 3.62 acres, composed of 3.48 acre of wetlands/associated riparian areas. Jurisdictional vegetation communities on site include southern coast live oak riparian forest and non-native riparian habitat. The jurisdictional areas are shown in Table 2 and Figure 5. The off-site impact areas to jurisdictional resources are shown in Section 5.

**Table 2**  
**Jurisdictional Aquatic Resources**

Jurisdictional Aquatic Resource	CDFW Riparian Area (Acres)	ACOE/RWQCB Wetland (Acres)
Southern Coast Live Oak Riparian Forest	3.35	–
Non-Native Riparian	0.13	0.13
<i>Total Riparian/Wetlands</i>	<i>3.48</i>	<i>0.13</i>
Jurisdictional Aquatic Resource	CDFW Streambed (Acres)	ACOE/RWQCB Non-wetland Waters (Acres)
Ephemeral Stream Channel	0.14	0.14
Perennial Stream Channel	0.17	0.17
<i>Total Streambed/ Non-wetland Waters</i>	<i>0.31</i>	<i>0.31</i>
<b>Total Jurisdictional Area*</b>	<b>3.62**</b>	<b>0.44</b>

\* Ephemeral stream channels are an overlay within the disturbed habitat and southern coast live oak vegetation communities. The perennial stream channel on site is within the understory of the oak canopy and therefore, to avoid double counting of resources, this channel, and the portion of the ephemeral channel within the oak canopy, are not counted toward the total jurisdictional area.

\*\* Acreage may not total due to rounding.

ACOE- and RWQCB-jurisdictional areas on site total 0.44 acre, including 0.13 acre of jurisdictional wetlands composed of non-native riparian areas. The remaining 0.31 acre under ACOE/RWQCB jurisdiction consists of ephemeral and perennial stream channels.

CDFW jurisdiction extends over all areas under ACOE and RWQCB jurisdiction discussed above and includes areas that meet ACOE wetland (i.e., hydrophytic) vegetation criteria but lack wetlands hydrology and/or hydric soils indicators. CDFW-jurisdictional areas on site total 3.48 acres of associated riparian habitat including 3.35 acres of southern coast live oak riparian forests and 0.13 acre of non-native riparian areas. In addition, there are also 0.31 acre of stream channels under the jurisdiction of CDFW, of which 0.17 acre is already included within the southern coast live oak riparian forest. In total, there are 3.62 acre of CDFW jurisdictional resources on-site.

## Biological Resources Technical Report for Bear Valley Parkway Project

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Jurisdictional waters/streambeds on site include perennial and ephemeral drainages flowing generally from north to south off site and downstream into San Dieguito River. San Dieguito River flows into Lake Hodges Reservoir and continues to the Pacific Ocean, a navigable water of the U.S. Jurisdictional waters/streambeds exhibit wetlands hydrology and/or hydric soils and signs of a bed and bank and they are therefore considered non-wetland waters under the jurisdiction of ACOE /RWQCB, and CDFW jurisdictional streambeds. The unvegetated perennial stream channel under ACOE/RWQCB/CDFW jurisdiction occurs within oak woodlands which are CDFW-jurisdictional riparian areas.

The wetlands determination forms used to develop these determinations are provided in Appendix E and more details regarding jurisdictional aquatic resources can be found in the Jurisdictional Delineation Report attached to this report (Appendix F).

# Biological Resources Technical Report for Bear Valley Parkway Project

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# Biological Resources Technical Report for Bear Valley Parkway Project

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## 5 ANTICIPATED PROJECT IMPACTS

This section addresses direct and indirect impacts to biological resources that would result from implementation of the proposed project.

**Direct Impacts** refer to 100% permanent loss of a biological resource. For purposes of this report, it refers to the area where the limits of grading are proposed. Direct impacts were quantified by overlaying the limits of grading on geographic information system (GIS)-located biological resources (Figure 6). Direct impacts include on-site impacts as well as off-site impacts associated with road improvements.

**Indirect impacts** are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct limits of grading. Indirect impacts may affect areas within the defined Study Area but outside the limits of grading, including non-impacted areas and areas outside the Study Area, such as downstream effects. Indirect impacts include short-term effects immediately related to construction activities and long-term or chronic effects related to long-term use of the housing development. In most cases, indirect effects are not quantified, but in some cases, quantification might be included, such as using a noise contour to quantify indirect impacts to nesting birds.

### 5.1 Direct Impacts

#### 5.1.1 Vegetation Communities

Short-term, construction-related, or temporary direct impacts to vegetation communities would primarily result from construction activities. Clearing, trampling, or grading of vegetation outside designated construction zones could occur in the absence of avoidance and mitigation measures. These potential effects could damage vegetation communities and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion.

Long-term or permanent direct impacts to vegetation communities were quantified by comparing the impact footprint with the boundaries of the vegetation communities mapped in the Study Area. Direct impacts to vegetation communities on site would occur as a result of grading activities. Off-site impacts are would occur as a result of the work along Bear Valley Road. Table 3 shows the acreage of direct impacts to on site and off site vegetation communities within the Study Area as a result of the limits of grading (Figure 6). In total, there are on-site impacts to 32.61 acres of vegetation communities and land covers and 0.89 acres of off-site impacts (Table 3).

## Biological Resources Technical Report for Bear Valley Parkway Project

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**Table 3**  
**Direct Impacts to Vegetation Communities**

Habitat Type	Existing On-site (Acres)	Direct On Site Impacts (Acres)	Direct Off Site Impacts (Acres)	Proposed Open Space (Lot H)
<i>Upland</i>				
Disturbed Southern Cactus Scrub (dSCS)	0.17	—	—	0.17
<i>Subtotal</i>	<i>0.17</i>	—	—	<i>0.17</i>
<i>Jurisdictional Aquatic Resources</i>				
Southern Coastal Live Oak Riparian Forest (SCLO)	3.35	0.40	0.27	2.95
Non-native Riparian (NNR)	0.13	—	—	0.13
<i>Subtotal</i>	<i>3.48</i>	<i>0.40</i>	<i>0.27</i>	<i>3.08</i>
<i>Other Land Covers</i>				
Disturbed Habitat (DH)	36.43	31.67	0.59	4.76
Developed Land (DEV)	0.54	0.54	0.03	0.00
<i>Subtotal</i>	<i>36.97</i>	<i>32.21</i>	<i>0.62</i>	<i>4.76</i>
<b>Total**</b>	<b>40.62</b>	<b>32.61</b>	<b>0.89</b>	<b>8.01</b>

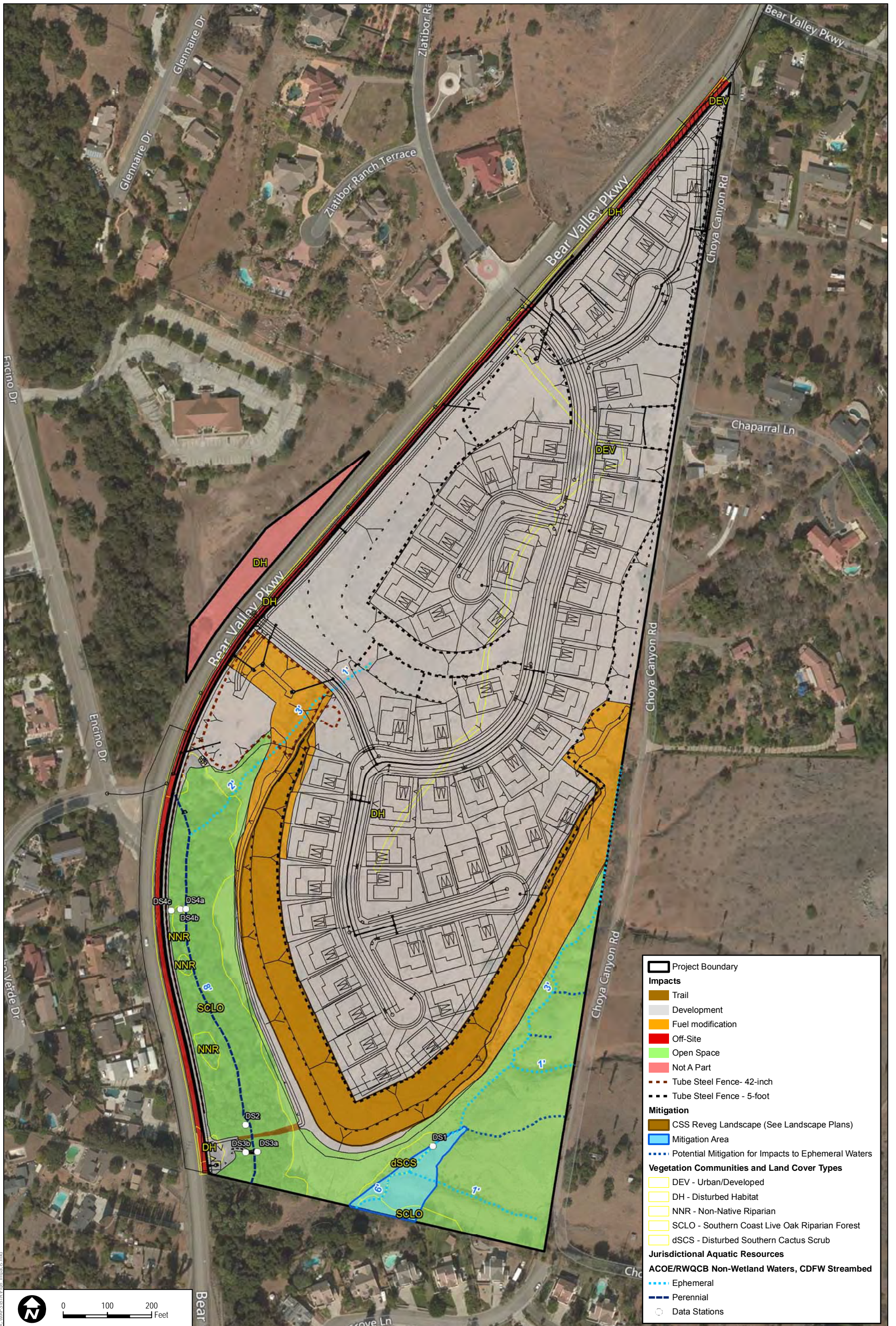
Impacts are primarily to disturbed habitat from the grading of the site for the residential lots. There are minor impacts to the southern live oak riparian forest from the construction of frontage improvements along Bear Valley Parkway consisting of curb, gutter, sidewalk, parkway, bike lane and one full travel lane with transitions that will tie into existing improvements.

### 5.1.2 Special-Status Plants

No special-status plants were observed within the Study Area. Due to the high level of disturbance within the Study Area and because the two species with moderate potential to occur, San Diego ambrosia and smooth tarplant, would likely occur outside the impact area, it is not expected that implementation of the proposed project would result in impacts to special-status plant species.

### 5.1.3 Special-Status Wildlife

No special-status wildlife species were detected on site or are expected in the off-site areas. One coastal cactus wren was observed off site and there is potential for this individual to use the cactus scrub on site, however this habitat community is not being impacted. One raptor, red-shouldered hawk, was detected foraging on site. While this species is not considered special-status and are fairly common in Southern California, raptors as a group are considered special-status, and Section 3503.5 of the California Fish and Game Code specifically prohibits the unauthorized take of raptors and raptor nests.



**FIGURE 6**  
**Project Impacts**

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## **Biological Resources Technical Report for Bear Valley Parkway Project**

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Implementation of the proposed project would not result in potential direct impacts to the special-status wildlife species that have moderate to high potential to occur because these species occur within the native habitats found on site such as southern coast live oak riparian forest and southern cactus scrub and the vast majority of impacts are within disturbed areas. These native habitats provide foraging and nesting habitat for birds and habitat for one mammal species, however, no impacts would occur to southern cactus scrub and only a small proportion of the southern live oak riparian forest along Bear Valley Road would be impacted.

### **5.1.4 Habitat Linkages/Wildlife Corridors**

As described in Section 4.3.3, the Study Area does not function as a major habitat linkage or wildlife corridor, but likely serves as a local wildlife corridor for common terrestrial and avian species. The proposed project would directly impact movement for urban-adapted species that use the oak trees and disturbed areas (e.g., raccoon, striped skunk, and coyote); however, these species can continue to use the areas outside of the proposed project for movement between habitat types. Wildlife species also tend to utilize drainages for movement; the drainages on site vegetated with riparian habitat will largely be avoided. The patch of southern coast live oak riparian forest within the southwestern corner of the Study Area may support wildlife movement into the Kit Carson Park and further to Lake Hodges; however minimal impacts are occurring to this area.

### **5.1.5 Jurisdictional Aquatic resources**

Short-term, construction-related, or temporary direct impacts to jurisdictional aquatic resources would primarily result from construction activities. Clearing, trampling, or grading of vegetation outside designated construction zones could occur in the absence of avoidance and mitigation measures. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion.

Long-term or permanent direct impacts to jurisdictional aquatic resources were quantified by comparing the impact footprint with the boundaries of the jurisdictional aquatic resources mapped in the Study Area.

As a result of the proposed project there are no direct impacts to non-native riparian areas under the jurisdiction of ACOE, RWQCB, and CDFW. There are direct impacts to 0.03 acres of impacts to unvegetated stream channels (including ephemeral channel), under the jurisdiction of ACOE, RWQCB, and CDFW and 0.40 acres of impacts to southern coast live oak riparian forest, CDFW jurisdiction only (Table 4). Off-site impacts include 0.27 acres of impacts to

## Biological Resources Technical Report for Bear Valley Parkway Project

southern coast live oak riparian forest, CDFW jurisdiction only. There are no off-site impact to ephemeral and perennial channels or areas under the jurisdiction of ACOE and RWQCB.

**Table 4  
Impacts to On-site Jurisdictional Aquatic Resources**

Jurisdictional Aquatic Resource	CDFW Riparian Area (Acres)			ACOE/RWQCB Wetland (Acres)		
	Existing	Impacts	Remaining	Existing	Impacts	Remaining
Southern Coast Live Oak Riparian Forest	3.35	0.40	2.95	--	--	--
Non-Native Riparian	0.13	--	0.13	0.13	--	0.13
<i>Total Riparian/Wetlands</i>	<i>3.48</i>	<i>0.40</i>	<i>3.08</i>	<i>0.13</i>	<i>--</i>	<i>0.13</i>
Jurisdictional Aquatic Resource	CDFW Streambed(Acres)			ACOE/RWQCB Non-wetland Waters (Acres)		
	Existing	Impacts	Remaining	Existing	Impacts	Remaining
Ephemeral Stream Channel	0.14	0.03	0.11	0.14	0.03	0.11
Perennial Stream Channel	0.17	0.002	0.17	0.17	0.002	0.17
<i>Total Streambed/ Non-wetland Waters</i>	<i>0.31</i>	<i>0.03</i>	<i>0.29</i>	<i>0.31</i>	<i>0.03</i>	<i>0.29</i>
<b>Total Jurisdictional Area*</b>	<b>3.62**</b>	<b>0.43</b>	<b>3.36</b>	<b>0.44</b>	<b>0.03</b>	<b>0.41</b>

\* Ephemeral stream channels are an overlay within the disturbed habitat and southern coast live oak vegetation communities. The perennial stream channel on site is within the understory of the oak canopy and is therefore, to avoid double counting of resources, this channel, and the portion of the ephemeral channel within the oak canopy, are not counted toward the total jurisdictional area.

\*\* Acreage may not total due to rounding.

## 5.2 Indirect Impacts

### 5.2.1 Vegetation Communities and Special-status Plants

#### Short-Term Indirect Impacts

Potential short-term or temporary indirect impacts to special-status vegetation communities and special-status plants in the Study Area would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts could affect special-status vegetation communities within the Study Area, and special-status plants that have a moderate to high potential to occur in the Study Area. These impacts are described in detail as follows.

***Generation of Fugitive Dust.*** Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases.

***Changes in Hydrology.*** Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the limits of grading. Hydrologic alterations include

## Biological Resources Technical Report for Bear Valley Parkway Project

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changes in flow rates and patterns in drainages and dewatering, which may affect adjacent and downstream (including off-site) aquatic, wetland, and riparian vegetation communities. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, and excessive sedimentation. Direct impacts, as described previously, can also remove native vegetation and increase runoff from roads and other paved surfaces, resulting in increased erosion and transport of surface matter into vegetation communities. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that may disperse seed.

***Chemical Pollutants.*** Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect special-status vegetation communities. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants.

### **Long-Term Indirect Impacts**

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to special-status vegetation communities after construction. The proposed project includes a revegetation area adjacent to the wetlands that will provide native landscaping to avoid indirect impacts. The area is shown on Figure 6 and discussed in detail on the landscape plans. Permanent indirect impacts that could affect special-status vegetation communities include chemical pollutants, altered hydrology, non-native invasive species, and increased human activity. Each of these potential indirect impacts is discussed as follows.

***Chemical Pollutants.*** The effects of chemical pollutants on vegetation communities and special-status plant species are described above. During landscaping activities, herbicides may be used to prevent vegetation from reoccurring around structures. However, weed control treatments shall include only legally permitted chemical, manual, and mechanical methods. Additionally, the herbicides used during landscaping activities will be contained within the Project impact footprint.

***Altered Hydrology.*** Water would be used for landscaping purposes that may alter the on-site hydrologic regime. These hydrologic alterations may affect special-status vegetation communities and special-status plant communities. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants (*Linepithema humile*), which can compete with native ant species that could be seed dispersers or plant pollinators. However, the water, and associated runoff, used during landscaping activities will be contained within the Project impact footprint, and long-term indirect impacts associated with altered hydrology are not expected.

## Biological Resources Technical Report for Bear Valley Parkway Project

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***Non-Native, Invasive Plant and Animal Species.*** Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including, but not limited to, exotic plant competition for light, water, and nutrients and the formation of thatches that block sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and unique vegetation communities. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within vegetation communities and special-status plant populations.

***Increased Human Activity.*** The proposed development will contain 55 residential units. Increased human activity could result in the potential for trampling of vegetation outside of the impacts footprint, as well as soil compaction, and could affect the viability of plant communities. Trampling can alter the ecosystem, creating gaps in vegetation and allow exotic, non-native plant species to become established, leading to soil erosion. Trampling may also affect the rate of rainfall interception and evapotranspiration, soil moisture, water penetration pathways, surface flows, and erosion. An increased human population increases the risk for damage to vegetation communities and special-status plants. The riparian habitat within the Study Area will be fenced in order to deter human activity. Further information regarding fencing is included in the landscape plan (GMP, Landscape Concept Plan 661 Bear Valley, December 2014).

### **5.2.2 Special-Status Wildlife**

#### **Short-Term Indirect Impacts**

Short-term, construction-related, or temporary indirect impacts to special-status wildlife species that have moderate or high potential to occur (see Appendix D) would primarily result from construction activities. Potential temporary indirect impacts could occur as a result of generation of fugitive dust, noise, chemical pollutants, increased human activity, and non-native animal species.

***Generation of Fugitive Dust.*** Dust and applications for fugitive dust control can impact vegetation surrounding the limits of grading, resulting in changes in the community structure and function. These changes could result in impacts to suitable habitat for special-status wildlife species.



## Biological Resources Technical Report for Bear Valley Parkway Project

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**Noise.** Construction-related noise could occur from equipment used during vegetation clearing and construction of the residences and associated infrastructure. Noise impacts can have a variety of indirect impacts on wildlife species, including increased stress, weakened immune systems, altered foraging behavior, displacement due to startle, degraded communication with conspecifics (e.g., masking), damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, cited in Lovich and Ennen 2011).

**Chemical Pollutants.** Accidental spills of hazardous chemicals could contaminate nearby surface waters and groundwater and indirectly impact wildlife species through poisoning or altering suitable habitat.

**Increased Human Activity.** Construction activities can deter wildlife from using habitat areas near the proposed project footprint and increase the potential for vehicle collisions.

**Non-Native Animal Species.** Trash from construction-related activities could attract invasive predators, such as ravens and coyotes that could impact the wildlife species in the Study Area.

### Long-Term Indirect Impacts

Potential long-term or permanent indirect impacts to special-status wildlife species that have moderate or high potential to occur (see Appendix D) include non-native, invasive plant and animal species; increased human activity; and altered hydrology.

**Non-Native, Invasive Plant and Animal Species.** Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including, but not limited to, the fact that exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and subsequently suitable habitat for special-status wildlife species. In addition, trash can attract invasive predators, such as ravens and coyotes, that could impact the wildlife species in the Study Area.

**Increased Human Activity.** The proposed residential development will contain 55 units. Increased human activity could result in the potential for trampling of vegetation outside of the impacts footprint, and soil compaction and could affect the viability and function of suitable habitat for wildlife species. An increased human population increases the risk for

## Biological Resources Technical Report for Bear Valley Parkway Project

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damage to suitable habitat for wildlife species. In addition, increased human activity can deter wildlife from using habitat areas near the proposed project footprint, and increased human activity and vehicle trips could result in vehicle collisions with wildlife species. The riparian habitat within the Study Area will be fenced in order to deter human activity. Further information regarding fencing is included in the landscape plan (GMP, Landscape Concept Plan 661 Bear Valley, December 2014).

**Altered Hydrology.** Water would be used for landscaping purposes that may alter the on-site hydrologic regime. These hydrologic alterations may affect special-status wildlife species. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants, which can compete with native ant species that could be seed dispersers or plant pollinators. Changes in plant composition could affect the native vegetation communities and wildlife habitat. However, the water, and associated runoff, used during landscaping activities will be contained within the Project impact footprint, and long-term indirect impacts associated with altered hydrology are not expected.

### 5.2.3 Habitat Linkages/Movement Corridors

#### Short-Term Indirect Impacts

Short-term indirect impacts to habitat connectivity and wildlife corridors could result from lighting and increased human activity.

**Increased Human Activity.** Project construction would likely take place during the daytime and would not affect wildlife species such as mammals that are most active in evenings and nighttime. Wildlife species such as birds, rabbits, and lizards are active in the daytime, but use a variety of habitats and could continue using other areas within and adjacent to the Study Area for wildlife movement.

**Lighting.** During construction of the proposed project, nighttime lighting may be required, which would create new sources of light in the area. These impacts would be short-term, and since the Study Area is not considered a core wildlife corridor, the proposed project is not expected to result in significant impacts to wildlife movement.

#### Long-Term Indirect Impacts

Long-term indirect impacts include fencing of the Study Area and lighting.

## Biological Resources Technical Report for Bear Valley Parkway Project

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**Fencing.** Fencing will be provided to protect the sensitive habitat from indirect impacts. Fencing will consist of tubular steel fencing at variable heights and will be placed along the areas indicated per the landscape plan ((GMP, Landscape Concept Plan 661 Bear Valley, December 2014).

**Lighting.** Lighting should be directed downward, and limit the type and spacing of lighting to maintain reasonable levels that do not contribute to light pollution. The buildings and parking areas would include lighting designed to minimize light pollution and preserve dark skies, while enhancing safety, security, and functionality.

### 5.2.4 Jurisdictional Aquatic Resources

#### Short-Term Indirect Impacts

Potential short-term or temporary indirect impacts to jurisdictional aquatic resources in the Study Area would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts that could affect all the jurisdictional aquatic resources that occur on the Study Area are described in detail as follows.

**Generation of Fugitive Dust.** As stated above, excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, and transpiration, as well as increased penetration of phytotoxic gaseous pollutants and increased incidence of pests and diseases.

**Changes in Hydrology.** Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area. The effects of changes in hydrology would be similar to those described in Section 5.2.1.

**Chemical Pollutants.** Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect jurisdictional aquatic resources. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants.

#### Long-Term Indirect Impacts

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to jurisdictional aquatic resources after construction, including impacts related to operation and maintenance. The proposed project includes a revegetation area adjacent to the wetlands that will provide native landscaping to avoid indirect impacts. The revegetation

## Biological Resources Technical Report for Bear Valley Parkway Project

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landscaping is not required as mitigation since impacts to uplands are not proposed however the revegetation area will be composed of native plant species to provide a buffer of the proposed development to the wetland area. The area is shown on Figure 6 and discussed in detail on the landscape plans. Operation and maintenance activities will occur within the impact footprint. Permanent indirect impacts that could affect jurisdictional aquatic resources include generation of fugitive dust, habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. Each of these potential indirect impacts is discussed as follows.

***Chemical Pollutants.*** The effects of chemical pollutants on jurisdictional aquatic resources are described above.

***Altered Hydrology.*** Water used for landscaping purposes may alter the on-site hydrologic regime. These hydrologic alterations may affect jurisdictional aquatic resources. However, the water, and associated runoff, used during landscaping activities will be contained within the Project impact footprint, and long-term indirect impacts associated with altered hydrology are not expected.

***Non-Native, Invasive Plant and Animal Species.*** The effects of chemical pollutants would be similar to those described in Section 5.2.1. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within jurisdictional aquatic resources.

***Increased Human Activity.*** The effects of increased human activity would be similar to those described in Section 5.2.1. An increased human population increases the risk for damage to jurisdictional aquatic resources. However, these resources will be fenced in order to deter human activity. Further information regarding fencing is included in the landscape plan (GMP, Landscape Concept Plan 661 Bear Valley, December 2014).

# Biological Resources Technical Report for Bear Valley Parkway Project

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## 6 ANALYSIS OF SIGNIFICANCE

### 6.1 Explanation of Findings of Significance

Impacts to vegetation communities, special-status plants, special-status wildlife, and wildlife movement species must be quantified and analyzed to determine whether such impacts are significant under the CEQA. CEQA Guidelines Section 15064(b) states that an ironclad definition of “significant” effect is not possible, because the significance of an activity may vary with the setting. Appendix G of the Guidelines, however, does provide “examples of consequences which may be deemed to be a significant effect on the environment” (CEQA Guidelines Section 15064[e]). These effects include substantial effects on rare or endangered species of animal or plant or the habitat of the species. CEQA Guidelines Section 15065(a) is also helpful in defining whether a project may have “a significant effect on the environment.” Under that section, a proposed project may have a significant effect on the environment if the project has the potential to: (1) substantially degrade the quality of the environment; (2) substantially reduce the habitat of a fish or wildlife species; (3) cause a fish or wildlife population to drop below self-sustaining levels; (4) threaten to eliminate a plant or animal community; or (5) reduce the number or restrict the range of a rare or endangered plant or animal.

The following are the significance thresholds for biological resources provided in the CEQA Guidelines Appendix G environmental checklist, which states that a project could potentially have a significant effect if it:

- Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG<sup>4</sup> or USFWS
- Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFG or USFWS
- Has 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
- Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impedes the use of native wildlife nursery sites

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<sup>4</sup> Although CDFG changed their name to CDFW in January 2013, we have retained language from the CEQA Guidelines Appendix G here, which refers to the agency as CDFG. The two are synonymous.

## Biological Resources Technical Report for Bear Valley Parkway Project

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- Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan

The evaluation of whether or not an impact to a particular biological resource is significant must consider both the resource itself and the role of that resource in a regional context. Substantial impacts are those that contribute to, or result in, permanent loss of an important resource, such as a population of a rare plant or animal. Impacts may be important locally, because they result in an adverse alteration of existing site conditions, but considered not significant, because they do not contribute substantially to the permanent loss of that resource regionally. The severity of an impact is the primary determinant of whether or not that impact can be mitigated to a level below significant.

### 6.2 Vegetation Communities

**Direct Impacts.** There are on-site direct impacts to 32.61 acres and off-site direct impact to 0.89 acres of vegetation communities and land covers, including southern live oak riparian forest, disturbed habitat, and developed land as a result of the proposed project. The majority of the impacts are to disturbed habitat and developed land, with minimal impacts to native vegetation communities. Impacts to 0.40 acres of on-site and 0.27 acre of off-site southern live oak riparian forest are considered significant (**Impact BIO-1**). However, this area is under CDFW jurisdiction and will therefore be mitigated through jurisdictional resources discussed (e.g., unvegetated channel and southern live oak riparian forest) in Section 6.6.

**Indirect Impacts.** Potential short-term or temporary indirect impacts to special-status vegetation communities and special-status plants in the Study Area would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). It is assumed, however, that standard construction BMPs and construction-related minimization measures to control dust, erosion, and runoff will be implemented and will ameliorate these effects. Therefore, a significant impact would be avoided through these measures.

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to special-status vegetation communities after construction. Permanent indirect impacts that could affect special-status vegetation communities include chemical pollutants, altered hydrology, non-native invasive species, and increased human activity. A significant impact for these potential impacts will be avoided through the following project design features: (1) fencing

## Biological Resources Technical Report for Bear Valley Parkway Project

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will be included per the landscape plans to preclude humans from traveling into the areas to be preserved; (2) landscaping adjacent to preserved land will not include species listed as high or moderate on the California Invasive Plant Council (Cal-IPC 2013); (3) proper selection, design, placement, and utilization of BMPs including source control (i.e., signage, and trash enclosures), treatment control (i.e., constructed wetlands, filter inserts, and catch basins), and site design (i.e., landscaping) BMPs; and (4) attenuation of flows from increase run-off from site development through energy dissipation (e.g., detention basins, rip-rap, etc.).

### 6.3 Special-Status Plants

**Direct Impacts.** In determining significance, the significance threshold applied to plants is whether the project would have a substantial adverse effect on the special-status species. While no special-status plant species were detected on site during surveys, there is moderate potential for two species to occur (see Appendix C). Potential impacts to individual species are not considered significant because much of the impacted habitat is already disturbed and low quality with minimal impacts to the outer edge of the riparian area on site. The two species with moderate potential to occur, San Diego ambrosia (*Ambrosia pumila*) and smooth tarplant (*Centromadia pungens ssp. laevis*), are typically found within riparian areas. The proposed project will impact the outer edge of the riparian habitat on site, therefore direct impacts to these species are not expected.

**Indirect Impacts.** Potential long-term or permanent indirect impacts to special-status plant species include non-native, invasive plant and animal species; increased human activity; and altered hydrology. A significant impact for these impacts will be avoided through the following project design features: (1) fencing will be included preclude humans from traveling into the areas to be preserved; (2) landscaping adjacent to preserved land will not include species listed as high or moderate on the California Invasive Plant Council (Cal-IPC 2013); (3) proper selection, design, placement and utilization of BMPs including source control, treatment control, and site design (i.e., landscaping) BMPs; and (4) attenuation of flows from increase run-off from site development through energy dissipation (e.g., detention basins, rip-rap).

### 6.4 Special-Status Wildlife

**Direct Impacts.** In determining significance, the significance threshold applied to wildlife is whether the project would have a substantial adverse effect on the special-status species. While no special-status wildlife species were detected on site during surveys, there is potential for some species to occur (see Appendix D). It is unlikely that direct impacts would occur to these special-status species since the only two native habitats on site will have none to minimal impacts resulting from the proposed project. If construction activities occur during the bird-

## Biological Resources Technical Report for Bear Valley Parkway Project

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breeding season (typically February 1 through September 15), impacts to migratory birds or destruction of active migratory bird nests and/or eggs would be considered a significant impact because they are protected under the Migratory Bird Treaty Act (**Impact BIO-2**).

**Indirect Impacts.** Short-term, construction-related indirect impacts to special-status wildlife species that have moderate to high potential to occur (see Appendix D) that would primarily result from construction activities, including fugitive dust, chemical pollutants, increased human activity, and non-native animal species would be avoided through the project design features listed in Sections 6.2 and 6.3. Potential indirect impacts from construction-related noise to nesting special-status birds or raptors would be considered a significant impact (**Impact BIO-3**).

Potential long-term or permanent indirect impacts to special-status wildlife species that have moderate or high potential to occur (see Appendix D) associated with non-native, invasive plant and animal species; increased human activity; and altered hydrology would be avoided through the project design features listed in Sections 6.2 and 6.3. Based on the minimal use of the impacted areas for wildlife movement through the site, habitat fragmentation would not be considered a significant impact.

### 6.5 Habitat Linkages/Wildlife Corridors

**Direct Impacts.** As mentioned, the site does not serve as a major wildlife corridor or habitat linkage and there are minimal impacts to the southern live oak riparian forest on the western side of the Study Area, which connects to undeveloped land off site. Additionally, there are no impacts to the main perennial channel along the western boundary and no impacts to the ephemeral channel that runs along the eastern portion of the project boundary. Both channels run in a north-south direction. Therefore, there would not be direct significant impacts to this minor local habitat linkage/wildlife corridor.

**Indirect Impacts.** Significant short-term indirect impacts to the minor local habitat linkage/wildlife corridor would be avoided through standard construction BMPs and construction-related minimization measures as discussed above. Potential long-term indirect impacts to will be avoided through the project design features as mentioned above in Section 5.2.

### 6.6 Jurisdictional Aquatic Resources

**Direct Impacts.** Jurisdictional aquatic resources, as described in Sections 3.2.4 and 4.3.4, are considered special-status and regulated by state and federal agencies. The direct impacts to these jurisdictional areas are considered significant. Implementation of the proposed project would result in direct impacts to 0.40 acre on site and 0.27 acre off site of southern coast live oak riparian forest under CDFW jurisdiction and impacts to 0.03 acres of ephemeral stream channel,



## Biological Resources Technical Report for Bear Valley Parkway Project

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which are under the jurisdiction of the ACOE, RWQCB, and CDFW. These impacts are considered significant (**Impact BIO-4**).

**Indirect Impacts.** Potential short-term indirect impacts to jurisdictional aquatic resources in the Study Area that would primarily result from construction activities, including fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides) would be avoided through the project design features listed in Sections 6.2 and 6.3.

Long-term indirect impacts to jurisdictional aquatic resources, including chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime would be avoided through the project design features listed in Sections 6.2 and 6.3. Because the jurisdictional resources on site include low-quality unvegetated ephemeral stream channels and only the edges of southern coast live oak riparian forest, potential indirect impacts associated with fragmentation from other jurisdictional resources are not considered a significant impact.

# Biological Resources Technical Report for Bear Valley Parkway Project

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# Biological Resources Technical Report for Bear Valley Parkway Project

## 7 MITIGATION

### 7.1 Vegetation Communities

Impacts BIO-1 Direct impacts to southern coast live oak riparian forest will be mitigated through habitat enhancement and establishment as described in MM-1.

**MM-1** The project applicant shall establish or enhance at least 2.01 acres of southern live oak riparian forest with establishment of 0.67 acre within the on-site mitigation area and enhancement of 1.34 acre within the open space area in general including enhancing the 0.13 acre of non-native riparian and enhancing the balance within the area mapped as southern coast live oak riparian forest which contains non-native and invasive species (Table 5). The mitigation will occur within the open space lot (Lot H) totaling 8.0 acres (Table 3). The mitigation area occurs along the ephemeral drainage that runs along the southeastern boundary as shown on Figure 6. A Conceptual Wetland Mitigation Plan shall be prepared as part of the permit application process.

**Table 5  
Preserved Vegetation Communities and Land Covers**

Habitat Type	Direct On-Site Impacts (Acres)	Direct Off-Site Impacts (Acres)	Mitigation Ratio	Mitigation Acreage	Required On-Site Mitigation
Southern Coast Live Oak Riparian Forest (CDFW-jurisdictional)	0.40	0.27	3:1	2.01	Establishment at 1:1 through revegetation within the mitigation area; Enhancement at 2:1 in the open space area.
Non-native Riparian	—	—	1:1	—	None
Disturbed Southern Cactus Scrub	—	—	1:1	—	None
Unvegetated Stream Channels* (ACOE/RWQCB/CDFW)	0.03		1:1 <sup>1</sup>	0.03 <sup>*</sup>	Establishment/Enhancement within the mitigation area as noted Figure 6 and discussed below in Section 7.5
Disturbed Habitat	31.67	0.59	None	—	None
Developed Land	0.54	0.03	None	—	None
<b>Total**</b>	<b>32.61</b>	<b>0.89</b>	-	<b>2.04</b>	

\* Ephemeral stream channels are an overlay within the disturbed habitat and southern coast live oak vegetation communities. The perennial stream channel on site is within the understory of the oak canopy and is therefore, to avoid double counting of resources, this channel, and the portion of the ephemeral channel within the oak canopy, are not counted toward the total jurisdictional area.

\*\* Acreage may not total due to rounding..

<sup>1</sup> Mitigation ratios for this habitat type are 1:1 to 2:1 according to the Table 4-7 in the MHCP. The Study Area lies outside Focused Planning Area, the on-site in-kind mitigation will enhance therefore impacts to unvegetated channels will be mitigated at 1:1.

# Biological Resources Technical Report for Bear Valley Parkway Project

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## 7.2 Special-Status Plants

No mitigation is proposed for impacts to special-status plants because direct impacts to special-status plants are not expected to occur.

## 7.3 Special-Status Wildlife

Potential impacts BIO-2 (direct impacts to nesting birds) and BIO-3 (indirect impacts to nesting birds) will be mitigated through pre-construction nesting bird surveys and appropriate buffers around active nests regulated by the Migratory Bird Treaty Act (MM-2, below).

**MM-2** If construction activity occurs during the breeding season (typically February 1 through September 15), a one-time biological survey for nesting bird species must be conducted within the proposed impact area and a 300-foot buffer within 72 hours prior to construction. This survey is necessary to assure avoidance of impacts to nesting raptors (e.g., Cooper's hawk and red-tailed hawk) and/or birds protected by the federal Migratory Bird Treaty Act. If any active nests are detected, the area will be flagged and mapped on the construction plans along with a minimum of a 25-foot buffer and up to a maximum of 300 feet for raptors, as determined by the project biologist, and will be avoided until the nesting cycle is complete.

## 7.4 Habitat Linkages/Wildlife Corridors

No mitigation is proposed for impacts to habitat linkages/wildlife corridors because the proposed impacts are not considered significant.

## 7.5 Jurisdictional Aquatic Resources

Impact BIO-4 (impacts to jurisdictional aquatic resources) will be mitigated through on-site enhancement and establishment of southern live oak riparian forest and unvegetated stream channel (see MM-1, above and MM-3, below), and compliance with federal and state regulatory agencies (MM-4, below), thus resulting in no net loss of acreage, function, and value of these resources.

**MM-3** The project applicant shall establish/enhance approximately 0.03 (1:1 mitigation ratio) acre of unvegetated stream channel (Table 6). The mitigation area occurs along the ephemeral drainage that runs along the southeastern boundary as shown on Figure 6. The 0.03 acre plus the 2.01 acre from MM-1 will result in the establishment of

## Biological Resources Technical Report for Bear Valley Parkway Project

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2.04 acre within the mitigation area. Details will be provided in a Conceptual Mitigation Plan which will be prepared as part of the permit application process.

**Table 6**  
**Jurisdictional Aquatic Resources**

Habitat Type	Direct On-Site Impacts (Acres)	Direct Off-Site Impacts (Acres)	Mitigation Ratio	Mitigation Acreage	Required On-Site Mitigation
Southern Coast Live Oak Riparian Forest (CDFW-jurisdictional)	0.40	0.27	3:1	2.01	Establishment at 1:1 through revegetation within the mitigation area; Enhancement at 2:1 in the open space area.
Non-native Riparian	—	—	1:1	—	None
Unvegetated Stream Channels* (ACOE/RWQCB/CDFW)	0.03	—	1:1	0.03	Establishment/Enhancement within the mitigation area as noted Figure 6
<b>Total</b>	<b>0.43</b>	<b>0.27</b>	<b>—</b>	<b>2.04</b>	

**MM-4** To comply with the state and federal regulations for impacts to jurisdictional aquatic resources, the following agency permits are required, or verification that they are not required shall be obtained:

- A CWA, Section 401/404 permit issued by the California RWQCB and the ACOE for all project-related disturbances of non-wetland waters of the United States and/or associated wetlands.
- A Section 1602 Streambed Alteration Agreement issued by the CDFW for all project-related disturbances of any streambed and associated riparian habitat.

Permits are required to be obtained by the applicant prior to the impact to the resources. As noted above in MM-1 and MM-3, a Conceptual Mitigation Plan is required to provide compensatory mitigation for the impacts. The on-site wetland preservation area and the proposed wetland mitigation area (Open Space; Lot H) will be protected under a covenant of easement. A long-term management plan for the area shall be prepared and will include maintenance of the wetland functions and values of the existing and restored habitat in perpetuity by the Home Owners Association, underlying land owner, or an approved land manager. The responsible party shall deter access to the Open Space through the use of signage and/or barriers which will also be placed along the proposed trail within the Open Space. The tasks in the long-term

## Biological Resources Technical Report for Bear Valley Parkway Project

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management plan shall provide for the long-term monitoring, documentation of site conditions, as well as task such as removal of trash, repair of any vandalism, and control of invasive species. The condition of the Open Space shall be documented annually by the preparation of an annual report submitted to the City and resource agencies. The responsible party shall also be responsible for the implementation of any remedial measures (e.g., planting of native wetland plants) to repair damage or loss due to any of the above mentioned factors. The long-term management plan shall be funded by a non-wasting endowment for which the amount can be determined via the preparation of a Property Analysis Record or similar method.

# Biological Resources Technical Report for Bear Valley Parkway Project

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## 8 ACKNOWLEDGMENTS

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# Biological Resources Technical Report for Bear Valley Parkway Project

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# **APPENDIX A**

*Vascular Plant Species  
Observed within the Study Area*



# APPENDIX A

## Plant Compendium

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### VASCULAR SPECIES

#### DICOTS

##### ***ANACARDIACEAE—SUMAC OR CASHEW FAMILY***

- \* *Schinus molle*—Peruvian peppertree
- Toxicodendron diversilobum*—Pacific poison oak

##### ***APIACEAE—CARROT FAMILY***

- \* *Foeniculum vulgare*—sweet fennel

##### ***ASTERACEAE—SUNFLOWER FAMILY***

- \* *Cynara cardunculus*—cardoon
- \* *Erigeron bonariensis*—asthmaweed
- \* *Glebionis coronaria*—crowndaisy
- Isocoma menziesii*—Menzies' goldenbush
- Baccharis salicifolia* ssp. *salicifolia*—mulefat
- \* *Carduus pycnocephalus*—Italian plumeless thistle

##### ***BORAGINACEAE—BORAGE FAMILY***

- Phacelia adenophora*—glandular yellow phacelia

##### ***BRASSICACEAE—MUSTARD FAMILY***

- \* *Brassica nigra*—black mustard
- \* *Hirschfeldia incana*—shortpod mustard
- \* *Raphanus sativus*—cultivated radish

##### ***CACTACEAE—CACTUS FAMILY***

- \* *Opuntia ficus-indica*—Barbary fig
- Opuntia littoralis*—coastal pricklypear

##### ***CHENOPODIACEAE—GOOSEFOOT FAMILY***

- Atriplex canescens*—fourwing saltbush

##### ***EUPHORBIACEAE—SPURGE FAMILY***

- \* *Ricinus communis*—castorbean

##### ***FAGACEAE—OAK FAMILY***

- Quercus agrifolia*—California live oak

## APPENDIX A (Continued)

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### **LAMIACEAE—MINT FAMILY**

- \* *Marrubium vulgare*—horehound

### **MORACEAE—MULBERRY FAMILY**

- \* *Ficus carica*—edible fig

### **PHRYMACEAE—LOPSEED FAMILY**

*Mimulus aurantiacus*—orange bush monkeyflower

### **PLATANACEAE—PLANE TREE, SYCAMORE FAMILY**

*Platanus racemosa*—California sycamore

### **SALICACEAE—WILLOW FAMILY**

*Salix exigua*—narrowleaf willow  
*Salix gooddingii*—Goodding's willow  
*Salix lasiolepis*—arroyo willow

### **SOLANACEAE—NIGHTSHADE FAMILY**

- \* *Nicotiana glauca*—tree tobacco  
*Datura wrightii*—sacred thorn-apple

### **TAMARICACEAE—TAMARISK FAMILY**

- \* *Tamarix aphylla*—Athel tamarisk

## MONOCOTS

### **ARECACEAE—PALM FAMILY**

- \* *Washingtonia robusta*—Washington fan palm
- \* *Phoenix dactylifera*—date palm

### **POACEAE—GRASS FAMILY**

- \* *Arundo donax*—giant reed
- \* *Bromus diandrus*—ripgut brome
- \* *Digitaria sanguinalis*—hairy crabgrass

\* signifies introduced (non-native) species



# **APPENDIX B**

*Cumulative List of Wildlife Species  
Observed within the Study Area*



**APPENDIX B**  
**Wildlife Compendium**

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**BIRD**

**EMBERIZINES**

***EMBERIZIDAE—EMBERIZIDS***

*Melospiza melodia*—Song sparrow

*Melozona crissalis*—California towhee

**FINCHES**

***FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES***

*Spinus tristis*—American goldfinch

**HAWKS**

***ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES***

*Buteo lineatus*—Red-shouldered hawk

**HUMMINGBIRDS**

***TROCHILIDAE—HUMMINGBIRDS***

*Calypte anna*—Anna's hummingbird

**JAYS, MAGPIES AND CROWS**

***CORVIDAE—CROWS AND JAYS***

*Corvus brachyrhynchos*—American crow

**MOCKINGBIRDS AND THRASHERS**

***MIMIDAE—MOCKINGBIRDS AND THRASHERS***

*Mimus polyglottos*—Northern mockingbird

**WOOD WARBLERS AND ALLIES**

***PARULIDAE—WOOD-WARBLERS***

*Setophaga coronata*—Yellow-rumped warbler

**WRENS**

***TROGLODYTIDAE—WRENS***

*Campylorhynchus* —Cactus wren

## APPENDIX B (Continued)

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### INVERTEBRATE

#### CRAYFISH

##### ***CAMBARIDAE—FRESHWATER CRAYFISH***

*Procambarus* sp.—Crayfish

### MAMMAL

#### HARES AND RABBITS

##### ***LEPORIDAE—HARES AND RABBITS***

*Sylvilagus bachmani*—Brush rabbit

#### SQUIRRELS

##### ***SCIURIDAE—SQUIRRELS***

*Spermophilus (Otospermophilus) beecheyi*—California ground squirrel

\* signifies introduced (non-native) species

# **APPENDIX C**

*Special-Status Plants Potential to Occur Table*



## APPENDIX C

### Special-Status Plants with Potential to Occur

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Abronia maritima</i>	red sand- verbena	None/ None/ 4.2/ None	Coastal dunes/ perennial herb/ Feb-Nov/ 0-328	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Acanthomintha ilicifolia</i>	San Diego thorn-mint	FT/ SE/ 1B.1/ Covered	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/Clay, openings/ annual herb/ Apr-Jun/ 33-3150	Not expected to occur. No coastal scrub or chaparral on site and suitable clay soils are absent. Species known to occur on Las Posas, Olivenhain, Redding, Huerhuero, Altamont, Ciendeba, and Linne soils (75 FR 50454 50496). Species known to occur within the vicinity <sup>2</sup> .
<i>Acmispon prostratus</i>	Nuttall's acmispon	None/ None/ 1B.1/ None	Coastal dunes, Coastal scrub(sandy)/ annual herb/ Mar-Jun(Jul)/ 0-33	Not expected to occur. The site is outside of the species' known elevation range.
<i>Adolphia californica</i>	California adolphia	None/ None/ 2B.1/ None	Chaparral, Coastal scrub, Valley and foothill grassland/clay/ perennial deciduous shrub/ Dec-May/ 148-2428	Not expected to occur. The site is located within the species' known elevation range; however, coastal scrub is limited in extent on site and is disturbed. Shrub would have been observed during surveys if present. Species is known to occur within the vicinity <sup>2</sup> .
<i>Agave shawii</i> var. <i>shawii</i>	Shaw's agave	None/ None/ 2B.1/ None	Coastal bluff scrub, Coastal scrub/ perennial leaf succulent/ Sep-May/ 33-394	Not expected to occur. The site is outside of the species' known elevation range.
<i>Ambrosia pumila</i>	San Diego ambrosia	FE/ None/ 1B.1/ Covered	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/sandy loam or clay, often in disturbed areas, sometimes alkaline/ perennial rhizomatous herb/ Apr-Oct/ 66-1362	Moderate potential to occur. Suitable sandy loam soils on site and the species is known to occur along drainages and river channels in western San Diego County (75 FR 74546 74604). Species is known to occur within the vicinity <sup>2</sup> .
<i>Aphanisma blitoides</i>	aphanisma	None/ None/ 1B.2/ None	Coastal bluff scrub, Coastal dunes, Coastal scrub/sandy/ annual herb/ Mar-Jun/ 3-1001	Low potential to occur. The site is located within the species' known elevation range; however, due to the disturbed nature and limited extent of coastal scrub present, species has a low potential to occur.

## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	Del Mar manzanita	FE/ None/ 1B.1/ Covered	Chaparral(maritime, sandy)/ perennial evergreen shrub/ Dec-Jun/ 0-1198	Not expected to occur. No suitable vegetation present and evergreen shrub would have been observed during surveys if present.
<i>Arctostaphylos rainbowensis</i>	Rainbow manzanita	None/ None/ 1B.1/ None	Chaparral/ perennial evergreen shrub/ Dec-Mar/ 673-2198	Not expected to occur. No suitable vegetation present and evergreen shrub would have been observed during surveys if present.
<i>Artemisia palmeri</i>	San Diego sagewort	None/ None/ 4.2/ None	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland/sandy, mesic/ perennial deciduous shrub/ (Feb),May-Sep/ 49-3002	Low potential to occur. Suitable riparian vegetation and sandy soils are found on site, however perennial shrub would have been observed during surveys. Species is known to occur within the vicinity <sup>2</sup> .
<i>Asplenium vespertinum</i>	western spleenwort	None/ None/ 4.2/ None	Chaparral, Cismontane woodland, Coastal scrub/rocky/ perennial rhizomatous herb/ Feb-Jun/ 591-3281	Low potential to occur. The site is located within the species' known elevation range and suitable vegetation is present; however, site lacks rocky habitat.
<i>Astragalus oocarpus</i>	San Diego milk-vetch	None/ None/ 1B.2/ None	Chaparral(openings), Cismontane woodland/ perennial herb/ May-Aug/ 1001-5000	Not expected to occur. The site is outside of the species' known elevation range.
<i>Astragalus tener</i> var. <i>titi</i>	coastal dunes milk-vetch	FE/ SE/ 1B.1/ None	Coastal bluff scrub(sandy), Coastal dunes, Coastal prairie(mesic)/often vernal mesic areas/ annual herb/ Mar-May/ 3-164	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable coastal vegetation present.
<i>Atriplex coulteri</i>	Coulter's saltbush	None/ None/ 1B.2/ None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland/alkaline or clay/ perennial herb/ Mar-Oct/ 10-1509	Not expected to occur. The site is located within the species' known elevation range; however, there are no suitable soils found on site.
<i>Atriplex pacifica</i>	South Coast saltscale	None/ None/ 1B.2/ None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/ annual herb/ Mar-Oct/ 0-459	Not expected to occur. The site is outside of the species' known elevation range.
<i>Atriplex parishii</i>	Parish's brittle-scale	None/ None/ 1B.1/ None	Chenopod scrub, Playas, Vernal pools/alkaline/ annual herb/ Jun-Oct/ 82-6234	Not expected to occur. No suitable vegetation present.
<i>Baccharis vanessae</i>	Encinitas baccharis	FT/ SE/ 1B.1/ Covered	Chaparral(maritime), Cismontane woodland/sandstone/ perennial deciduous shrub/ Aug-Nov/ 197-2362	Not expected to occur. Suitable vegetation is present; however, site lacks suitable soils and shrub would have been observed during surveys if present. Species is known to occur within the vicinity <sup>2</sup> .



## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Berberis nevinii</i>	Nevin's barberry	FE/ SE/ 1B.1/ None	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub/sandy or gravelly/ perennial evergreen shrub/ Mar-Jun/ 899-2707	Not expected to occur. Suitable vegetation is present; however, the site is outside of the species' known elevation range and evergreen shrub would have been observed during surveys if present.
<i>Bergerocactus emoryi</i>	golden-spined cereus	None/ None/ 2B.2/ None	Closed-cone coniferous forest, Chaparral, Coastal scrub/sandy/ perennial stem succulent/ May-Jun/ 10-1296	Not expected to occur. The site is located within the species' known elevation range and there is one small patch of disturbed cactus scrub; however, conspicuous stem succulent would have been observed during surveys if present.
<i>Bloomeria clevelandii</i>	San Diego goldenstar	None/ None/ 1B.1/ Covered	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/clay/ perennial bulbiferous herb/ Apr-May/ 164-1526	Not expected to occur. No suitable habitat or clay soils found on site. Species is known to occur within the vicinity <sup>2</sup> .
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT/ SE/ 1B.1/ Covered	Chaparral(openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools/often clay/ perennial bulbiferous herb/ Mar-Jun/ 82-3675	Low potential to occur. The site is located within the species' known elevation range and species is known to occur on Fallbrook soils; however, there is very limited suitable habitat found on site. Species is known to occur within the vicinity <sup>2</sup> .
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	None/ None/ 1B.1/ Covered	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland, Vernal pools/mesic, clay, sometimes serpentinite/ perennial bulbiferous herb/ May-Jul/ 98-5551	Low potential to occur. The site is located within the species' known elevation range however, suitable vernal pools are absent.
<i>Calandrinia breweri</i>	Brewer's calandrinia	None/ None/ 4.2/ None	Chaparral, Coastal scrub/sandy or loamy, disturbed sites and burns/ annual herb/ Mar-Jun/ 33-4003	Low potential to occur. The site is located within the species' known elevation range, suitable soils are present and species is found within disturbed sites.
<i>California macrophylla</i>	round-leaved filaree	None/ None/ 1B.1/ None	Cismontane woodland, Valley and foothill grassland/clay/ annual herb/ Mar-May/ 49-3937	Low potential to occur. The site is located within the species' known elevation range and suitable woodland is present; however, site lacks suitable soils.

## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Calochortus dunnii</i>	Dunn's mariposa lily	None/ SR/ 1B.2/ None	Closed-cone coniferous forest, Chaparral, Valley and foothill grassland/gabbroic or metavolcanic, rocky/ perennial bulbiferous herb/ (Feb),Apr-Jun/ 607-6004	Not expected to occur. No suitable vegetation present.
<i>Camissoniopsis lewisii</i>	Lewis' evening- primrose	None/ None/ 3/ None	Coastal bluff scrub, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland/sandy or clay/ annual herb/ Mar-May(Jun)/ 0-984	Low potential to occur. The site is located within the species' known elevation range and suitable vegetation is present; however, suitable soils are absent.
<i>Ceanothus cyaneus</i>	Lakeside ceanothus	None/ None/ 1B.2/ None	Closed-cone coniferous forest, Chaparral/ perennial evergreen shrub/ Apr-Jun/ 771-2477	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. Evergreen shrub would have been observed during surveys if present
<i>Ceanothus verrucosus</i>	wart-stemmed ceanothus	None/ None/ 2B.2/ Covered	Chaparral/ perennial evergreen shrub/ Dec-May/ 3-1247	Not expected to occur. No suitable vegetation present and evergreen shrub would have been observed during surveys if present. Species is known to occur within the vicinity <sup>2</sup> .
<i>Centromadia parryi</i> <i>ssp. australis</i>	southern tarplant	None/ None/ 1B.1/ None	Marshes and swamps(margins), Valley and foothill grassland(vernal mesic), Vernal pools/ annual herb/ May- Nov/ 0-1575	Low potential to occur. Site is located within the species' known elevation range; however, suitable vegetation is absent. Species is known to occur within the vicinity <sup>2</sup> .
<i>Centromadia pungens</i> <i>ssp. laevis</i>	smooth tarplant	None/ None/ 1B.1/ None	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland/alkaline/ annual herb/ Apr-Sep/ 0-2100	Moderate potential to occur. Suitable riparian habitat found on site and the site is located within the species' known elevation range. Species is known to occur within the vicinity <sup>2</sup> .
<i>Chaenactis</i> <i>glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	None/ None/ 1B.1/ None	Coastal bluff scrub(sandy), Coastal dunes/ annual herb/ Jan-Aug/ 0-328	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Chamaebatia australis</i>	southern mountain misery	None/ None/ 4.2/ None	Chaparral(gabbroic or metavolcanic)/ perennial evergreen shrub/ Nov-May/ 984-3346	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. Evergreen shrub would have been observed during surveys if present

## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	salt marsh bird's-beak	FE/ SE/ 1B.2/ None	Coastal dunes, Marshes and swamps(coastal salt)/ annual herb (hemiparasitic)/ May-Oct/ 0-98	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Chorizanthe leptotheca</i>	Peninsular spineflower	None/ None/ 4.2/ None	Chaparral, Coastal scrub, Lower montane coniferous forest/alluvial fan, granitic/ annual herb/ May-Aug/ 984- 6234	Not expected to occur. The site is outside of the species' known elevation range.
<i>Chorizanthe orcuttiana</i>	Orcutt's spineflower	FE/ SE/ 1B.1/ None	Closed-cone coniferous forest, Chaparral(maritime), Coastal scrub/sandy openings/ annual herb/ Mar-May/ 10- 410	Not expected to occur. The site is outside of the species' known elevation range.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	None/ None/ 1B.2/ None	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools/often clay/ annual herb/ Apr-Jul/ 98-5020	Not expected to occur. No suitable vegetation or soils found on site.
<i>Cistanthe maritima</i>	seaside cistanthe	None/ None/ 4.2/ None	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland/sandy/ annual herb/ (Feb),Mar-Jun(Aug)/ 16-984	Not expected to occur. No suitable habitat found on site.
<i>Clarkia delicata</i>	delicate clarkia	None/ None/ 1B.2/ None	Chaparral, Cismontane woodland/often gabbroic/ annual herb/ Apr-Jun/ 771-3281	Low potential to occur. There is suitable woodland present; however, the site is slightly outside of the species' known elevation range. Species is known to occur within the vicinity <sup>2</sup> .
<i>Clinopodium chandleri</i>	San Miguel savory	None/ None/ 1B.2/ None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland/Rocky, gabbroic or metavolcanic/ perennial shrub/ Mar-Jul/ 394-3527	Not expected to occur. The site is located within the species' known elevation range and suitable woodland is present; however, there are no suitable soils found on site. Shrub would have been observed during surveys if present
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer holly	None/ None/ 1B.2/ Covered	Chaparral, Cismontane woodland/ perennial evergreen shrub/ Apr-Jun/ 98-2592	Not expected to occur. Suitable woodland is present and species is known to occur within the vicinity <sup>2</sup> ; however, evergreen shrub would have been observed during surveys if present
<i>Convolvulus simulans</i>	small- flowered morning-glory	None/ None/ 4.2/ None	Chaparral(openings), Coastal scrub, Valley and foothill grassland/clay, serpentinite seeps/ annual herb/ Mar-Jul/ 98-2297	Low potential to occur. The site is located within the species' known elevation range; however, there is a limited amount of disturbed coastal scrub present.

## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	San Diego sand aster	None/ None/ 1B.1/ None	Coastal bluff scrub, Chaparral, Coastal scrub/ perennial herb/ Jun-Sep/ 10-377	Not expected to occur. The site is outside of the species' known elevation range.
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Del Mar Mesa sand aster	None/ None/ 1B.1/ None	Coastal bluff scrub, Chaparral(maritime, openings), Coastal scrub/sandy/ perennial herb/ May-Sep/ 49-492	Not expected to occur. The site is outside of the species' known elevation range.
<i>Cylindropuntia californica</i> var. <i>californica</i>	snake cholla	None/ None/ 1B.1/ None	Chaparral, Coastal scrub/ perennial stem succulent/ Apr-May/ 98-492	Not expected to occur. The site is outside of the species' known elevation range and conspicuous stem succulent would have been observed during surveys if present.
<i>Deinandra paniculata</i>	paniculate tarplant	None/ None/ 4.2/ None	Coastal scrub, Valley and foothill grassland, Vernal pools/usually vernal mesic, sometimes sandy/ annual herb/ Apr-Nov/ 82-3084	Low potential to occur. The site is located within the species' known elevation range; however, there is a limited amount of disturbed coastal scrub present.
<i>Dichondra occidentalis</i>	western dichondra	None/ None/ 4.2/ None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/ perennial rhizomatous herb/ (Jan),Mar-Jul/ 164-1640	Low potential to occur. The site is located within the species' known elevation range and suitable vegetation is present.
<i>Dudleya brevifolia</i>	short-leaved dudleya	None/ SE/ 1B.1/ None	Chaparral(maritime, openings), Coastal scrub/Torrey sandstone/ perennial herb/ Apr-May/ 98-820	Low potential to occur. The site is located within the species' known elevation range and there is a limited amount of vegetation present; however, site lacks suitable soils.
<i>Dudleya variegata</i>	variegated dudleya	None/ None/ 1B.2/ Covered	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools/clay/ perennial herb/ Apr-Jun/ 10-1903	Low potential to occur. The site is located within the species' known elevation range and suitable vegetation is present; however, no suitable soils found on site. Species is known to occur within the vicinity <sup>2</sup> .
<i>Dudleya viscida</i>	sticky dudleya	None/ None/ 1B.2/ Covered	Coastal bluff scrub, Chaparral, Cismontane woodland, Coastal scrub/rocky/ perennial herb/ May-Jun/ 33-1804	Not expected to occur. No suitable soils found on site. Species is not known to occur within the vicinity <sup>2</sup> .
<i>Ericameria palmeri</i> var. <i>palmeri</i>	Palmer's goldenbush	None/ None/ 1B.1/ None	Chaparral, Coastal scrub/mesic/ perennial evergreen shrub/ (Jul),Sep-Nov/ 98-1969	Not expected to occur. Limited suitable vegetation found on site and conspicuous evergreen shrub would have been detected during surveys. Species is known to occur within the vicinity <sup>2</sup> .

## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	FE/ SE/ 1B.1/ None	Coastal scrub, Valley and foothill grassland, Vernal pools/mesic/ annual / perennial herb/ Apr-Jun/ 66-2034	Not expected to occur. No suitable vernal pools found on site. Species is known to occur within the vicinity <sup>2</sup> .
<i>Euphorbia misera</i>	cliff spurge	None/ None/ 2B.2/ None	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub/rocky/ perennial shrub/ Dec-Aug(Oct)/ 33-1640	Not expected to occur. Limited suitable vegetation and no suitable soils found on site.
<i>Ferocactus viridescens</i>	San Diego barrel cactus	None/ None/ 2B.1/ Covered	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/ perennial stem succulent/ May-Jun/ 10-1476	Not expected to occur. Limited cactus scrub found on site and conspicuous stem succulent would have been observed during surveys. Species is known to occur within the vicinity <sup>2</sup> .
<i>Frankenia palmeri</i>	Palmer's frankenian	None/ None/ 2B.1/ None	Coastal dunes, Marshes and swamps(coastal salt), Playas/ perennial herb/ May-Jul/ 0-33	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Geothallus tuberosus</i>	Campbell's liverwort	None/ None/ 1B.1/ None	Coastal scrub(mesic), Vernal pools/mesic soil/ ephemeral liverwort/ N.A./ 33-1969	Not expected to occur. No suitable vernal pools found on site.
<i>Githopsis diffusa</i> ssp. <i>filicaulis</i>	Mission Canyon bluecup	None/ None/ 3.1/ None	Chaparral(mesic, disturbed areas)/ annual herb/ Apr-Jun/ 1476-2297	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Grindelia hallii</i>	San Diego gumplant	None/ None/ 1B.2/ None	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland/ perennial herb/ May-Oct/ 607-5725	Not expected to occur. No suitable vegetation present.
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	None/ None/ 4.2/ None	Chaparral, Coastal scrub, Valley and foothill grassland/clay/ annual herb/ Mar-May/ 66-3133	Not expected to occur. Limited suitable vegetation and no suitable soils found on site.
<i>Hazardia orcuttii</i>	Orcutt's hazardia	FC/ CT/ 1B.1/ None	Chaparral(maritime), Coastal scrub/often clay/ perennial evergreen shrub/ Aug-Oct/ 262-279	Not expected to occur. The site is outside of the species' known elevation range.
<i>Heterotheca</i> <i>sessiliflora</i> ssp. <i>sessiliflora</i>	beach goldenaster	None/ None/ 1B.1/ None	Chaparral(coastal), Coastal dunes, Coastal scrub/ perennial herb/ Mar-Dec/ 0-4019	Not expected to occur. No suitable coastal dune habitat found on site. Limited coastal scrub found on site; species not known to occur in the vicinity <sup>2</sup> .
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	graceful tarplant	None/ None/ 4.2/ None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/ annual herb/ May-Nov/ 197-3609	Low potential to occur. The site is located within the species' known elevation range and suitable vegetation is present.

## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Hordeum intercedens</i>	vernal barley	None/ None/ 3.2/ None	Coastal dunes, Coastal scrub, Valley and foothill grassland(saline flats and depressions), Vernal pools/ annual herb/ Mar-Jun/ 16-3281	Not expected to occur. No suitable coastal dune habitat or vernal pools found on site.
<i>Horkelia truncata</i>	Ramona horkelia	None/ None/ 1B.3/ None	Chaparral, Cismontane woodland/clay, gabbroic/ perennial herb/ May-Jun/ 1312-4265	Not expected to occur. The site is outside of the species' known elevation range.
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	None/ None/ 1B.2/ None	Chaparral, Coastal scrub(sandy, often in disturbed areas)/ perennial shrub/ Apr-Nov/ 33-443	Not expected to occur. The site is outside of the species' known elevation range.
<i>Iva hayesiana</i>	San Diego marsh-elder	None/ None/ 2B.2/ Covered	Marshes and swamps, Playas/ perennial herb/ Apr-Oct/ 33-1640	Not expected to occur. Suitable vegetation found on site and species is known to occur within the vicinity <sup>2</sup> , but this perennial herb is conspicuous and would have been detected during surveys conducted, if present.
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	southwestern spiny rush	None/ None/ 4.2/ None	Coastal dunes(mesic), Meadows and seeps(alkaline seeps), Marshes and swamps(coastal salt)/ perennial rhizomatous herb/ (Mar),May-Jun/ 10-2953	Not expected to occur. No suitable vegetation found on site.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	None/ None/ 1B.1/ None	Marshes and swamps(coastal salt), Playas, Vernal pools/ annual herb/ Feb-Jun/ 3-4003	Not expected to occur. No suitable vegetation found on site.
<i>Lepechinia cardiophylla</i>	heart-leaved pitcher sage	None/ None/ 1B.2/ None	Closed-cone coniferous forest, Chaparral, Cismontane woodland/ perennial shrub/ Apr-Jul/ 1706-4495	Not expected to occur. The site is outside of the species' known elevation range.
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/ None/ 4.3/ None	Chaparral, Coastal scrub/ annual herb/ Jan-Jul/ 3-2904	Low potential to occur. Limited suitable vegetation found on site is in a disturbed state. Species is known to occur within the vicinity <sup>2</sup> .
<i>Leptosiphon grandiflorus</i>	large-flowered leptosiphon	None/ None/ 4.2/ None	Coastal bluff scrub, Closed-cone coniferous forest, Cismontane woodland, Coastal dunes, Coastal prairie, Coastal scrub, Valley and foothill grassland/usually sandy/ annual herb/ Apr-Aug/ 16-4003	Low potential to occur. Suitable vegetation and soils found on site, but species is not known to occur within the vicinity <sup>2</sup> .
<i>Leptosyne maritima</i>	sea dahlia	None/ None/ 2B.2/ None	Coastal bluff scrub, Coastal scrub/ perennial herb/ Mar-May/ 16-492	Not expected to occur. The site is outside of the species' known elevation range.
<i>Lycium californicum</i>	California box-thorn	None/ None/ 4.2/ None	Coastal bluff scrub, Coastal scrub/ perennial shrub/ (Dec),Mar-Aug/ 16-492	Not expected to occur. The site is outside of the species' known elevation range.

## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Microseris douglasii</i> ssp. <i>platycarpa</i>	small- flowered microseris	None/ None/ 4.2/ None	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools/clay/ annual herb/ Mar-May/ 49- 3510	Low potential to occur. Limited suitable vegetation and no suitable soils found on site.
<i>Mimulus diffusus</i>	Palomar monkeyflower	None/ None/ 4.3/ None	Chaparral, Lower montane coniferous forest/sandy or gravelly/ annual herb/ Apr-Jun/ 4003-6004	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella	None/ None/ 1B.2/ None	Chaparral, Cismontane woodland/ perennial rhizomatous herb/ Jun-Aug/ 984-5167	Not expected to occur. The site is outside of the species' known elevation range.
<i>Monardella viminea</i>	willowy monardella	FE/ SE/ 1B.1/ None	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland/alluvial ephemeral washes/ perennial herb/ Jun-Aug/ 164-738	Low potential to occur. The site is located within the species' known elevation range and suitable vegetation and ephemeral washes found on site.
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	None/ None/ 3.1/ None	Valley and foothill grassland, Vernal pools(alkaline)/ annual herb/ Mar-Jun/ 66-2100	Not expected to occur. No suitable vegetation present.
<i>Navarretia fossalis</i>	spreading navarretia	FT/ None/ 1B.1/ None	Chenopod scrub, Marshes and swamps(assorted shallow freshwater), Playas, Vernal pools/ annual herb/ Apr-Jun/ 98-2149	Not expected to occur. No suitable marshes or swamps found on site.
<i>Nemacaulis denudata</i> var. <i>denudata</i>	coast woolly- heads	None/ None/ 1B.2/ None	Coastal dunes/ annual herb/ Apr-Sep/ 0-328	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Nolina cismontana</i>	chaparral nolina	None/ None/ 1B.2/ None	Chaparral, Coastal scrub/sandstone or gabbro/ perennial evergreen shrub/ (Mar),May-Jul/ 459-4183	Not expected to occur. No suitable vegetation or soils found on site and perennial shrub would have been observed during surveys.
<i>Ophioglossum</i> <i>californicum</i>	California adder's- tongue	None/ None/ 4.2/ None	Chaparral, Valley and foothill grassland, Vernal pools(margins)/mesic/ perennial rhizomatous herb/ (Dec),Jan-Jun/ 197-1722	Not expected to occur. No suitable vegetation present.
<i>Orcuttia californica</i>	California Orcutt grass	FE/ SE/ 1B.1/ None	Vernal pools/ annual herb/ Apr-Aug/ 49-2165	Not expected to occur. No suitable vegetation present.
<i>Orobanche parishii</i> ssp. <i>brachyloba</i>	short-lobed broomrape	None/ None/ 4.2/ None	Coastal bluff scrub, Coastal dunes, Coastal scrub/sandy/ perennial herb (parasitic)/ Apr-Oct/ 10-1001	Low potential to occur. No suitable coastal bluff or dune habitat found on site. Coastal scrub on site is limited to a small disturbed stand.

## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Packera ganderi</i>	Gander's ragwort	None/ CR/ 1B.2/ None	Chaparral(burns, gabbroic outcrops)/ perennial herb/ Apr-Jun/ 1312-3937	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Pentachaeta aurea</i> ssp. <i>aurea</i>	golden-rayed pentachaeta	None/ None/ 4.2/ None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland, Valley and foothill grassland/ annual herb/ Mar-Jul/ 262-6070	Low potential to occur. The site is located within the species' known elevation range and suitable vegetation is present.
<i>Phacelia ramosissima</i> var. <i>australtoralis</i>	south coast branching phacelia	None/ None/ 3.2/ None	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps(coastal salt)/sandy, sometimes rocky/ perennial herb/ Mar-Aug/ 16-984	Low potential to occur. Limited suitable coastal scrub habitat and no dune habitat found on site.
<i>Phacelia stellaris</i>	Brand's star phacelia	None/ None/ 1B.1/ None	Coastal dunes, Coastal scrub/ annual herb/ Mar-Jun/ 3-1312	Low potential to occur. Limited suitable coastal scrub habitat and no dune habitat found on site.
<i>Pinus torreyana</i> ssp. <i>torreyana</i>	Torrey pine	None/ None/ 1B.2/ None	Closed-cone coniferous forest, Chaparral/Sandstone/ perennial evergreen tree/ N.A./ 246-525	Not expected to occur. No suitable vegetation present or soils present. Evergreen tree would have been observed during surveys if present.
<i>Piperia cooperi</i>	chaparral rein orchid	None/ None/ 4.2/ None	Chaparral, Cismontane woodland, Valley and foothill grassland/ perennial herb/ Mar-Jun/ 49-5200	Low potential to occur. Suitable vegetation present; however, species is not known to occur within the vicinity <sup>2</sup> .
<i>Pogogyne abramsii</i>	San Diego mesa mint	FE/ SE/ 1B.1/ None	Vernal pools/ annual herb/ Mar-Jul/ 295-656	Not expected to occur. No suitable vegetation present.
<i>Pogogyne nudiuscula</i>	Otay Mesa mint	FE/ SE/ 1B.1/ None	Vernal pools/ annual herb/ May-Jul/ 295-820	Not expected to occur. No suitable vegetation present.
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish's milkwort	None/ None/ 4.3/ None	Chaparral, Cismontane woodland, Riparian woodland/ perennial deciduous shrub/ May-Aug/ 328-3281	Low potential to occur. The site is located within the species' known elevation range and suitable vegetation is found on site. However, perennial shrub would have been observed during surveys.
<i>Psilocarphus brevissimus</i> var. <i>multiflorus</i>	Delta woolly-marbles	None/ None/ 4.2/ None	Vernal pools/ annual herb/ May-Jun/ 33-1640	Not expected to occur. No suitable vegetation present.



## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Quercus cedrosensis</i>	Cedros Island oak	None/ None/ 2B.2/ None	Closed-cone coniferous forest, Chaparral, Coastal scrub/ perennial evergreen tree/ Apr-May/ 837-3150	Not expected to occur. The site is outside of the species' known elevation range. Evergreen tree would have been observed during surveys if present.
<i>Quercus dumosa</i>	Nuttall's scrub oak	None/ None/ 1B.1/ None	Closed-cone coniferous forest, Chaparral, Coastal scrub/sandy, clay loam/ perennial evergreen shrub/ Feb-Apr(Aug)/ 49-1312	Not expected to occur. No suitable vegetation present. Evergreen shrub would have been observed during surveys.
<i>Quercus engelmannii</i>	Engelmann oak	None/ None/ 4.2/ Covered	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/ perennial deciduous tree/ Mar-Jun/ 164-4265	Not expected to occur. Suitable vegetation is present and site is located within species' known elevation range; however, deciduous tree would have been observed during surveys.
<i>Selaginella cinerascens</i>	ashy spike-moss	None/ None/ 4.1/ None	Chaparral, Coastal scrub/ perennial rhizomatous herb/ N.A./ 66-2100	Not expected to occur. Limited suitable vegetation found on site and not known from within the vicinity <sup>2</sup> .
<i>Senecio aphanactis</i>	chaparral ragwort	None/ None/ 2B.2/ None	Chaparral, Cismontane woodland, Coastal scrub/sometimes alkaline/ annual herb/ Jan-Apr/ 49-2625	Not expected to occur. Suitable vegetation present; however, no suitable soils found on site. Species not known from within the vicinity <sup>2</sup> .
<i>Sphaerocarpos drewei</i>	bottle liverwort	None/ None/ 1B.1/ None	Chaparral, Coastal scrub/openings, soil/ ephemeral liverwort/ N.A./ 295-1969	Not expected to occur. Limited suitable vegetation found on site and not known from within the vicinity <sup>2</sup> .
<i>Stemodia durantifolia</i>	purple stemodia	None/ None/ 2B.1/ None	Sonoran desert scrub(often mesic, sandy)/ perennial herb/ Jan-Dec/ 591-984	Not expected to occur. No suitable vegetation present.
<i>Stipa diegoensis</i>	San Diego County needle grass	None/ None/ 4.2/ None	Chaparral, Coastal scrub/rocky, often mesic/ perennial herb/ Feb-Jun/ 33-2625	Not expected to occur. Limited suitable vegetation and no suitable soils found on site.
<i>Suaeda esteroa</i>	estuary seablite	None/ None/ 1B.2/ None	Marshes and swamps(coastal salt)/ perennial herb/ May-Oct(Jan)/ 0-16	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

## APPENDIX C (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/CRPR/ Escondido Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur <sup>2</sup>
<i>Suaeda taxifolia</i>	woolly seablite	None/ None/ 4.2/ None	Coastal bluff scrub, Coastal dunes, Marshes and swamps(margins of coastal salt)/ perennial evergreen shrub/ Jan-Dec/ 0-164	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	None/ None/ 1B.2/ Covered	Chaparral, Coastal scrub/ perennial deciduous shrub/ Apr- May/ 541-3281	Not expected to occur. No suitable vegetation is present. Shrub would have been observed during surveys if present.
<i>Texosporium sancti- jacobi</i>	woven-spored lichen	None/ None/ 3/ None	Chaparral(openings)/On soil, small mammal pellets, dead twigs, and on <i>Selaginella</i> spp/ <i>crustose lichen (terricolous)</i> / N.A./ 951-2165	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Triquetrella californica</i>	coastal triquetrella	None/ None/ 1B.2/ None	Coastal bluff scrub, Coastal scrub/soil/ moss/ N.A./ 33-328	Not expected to occur. The site is outside of the species' known elevation range.
<i>Viguiera laciniata</i>	San Diego County viguiera	None/ None/ 4.2/ None	Chaparral, Coastal scrub/ perennial shrub/ Feb-Jun(Aug)/ 197-2461	Not expected to occur. Limited suitable vegetation found on site and conspicuous shrub would have been detected.
<i>Xanthisma junceum</i>	rush-like bristleweed	None/ None/ 4.3/ None	Chaparral, Coastal scrub/ perennial herb/ Jun-Jan/ 787- 3281	Not expected to occur. The site is outside of the species' known elevation range.

<sup>1</sup> Status Legend:

**Federal**

FE: Federally listed as endangered  
 FT: Federally listed as threatened  
 FC: Federal Candidate for listing

**State**

SE: State listed as endangered  
 ST: State listed as threatened  
 SR: State Rare

**CRPR**

CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere  
 CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere  
 CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere  
 CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere  
 CRPR 3: Plants About Which More Information is Needed - A Review List  
 CRPR 4: Plants of Limited Distribution - A Watch List

.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)  
 .2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

## APPENDIX C (Continued)

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.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

**Multiple Habitat Conservation Program (MHCP) Escondido Subarea Plan**

Covered: MHCP species occurring or potentially occurring in Escondido

<sup>2</sup> **Potential to Occur Designations:**

Found within the vicinity: Escondido quadrangle

Found within the region: CNDDDB 9-quad search

## APPENDIX C (Continued)

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# **APPENDIX D**

## *Special-Status Wildlife Potential to Occur Table*



## APPENDIX D

### Special-Status Wildlife Species Potential To Occur

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/ MCHP Subarea Plan/ Other	Primary Habitat Associations	Status on Site or Potential to Occur <sup>2</sup>
<i>Amphibians</i>				
<i>Anaxyrus californicus</i>	Arroyo toad	FE/SSC/None/ None	Stream channels for breeding (typically 3rd order); adjacent stream terraces and uplands for foraging and wintering	Low potential to occur. Although the site contains a perennial stream it lacks the stream terraces to be considered suitable habitat. There is a USFWS occurrence of this species within 3 miles of the project site.
<i>Rana draytonii</i>	California red-legged frog	FT/ SSC/ Covered/None	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Low potential to occur. Although the site contains a perennial stream it lacks the depth and emergent vegetation to be considered suitable habitat.
<i>Scaphiopus (= Spea ) hammondi</i>	Western spadefoot toad	None/ SSC/ Covered/None	Most common in grasslands, coastal sage scrub near rain pools or vernal pools; riparian habitats	Low potential to occur. No suitable grasslands coastal sage scrub or vernal pools occur on site. Found within the vicinity.
<i>Reptiles</i>				
<i>Aspidoscelis hyperythra</i>	Orange-throated whiptail	None/SSC/ Covered/None	Chaparral Cismontane woodland, coastal scrub	Moderate potential to occur in dSCS and SCLOW. Found within the vicinity.
<i>Aspidoscelis tigris stejnegeri</i>	Coastal whiptail	None/None/ None/None	Coastal sage scrub, chaparral, grassland, juniper and oak woodland	Moderate potential to occur in dSCS and SCLOW Found within the vicinity.
<i>Charina trivirgata</i>	Rosy boa	None/None/ None/None	Chaparral, Mojavean desert scrub, Sonoran desert scrub	Not expected to occur on site due to very limited scrub habitat present and highly disturbed character of site. Found within the vicinity.
<i>Crotalus ruber</i>	Red-diamond rattlesnake	None/SSC/ None/None	Variety of shrub habitats where there is heavy brush, large rocks, or boulders	Low potential to occur. The site is generally lacking in boulders and shrubs and is highly disturbed from past agricultural activity. Found within the vicinity.
<i>Diadophis punctatus similis</i>	San Diego ringneck snake	None/None/ None/None	Open, rocky areas in moist habitats near intermittent streams: marsh, riparian woodland, sage scrub	Moderate potential to occur. Suitable riparian habitat occurs on site.

## APPENDIX D (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/ MCHP Subarea Plan/ Other	Primary Habitat Associations	Status on Site or Potential to Occur <sup>2</sup>
<i>Emys marmorata</i>	Western pond turtle	None/SSC/ Covered/None	Slow-moving permanent or intermittent streams, ponds, small lakes, reservoirs with emergent basking sites; adjacent uplands used during winter. Found in coast ranges, central valley, below 1,800 meters.	Low potential to occur on site. Limited suitable habitat present, the perennial stream contains very little water (3 inches). Found within the vicinity.
<i>Phrynosoma coronatum</i> ( <i>blainvillei</i> population)	Coast horned lizard	None/SSC/ Covered/None	Coastal sage scrub, annual grassland, chaparral, oak and riparian woodland, coniferous forest	Low potential to occur. Limited suitable habitat occurs on site. Found within the vicinity.
<i>Plestiodon skiltonianus</i> <i>interparietalis</i>	Coronado Island skink	None/SSC/ None/None	Grassland, riparian and oak woodland; found in litter, rotting logs, under flat stones	Low potential to occur onsite. Limited suitable habitat present. Site dominated by disturbed habitat. Found within the vicinity.
<i>Salvadora hexalepis</i> <i>virgultea</i>	Coast patch-nosed snake	None/SSC/ None/None	Chaparral, washes, sandy flats, rocky areas	Low potential to occur. No chaparral or sandy washes occur on site.
<i>Thamnophis hammondi</i>	Two-striped garter snake	None/SSC/ None/None	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Moderate potential to occur. Suitable habitat on site.
<i>Birds</i>				
<i>Accipiter cooperii</i>	Cooper's hawk	None/WL/ Covered/None	Cismontane woodland, riparian forest, riparian woodland, upper montane coniferous forest	High potential to occur. Suitable coast live oak woodland is found on site.
<i>Agelaius tricolor</i> (nesting colony)	Tricolored blackbird	None/SSC/ Covered/None	Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Low potential to occur. No open water found on site.
<i>Aimophila ruficeps</i> <i>canescens</i>	Southern California rufous-crowned sparrow	None/WL/ Covered/None	Chaparral, coastal scrub	Low potential to occur. No chaparral or coastal sage scrub found on site. Found within the vicinity.
<i>Ammodramus savannarum</i>	Grasshopper sparrow	None/SSC/ Covered/None	Valley and foothill grassland	Low potential to occur. No grassland found on site.



## APPENDIX D (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/ MCHP Subarea Plan/ Other	Primary Habitat Associations	Status on Site or Potential to Occur <sup>2</sup>
<i>Aquila chrysaetos</i> (nesting and wintering)	Golden eagle	None/FP, WL/ Covered/None	Open country, especially hilly and mountainous regions; grassland, coastal sage scrub, chaparral, oak savannas, open coniferous forest	Moderate potential to forage, low potential to nest on site. The site is open with oak woodland but due to the limited space and surrounding residential development unlikely to support nesting habitat. Species typically requires inaccessible nesting sites that are more isolated from development than the site can provide.
<i>Artemisiospiza belli belli</i>	Bell's sage sparrow	None/WL/ Covered/None	Chaparral, coastal scrub	Low potential to occur. No chaparral or coastal sage scrub found on site. Found within the vicinity.
<i>Athene cunicularia</i> (burrow sites)	Burrowing owl	None/SSC/ Covered/None	Grassland, lowland scrub, agriculture, coastal dunes and other artificial open areas	Moderate potential to occur on site. Site contains open areas, however, no suitable burrows were observed during surveys. Found within the vicinity.
<i>Buteo swainsoni</i> (nesting)	Swainson's hawk	None/ST/None /None	Nests in open woodland and savanna, riparian and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Moderate potential to forage; low potential to nest. Typically prefer isolated large trees for nesting, which are not characteristic of the site. Suitable foraging habitat occurs on site, however very limited in size. Found within the vicinity.
<i>Campylorhynchus brunneicapillus sandiegensis</i>	Coastal cactus wren	None/SSC/ Covered/None	Southern cactus scrub, maritime succulent scrub, cactus thickets in coastal sage scrub. In arid parts of westward-draining slopes of Southern California.	High potential to occur. Observed in a palm tree immediately off site and could use cactus scrub areas on site for nesting. Found within the vicinity.
<i>Charadrius alexandrinus nivosus</i> (nesting)	Western snowy plover (coastal population)	FT/SSC/ None/None	Nests primarily on coastal beaches, in flat open areas, with sandy or saline substrates; less commonly in salt pans, dredged spoil disposal sites, dry salt ponds and levees	Not expected to occur. No suitable coastal beaches, site is 14 miles inland.

## APPENDIX D (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/ MCHP Subarea Plan/ Other	Primary Habitat Associations	Status on Site or Potential to Occur <sup>2</sup>
<i>Circus cyaneus</i> (nesting)	Northern harrier	None/ST/ Covered/None	Coastal salt and fresh-water marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas.	Moderate potential to forage, low potential to nest on site. The site is open with oak woodland but due to the limited space unlikely to support nesting habitat.
<i>Elanus leucurus</i> (nesting)	White-tailed kite	None/FP/ None/None	Open grasslands, savanna-like habitats, agriculture, wetlands, oak woodlands, riparian	Moderate potential to occur. Suitable oak woodland and riparian habitat occur on site.
<i>Empidonax traillii</i> <i>extimus</i>	Southwestern willow flycatcher	FE/SE/ Covered/None	Riparian woodlands along streams and rivers with mature, dense stands of willows or alders; may nest in thickets dominated by tamarisk	Low potential to occur in SCLOW along drainage. No willow thickets found on site. Found within the vicinity. There is a USFWS occurrence of this species within 3 miles of the project site.
<i>Eremophila alpestris</i> <i>actia</i>	California horned lark	None/WL/ None/None	Nests and forages in grasslands disturbed lands, agriculture, and beaches; nests in alpine fell fields of the high Sierra	High potential to occur. Suitable disturbed, agricultural habitat occurs on site.
<i>Icteria virens</i> (nesting)	Yellow-breasted chat	None/SSC/ Covered/None	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles and dense brush.	Low potential to occur. No willow thickets found on site. Found within the vicinity.
<i>Laterallus jamaicensis</i> <i>coturniculus</i>	California black rail	None/ST, FP/ None/None	Saline, brackish, and fresh emergent wetlands mostly in central coastal California	Not expected to occur. No suitable habitat on site.
<i>Numenius americanus</i> (nesting)	Long-billed curlew	None/WL/ Covered/None	Habitats on gravelly soils and gently rolling terrain are favored over others. Breeds in upland shortgrass prairies and wet meadows	Low potential to occur. No shortgrass prairies or wet meadows found on site.
<i>Pandion halieatus</i> (nesting)	Osprey	None/ WL/ Covered/None	Ocean shore, bays, fresh-water lakes, and larger streams.	Low potential to occur on site. No suitable nesting or open water foraging habitat occurs on site.
<i>Passerculus</i> <i>sandwichensis beldingi</i>	Belding's savannah sparrow	None/SE/ None/None	Scattered southern coastal salt marsh wetlands in southwestern California	Not expected to occur. No suitable habitat on site.
<i>Plegadis chihi</i>	White-faced ibis	None/WL/ Covered/None	Marsh and swamp, wetlands	Low potential to occur on site. No suitable marsh and swamp habitat present on site. Found within the vicinity.

## APPENDIX D (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/ MCHP Subarea Plan/ Other	Primary Habitat Associations	Status on Site or Potential to Occur <sup>2</sup>
<i>Polioptila californica californica</i>	Coastal California gnatcatcher	FT/SSC/ Covered/None	Coastal sage scrub, coastal sage scrub-chaparral mix, coastal sage scrub-grassland ecotone, riparian in late summer	Low potential to occur on site; not expected to nest on site. No suitable coastal sage scrub habitat occurs on site. Limited amount of dSCS on site (less than 1/5 of an acre; however the site is dominated by highly disturbed land from past agricultural activities. Found within the vicinity. There is a USFWS occurrence of this species within 3 miles of the project site.
<i>Rallus obsoletus levipes</i>	Ridgeway's Rail (formerly Light-footed clapper rail)	FE/SE, FP/ None/None	Coastal saline emergent wetlands along southern California from Santa Barbara Co. to San Diego Co.	Not expected to occur. No suitable habitat on site.
<i>Sialia mexicana</i>	Western bluebird	None/None/ Covered/None	Oak savannah, parks and agricultural lands where trees and open areas are present.	High potential to occur. Suitable habitat occurs on site.
<i>Sternula antillarum browni</i> (nesting colony)	California least tern	FE/SE, FP/ None/None	Breeding colonies located in marine and estuarine shores and in abandoned salt ponds and estuarine shores. Feeds in nearby waters.	Not expected to occur. No suitable habitat on site.
<i>Vireo bellii pusillus</i>	Least Bell's vireo	FE/SE/ Covered/None	Nests in southern willow scrub with dense cover within 1-2 meters of the ground; habitat includes willows, cottonwoods, baccharis, wild blackberry or mesquite on desert areas	Low potential to occur on site. Riparian area on site does not contain willows. Found within the vicinity. There is a USFWS occurrence of this species within 3 miles of the project site.
<i>Mammals</i>				
<i>Antrozous pallidus</i>	Pallid bat	None/SSC/ None/ WBWG: H	Grasslands, shrublands, woodlands, forests; most common in open dry habitats with rocky outcrops for roosting. Found throughout low elevations of California, except for high Sierra Nevada and northwestern corner of the state south to Mendocino Co.	Not expected to roost on site due to lack of rocky outcrops. Moderate potential to forage on site. Found within the vicinity.
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	None/SSC/ None/None	Coastal sage scrub, chaparral, riparian-scrub ecotone; more mesic areas	Low potential to occur. Limited suitable habitat found on site; site highly disturbed from past agricultural operations. Found within the vicinity.

## APPENDIX D (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/ MCHP Subarea Plan/ Other	Primary Habitat Associations	Status on Site or Potential to Occur <sup>2</sup>
<i>Chaetodipus fallax fallax</i>	Northwestern San Diego pocket mouse	None/SSC/ Covered/None	Coastal sage scrub, grassland, sage scrub-grassland ecotones, sparse chaparral; rocky substrates, loams and sandy loams	Low potential to occur on site. No coastal sage scrub habitat occurs on site. Site is highly disturbed from past agricultural operations.
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	None/SSC/ None/ WBWG: H	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland. Roosts in caves, mines, and buildings. Summer resident in San Diego Co. In southwestern US, typically observed in oak-conifer woodlands and semi desert grasslands.	Not expected to roost on site due to lack of suitable roosting habitat. Low potential to forage on site because species is rare in western San Diego County.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None/ CT, SSC/ Covered/ WBWG: H	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, also man-made structures and tunnels.	Low potential to roost and forage on site. Found within the vicinity.
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE/ST/ Covered/None	Coastal scrub, valley and foothill grassland	No potential to occur. No grassland available on site. Nearest populations are in Fallbrook and on Camp Pendleton, which are separated from the Project site by highly unsuitable land uses (intensive agriculture and urban development) and unsuitable vegetation (chaparral and dense coastal scrub).
<i>Euderma maculatum</i>	Spotted bat	None/SSC/ None/ WBWG: H	Arid deserts, grasslands and mixed conifer forests at elevations from below sea level to 10,000 feet. Roosts sites are cracks, crevices and caves, usually high in fractured rock cliffs.	No potential to roost on site due to lack of suitable roosting habitat. Low potential to forage on site.
<i>Eumops perotis californicus</i>	Western mastiff bat	None/SSC/ Covered/ WBWG: H	Primarily a cliff-dwelling species. Roosts under exfoliating rock slabs, or in small colonies in cracks and small holes in boulders and buildings.	Not expected to roost on site due to lack of suitable roosting habitat. Moderate potential to forage on site. Found within the vicinity.

## APPENDIX D (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/ MCHP Subarea Plan/ Other	Primary Habitat Associations	Status on Site or Potential to Occur <sup>2</sup>
<i>Odocoileus hemionus fuliginata</i>	Southern mule deer	None/None/ Covered/None	Conifer forests, oak woodlands, open scrub, chaparral, riparian areas and along the margins of meadows and grasslands.	High potential to occur. Suitable oak woodland occurs on site and the species is known to readily move through rural residential neighborhoods on the edge of urban cities within the county.
<i>Lasiurus blossevillii</i>	Western red bat	None/SSC/ None/ WBWG: H	Roosts in forests and woodlands and feeds over grasslands, shrublands, open woodlands and forests, and croplands. Roosts sites are often in edge habitats adjacent to streams, fields or urban areas.	Moderate potential to roost and forage on site. Suitable woodlands adjacent to stream occur on site.
<i>Lasiurus cinereus</i>	Hoary bat	None/None/ None/ WBWG: M	Broadleaved upland forest. Cismontane woodland. Lower montane coniferous forest. North coast coniferous forest.	No potential to roost due to lack of suitable roosting habitat. Moderate potential to forage on site due to presence of water. Found within the vicinity.
<i>Lasionycteris noctivagans</i>	Silver-haired bat	None/None/ None/WBWG: M	Old growth forest, maternity roosts in trees (primarily woodpecker hollows), large diameter snags 50 ft above ground; hibernates in hollow trees, under sloughing bark, in rock crevices, and occasionally in buildings, mines and caves; forages in or near coniferous or mixed deciduous forest, often following stream or river drainages	Not expected to roost on site due to lack of suitable roosting habitat. Low potential to forage on site due to lack of suitable foraging habitat.
<i>Lasiurus xanthinus</i>	Western yellow bat	None/SSC/ None/ WBWG: H	Valley foothill riparian, desert riparian, desert wash, and palm oasis habitats below 2,000 feet. Display a particular association with palms and desert riparian oases. Prefer tree-roosting under palm leaves, but also have been documented using cottonwood.	Not expected to roost on site due to lack of suitable roosting habitat. Low potential to forage on site. Species very uncommon in western San Diego County.
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/SSC/ Covered/None	Arid habitats with open ground; grasslands, coastal sage scrub, agriculture, disturbed areas, rangelands	Moderate potential to occur. Site contains open areas but lacks grassland or coastal sage scrub habitat. Found within the vicinity.

## APPENDIX D (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/ MCHP Subarea Plan/ Other	Primary Habitat Associations	Status on Site or Potential to Occur <sup>2</sup>
<i>Myotis ciliolabrum</i>	Western small-footed myotis	None/None/ None/WBVG: M	Caves, old mines, abandoned buildings	Not expected to roost on site due to lack of suitable roosting habitat. Moderate potential to forage on site due to presence of water.
<i>Myotis evotis</i>	Long-eared myotis	None/None/ None/ WBVG: M	Roosts in buildings, crevices, under bark, and snags. Caves used as night roosts. Feeds along habitat edges, in open habitats, and over water. Occurs primarily along entire coast and in Sierra Nevada, Cascades, Great Basin, and 0-2700 m	Not expected to roost on site due to lack of suitable roosting habitat. Moderate potential to forage on site due to presence of water.
<i>Myotis yumanensis</i>	Yuma myotis	None/None/ None/ WBVG: LM	Lower montane coniferous forest. Riparian forest. Riparian woodland. Upper montane coniferous forest.	Low potential to roost on site due to presence of riparian woodland. Moderate potential to forage on site due to presence of water.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/SSC/ None/None	Coastal sage scrub, chaparral, pinyon-juniper woodland with rock outcrops, cactus thickets, dense undergrowth	Low potential to occur due to very limited and disturbed suitable habitat on site. Found within the vicinity.
<i>Nyctinomops femorosaccus</i>	Pocketed free-tailed bat	None/SSC/ None/ WBVG: M	Rocky desert areas with high cliffs or rock outcrops; pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, palm oasis	Not expected to roost on site due to lack of suitable roosting habitat. Low potential to forage on site; more common in desert areas.. Found within the vicinity.
<i>Nyctinomops macrotis</i>	Big free-tailed bat	None/SSC/ None/ WBVG: MH	Rugged, rocky canyons in arid landscapes. Primarily roosts in crevices in rocks in cliffs, but also documented using buildings, caves and tree cavities.	Not expected to roost on site due to lack of suitable roosting habitat. Moderate potential to forage on site due to presence of water. Found in vicinity.
<i>Puma concolor</i>	Mountain lion	None/None/ Covered/None	Live in dense bottomland vegetation, also found in adjacent, rocky uplands.	Low potential to occur. Limited suitable habitat found on site and site is surrounded by rural residential development.
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	FE/SSC/ None/None	Coastal dunes, river alluvium, coastal sage scrub with firm sandy soils; along immediate coast in San Diego, Orange, and Los Angeles Cos.	No potential to occur. Site is well east and south of current known range for this species, including Camp Pendleton and Dana Point in Orange County.

## APPENDIX D (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/ MCHP Subarea Plan/ Other	Primary Habitat Associations	Status on Site or Potential to Occur <sup>2</sup>
<i>Taxidea taxus</i>	American badger	None/SSC/ None/None	Dry, open treeless areas, grasslands, coastal sage scrub, especially with friable soils throughout California	Low potential to occur. Limited suitable habitat occurs on site. Found within the vicinity.
<i>Mollusks</i>				
<i>Tryonia imitator</i>	Mimic tryonia (=California brackishwater snail)	None/None/ None/None	Aquatic, estuaries, lagoons, marshes and swamps, and wetland areas. Salt and brackish marshes.	Not expected to occur. No estuaries, lagoons or brackish waters on site.
<i>Fish</i>				
<i>Gilia orcuttii</i>	Arroyo chub	None/SSC/ None/ AFS: VU	Aquatic. South coast flowing waters	Not expected to occur. Limited suitable habitat on site and species is not known to occur in Escondido. Species is native to the streams and rivers of the Los Angeles plain in southern California.
<i>Invertebrates</i>				
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE/None/ None/None	Small, shallow vernal pools, occasionally ditches and road ruts	Not expected to occur. No vernal pools on site.
<i>Cicindela hirticollis grvida</i>	Sandy beach tiger beetle	None/None/ None/None	Clean, dry, light-colored sand in upper zone of the beach dunes, close to non-brackish water along coastal California	Not expected to occur. No suitable beach dune habitat on site.
<i>Cicindela senilis frosti</i>	Senile tiger beetle	None/None/ None/None	Coastal salt marshes; fresh/brackish lagoons, open patches of Salicornia, dried salt pans, muddy alkali area. Records in Riverside, San Diego, Los Angeles, Ventura Counties	Not expected to occur. No suitable salt marsh habitat on site.
<i>Coelus globosus</i>	Globose dune beetle	None/None/ None/None	Fore dunes, sand hummocks, back dunes along immediate coast. Larvae, adults spend time under vegetation or debris from Santa Cruz south to Ventura Cos. Possibly extirpated in San Diego and other coastal counties	Not expected to occur. No suitable beach dune habitat on site.
<i>Danaus plexippus</i> (overwintering)	Monarch butterfly	None/None/ None/None	Overwinters in eucalyptus groves from San Francisco south to northern Baja California	Low potential to occur. No potential to roost due to lack of eucalyptus tree groves on site. Site not near any known roosting locations.

## APPENDIX D (Continued)

Scientific Name	Common Name	Status <sup>1</sup> Federal/State/ MCHP Subarea Plan/ Other	Primary Habitat Associations	Status on Site or Potential to Occur <sup>2</sup>
<i>Euphyes vestris harbisoni</i>	Harbison's dun skipper	None/None/ Covered/None	Riparian oak woodland in a matrix of chamise chaparral or southern mixed chaparral. Larval host plant, <i>Carex spissa</i> .	Low potential to occur. Suitable habitat exists on site but host plant not observed during surveys.
<i>Lycaena hermes</i>	Hermes copper	None/None/ Covered/None	Found in southern mixed chaparral and coastal sage scrub at western edge of Laguna Mountains. Host plant is <i>Rhamnus crocea</i> and nectar source <i>Eriogonum fasciculatum</i>	Low potential to occur. No suitable habitat found on site and no host plant or nectar plant observed during surveys.
<i>Euphydryas editha quino</i>	Quino checkerspot	FE/None/ Covered/None	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Need high densities of food plants <i>Plantago erecta</i> , <i>P. insularis</i> , <i>Orthocarpus purpurescens</i>	Low potential to occur. Site is located outside of the USFWS-identified survey area; and no host plants observed during surveys. There is a USFWS occurrence of this species within 3 miles of the project site.
<i>Melitta californica</i>	California mellitid bee	None/None/ None/None	Found in deserts of SE California, SW Arizona and Baja California (collected from desert apricot). Also collected at Torrey Pines, on sea dahlia.	Not expected to occur. No suitable habitat is present on site.
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE/None/ None/None	Deep, long-lived vernal pools, vernal pool-like seasonal ponds, stock ponds; warm water pools that have low to moderate dissolved solids; in patches of grassland or agriculture interspersed in coastal sage scrub vegetation in Southern California.	Not expected to occur. No vernal pools on site.

The federal and state status of species is based on the Special Animals List (September 2014), California Department of Fish and Wildlife.

<sup>1</sup> Status Designations

**Federal:**

- FC Candidate for federal listing as threatened or endangered
- (FD) Federally-delisted; monitored for five years
- FE Federally-listed Endangered
- FPT Federally-proposed threatened

**State:**

- SSC California Species of Special Concern
- CT California Candidate Threatened
- FP California Department of Fish and Game Fully Protected Species
- WL California Department of Fish and Game Watch List Species



## APPENDIX D (Continued)

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SE State-listed as Endangered  
ST State-listed as Threatened  
(SD) State-delisted

### Multiple Habitat Conservation Program (MHCP) Draft Escondido Subarea Plan:

Covered MHCP species occurring or potentially occurring in Escondido (Table 3-2)

### Other:

#### WBWG Western Bat Working Group

L: Species is stable globally but there may be localized conservation concerns.  
M: Species warrants closer evaluation, research, and conservation actions  
H: Species are imperiled or are at high risk of imperilment

#### AFS American Fisheries Society

EN: Endangered  
TH: Threatened  
VU: Vulnerable

### <sup>2</sup> Potential to Occur Designations:

Found within the vicinity: Escondido quadrangle

Found within the region: CNDDDB 9-quad search

## APPENDIX D (Continued)

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# **APPENDIX E**

## *Routine Wetland Determination Data Forms*



**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 5/23/2013  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 1  
 Investigator(s): Callie Ford Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 33.0955 Long: 117.0573 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ramona sandy loam, 9 to 15 percent slopes, eroded NWI classification: n/a

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Data station taken in low flow channel of a primarily unvegetated stream channel.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0.0 %</u> (A/B)
4. _____	_____	_____	_____		
Total Cover: <u>_____ %</u>					
Sapling/Shrub Stratum				<b>Prevalence Index worksheet:</b>	
1. <u>Ricinus communis</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	Total % Cover of: _____ Multiply by: _____	
2. <u>Mimulus aurantiacus</u>	<u>10</u>	<u>No</u>	<u>Not Listed</u>	OBL species	<u>_____</u> x 1 = <u>0</u>
3. <u>Nicotiana glauca</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	FACW species	<u>_____</u> x 2 = <u>0</u>
4. <u>Opuntia littoralis</u>	<u>5</u>	<u>No</u>	<u>Not Listed</u>	FAC species	<u>5</u> x 3 = <u>15</u>
5. <u>Opuntia ficus indica</u>	<u>5</u>	<u>No</u>	<u>Not Listed</u>	FACU species	<u>20</u> x 4 = <u>80</u>
Total Cover: <u>45 %</u>				UPL species	<u>35</u> x 5 = <u>175</u>
Herb Stratum				Column Totals:	<u>60</u> (A) <u>270</u> (B)
1. <u>Hirschfeldia incana</u>	<u>15</u>	<u>Yes</u>	<u>Not Listed</u>	Prevalence Index = B/A = <u>4.50</u>	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>15 %</u>					
Woody Vine Stratum				<b>Hydrophytic Vegetation Indicators:</b>	
1. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
2. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
Total Cover: <u>_____ %</u>					
% Bare Ground in Herb Stratum _____ %		% Cover of Biotic Crust _____ %		<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	

Remarks: Vegetation present is sparse and consist of non-native species.

**SOIL**

Sampling Point: 1 \_\_\_\_\_

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	7.5 YR 3/4	100					Loamy sand	
4-20	7.5 YR 3/3	100					sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<p><b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <b>(LRR C)</b> <input type="checkbox"/> 1 cm Muck (A9) <b>(LRR D)</b> <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<p><b>Indicators for Problematic Hydric Soils:<sup>4</sup></b></p> <input type="checkbox"/> 1 cm Muck (A9) <b>(LRR C)</b> <input type="checkbox"/> 2 cm Muck (A10) <b>(LRR B)</b> <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

<p><b>Restrictive Layer (if present):</b></p> Type: _____ Depth (inches): _____ Remarks: _____	<p><b>Hydric Soil Present?</b>    Yes <input type="radio"/>    No <input checked="" type="radio"/></p>
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**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (any one indicator is sufficient)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <b>(Nonriverine)</b> <input type="checkbox"/> Sediment Deposits (B2) <b>(Nonriverine)</b> <input type="checkbox"/> Drift Deposits (B3) <b>(Nonriverine)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary Indicators (2 or more required)</u></p> <input type="checkbox"/> Water Marks (B1) <b>(Riverine)</b> <input checked="" type="checkbox"/> Sediment Deposits (B2) <b>(Riverine)</b> <input type="checkbox"/> Drift Deposits (B3) <b>(Riverine)</b> <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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<p><b>Field Observations:</b></p> Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p><b>Wetland Hydrology Present?</b>    Yes <input checked="" type="radio"/>    No <input type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data station located within an ephemeral stream channel that has been created by erosive soil conditions.

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 5/23/2013  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 2  
 Investigator(s): Callie Ford Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 33.0956 Long: 117.0587 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Steep gullied land NWI classification: Stream/river

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Data station taken in a perennial channel located within an oak woodland understory.	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																									
1. _____				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <input type="text" value="0"/> (A)  Total Number of Dominant Species Across All Strata: <input type="text" value="0"/> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <input type="text" value="0"/> % (A/B)																								
2. _____																												
3. _____																												
4. _____																												
Total Cover: <input type="text" value="0"/> %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center">Total % Cover of:</td> <td align="center">Multiply by:</td> <td></td> </tr> <tr> <td>OBL species</td> <td>x 1 =</td> <td><input type="text" value="0"/></td> </tr> <tr> <td>FACW species</td> <td>x 2 =</td> <td><input type="text" value="0"/></td> </tr> <tr> <td>FAC species</td> <td>x 3 =</td> <td><input type="text" value="0"/></td> </tr> <tr> <td>FACU species</td> <td>x 4 =</td> <td><input type="text" value="0"/></td> </tr> <tr> <td>UPL species</td> <td>x 5 =</td> <td><input type="text" value="0"/></td> </tr> <tr> <td>Column Totals:</td> <td>(A)</td> <td><input type="text" value="0"/> (B)</td> </tr> <tr> <td align="center" colspan="3">Prevalence Index = B/A = <input type="text" value="0"/></td> </tr> </table>	Total % Cover of:	Multiply by:		OBL species	x 1 =	<input type="text" value="0"/>	FACW species	x 2 =	<input type="text" value="0"/>	FAC species	x 3 =	<input type="text" value="0"/>	FACU species	x 4 =	<input type="text" value="0"/>	UPL species	x 5 =	<input type="text" value="0"/>	Column Totals:	(A)	<input type="text" value="0"/> (B)	Prevalence Index = B/A = <input type="text" value="0"/>		
Total % Cover of:	Multiply by:																											
OBL species	x 1 =	<input type="text" value="0"/>																										
FACW species	x 2 =	<input type="text" value="0"/>																										
FAC species	x 3 =	<input type="text" value="0"/>																										
FACU species	x 4 =	<input type="text" value="0"/>																										
UPL species	x 5 =	<input type="text" value="0"/>																										
Column Totals:	(A)	<input type="text" value="0"/> (B)																										
Prevalence Index = B/A = <input type="text" value="0"/>																												
<u>Sapling/Shrub Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																								
1. _____																												
2. _____																												
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
Total Cover: <input type="text" value="0"/> %																												
<u>Herb Stratum</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>																								
1. _____																												
2. _____																												
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
8. _____																												
Total Cover: <input type="text" value="0"/> %																												
<u>Woody Vine Stratum</u>																												
1. _____																												
2. _____																												
Total Cover: <input type="text" value="0"/> %																												
% Bare Ground in Herb Stratum <input type="text" value="0"/> %		% Cover of Biotic Crust <input type="text" value="0"/> %																										

Remarks: Data station is located within a perennial creek. There is no vegetation within the creek. The creek is located under a canopy of coast live oaks (*Quercus agrifolia*) with some palm trees (*Washingtonia robusta*)

**SOIL**

Sampling Point: 2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-20	7.5 YR 4/4	100					sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b> <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)
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<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks: Since the data station is located within a perennial creek, hydric soils are assumed present despite the lack of indicators.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (any one indicator is sufficient)		Secondary Indicators (2 or more required)	
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Water Marks (B1) (Riverine) <input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine) <input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)	

**Field Observations:**

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<u>3"</u>
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<u>0"</u>
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	_____

**Wetland Hydrology Present?**    Yes     No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data station is located within a perennial stream channel which is listed in the National Hydrography Dataset as a Stream/river.



## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 3/21/14  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 3a  
 Investigator(s): Callie Ford and Patricia Schuyler Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Bank Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Steep gullied land NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Data station taken on bank above channel in oak woodland.</u>	

### VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Quercus agrifolia</u>	60	Yes	Not Listed		
2. _____					
3. _____					
4. _____					
Total Cover: <u>60 %</u>					
Sapling/Shrub Stratum					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
Total Cover: _____ %					
Herb Stratum					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
Total Cover: _____ %					
Woody Vine Stratum					
1. <u>Toxicodendron diversilobum</u>	10	Yes	FACU		
2. _____					
Total Cover: <u>10 %</u>					
% Bare Ground in Herb Stratum _____ %		% Cover of Biotic Crust <u>100%</u>			

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

**Prevalence Index worksheet:**  

Total % Cover of:	Multiply by:		
OBL species	x 1 =	0	
FACW species	x 2 =	0	
FAC species	x 3 =	0	
FACU species	x 4 =	40	
UPL species	x 5 =	300	
Column Totals:		70 (A)	340 (B)
Prevalence Index = B/A =		4.86	

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Data station is located on the bank above the perennial creek. Vegetation is dominated by oaks with leaf litter covering the ground.

**SOIL**

Sampling Point: 3a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 3/3	100					silty loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b> <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)	
--	--	---	--	--	--

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: No indicators of hydric soils with the data station.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (any one indicator is sufficient)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)	<b>Field Observations:</b> Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	
Remarks: No signs of hydrology associated with the data station.			

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 3/21/14  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 3b  
 Investigator(s): Callie Ford and Patricia Schuyler Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Steep gullied land NWI classification: Stream/river

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Data station taken in channel within oak woodland canopy.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <u>Phoenix dactylifera</u>	5	Yes	Not Listed	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0 %</u> (A/B)																																
2. _____																																				
3. _____																																				
4. _____																																				
Total Cover: <u>5 %</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center"><u>  </u></td> <td align="center">x 1 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>  </u></td> <td align="center">x 2 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>  </u></td> <td align="center">x 3 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>  </u></td> <td align="center">x 4 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>5</u></td> <td align="center">x 5 =</td> <td align="center"><u>25</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>5</u></td> <td align="center">(A)</td> <td align="center"><u>25</u> (B)</td> </tr> <tr> <td align="center" colspan="2">Prevalence Index = B/A =</td> <td></td> <td align="center"><u>5.00</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>  </u>	x 1 =	<u>0</u>	FACW species	<u>  </u>	x 2 =	<u>0</u>	FAC species	<u>  </u>	x 3 =	<u>0</u>	FACU species	<u>  </u>	x 4 =	<u>0</u>	UPL species	<u>5</u>	x 5 =	<u>25</u>	Column Totals:	<u>5</u>	(A)	<u>25</u> (B)	Prevalence Index = B/A =			<u>5.00</u>
Total % Cover of:		Multiply by:																																		
OBL species	<u>  </u>	x 1 =	<u>0</u>																																	
FACW species	<u>  </u>	x 2 =	<u>0</u>																																	
FAC species	<u>  </u>	x 3 =	<u>0</u>																																	
FACU species	<u>  </u>	x 4 =	<u>0</u>																																	
UPL species	<u>5</u>	x 5 =	<u>25</u>																																	
Column Totals:	<u>5</u>	(A)	<u>25</u> (B)																																	
Prevalence Index = B/A =			<u>5.00</u>																																	
<b>Sapling/Shrub Stratum</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: <u>  </u> %																																				
<b>Herb Stratum</b> 1. _____ Not Listed 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>  </u> %																																				
<b>Woody Vine Stratum</b> 1. _____ 2. _____ Total Cover: <u>  </u> %																																				
% Bare Ground in Herb Stratum <u>  </u> %		% Cover of Biotic Crust <u>  </u> %		<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>																																

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Data station is located within a perennial creek . Only vegetation within this portion of the channel is a large date palm (Phoenix dactylifera).

**SOIL**

Sampling Point: 3b

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	7.5 YR 3/3	20					sand	
0-18	7.5 YR 4/4	40					sand	
0-18	7.5 YR 5/6	40					sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

1 cm Muck (A9) (LRR C)  
 2 cm Muck (A10) (LRR B)  
 Reduced Vertic (F18)  
 Red Parent Material (TF2)  
 Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: Since the data station is located within a perennial creek, hydric soils are assumed present despite the lack of indicators.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<u>Primary Indicators (any one indicator is sufficient)</u>		<u>Secondary Indicators (2 or more required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Water Marks (B1) (Riverine)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	3"
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	0"
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	0"

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data station within perennial creek with approximately 3 inches of running water.

## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 3/21/14  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 4a  
 Investigator(s): Callie Ford and Patricia Schuyler Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ramona sandy loam, 2% to 5% slopes NWI classification: Stream/River

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Data station taken in a 6-foot wide channel within oak woodland canopy.</u>	

### VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	0 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	0 % (A/B)
4. _____	_____	_____	_____		
Total Cover: _____ %					
Sapling/Shrub Stratum				<b>Prevalence Index worksheet:</b>	
1. _____	Total % Cover of:		Multiply by:		
2. _____	_____		OBL species	x 1 =	0
3. _____	_____		FACW species	x 2 =	0
4. _____	_____		FAC species	x 3 =	0
5. _____	_____		FACU species	x 4 =	0
Total Cover: _____ %			UPL species	x 5 =	0
			Column Totals:	(A)	0 (B)
			Prevalence Index = B/A = _____		
Herb Stratum				<b>Hydrophytic Vegetation Indicators:</b>	
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%	
2. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. _____				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____					
6. _____					
7. _____					
8. _____					
Total Cover: _____ %					
Woody Vine Stratum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum _____ %		% Cover of Biotic Crust _____ %			

Remarks: Data station is located within a perennial creek. There is no vegetation within the creek. The creek is located under a canopy of coast live oaks (Quercus agrifolia).

**SOIL**

Sampling Point: 4a

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	7.5 YR 3/3	20					sand	
0-18	7.5 YR 4/4	40					sand	
0-18	7.5 YR 5/6	40					sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b> <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: Since the data station is located within a perennial creek, hydric soils are assumed present despite the lack of indicators.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (any one indicator is sufficient) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators (2 or more required)</b> <input checked="" type="checkbox"/> Water Marks (B1) (Riverine) <input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine) <input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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**Field Observations:**

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	3"
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	0"
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	0"

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data station within perennial creek.

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 3/21/14  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 4b  
 Investigator(s): Callie Ford and Patricia Schuyler Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): none Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ramona sandy loam, 2% to 5% slopes NWI classification: none

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Data station taken adjacent to the 6-foot wide channel within a stand of palm trees. Area is mapped as non-native riparian.	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <i>Washingtonia robusta</i>	80	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0 %</u> (A/B)																																
2. _____																																				
3. _____																																				
4. _____																																				
Total Cover: <u>80 %</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center"><u>  </u></td> <td>x 1 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>80</u></td> <td>x 2 =</td> <td align="center"><u>160</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>  </u></td> <td>x 3 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>2</u></td> <td>x 4 =</td> <td align="center"><u>8</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>  </u></td> <td>x 5 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>82</u></td> <td>(A)</td> <td align="center"><u>168</u> (B)</td> </tr> <tr> <td align="center" colspan="4">Prevalence Index = B/A = <u>2.05</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>  </u>	x 1 =	<u>0</u>	FACW species	<u>80</u>	x 2 =	<u>160</u>	FAC species	<u>  </u>	x 3 =	<u>0</u>	FACU species	<u>2</u>	x 4 =	<u>8</u>	UPL species	<u>  </u>	x 5 =	<u>0</u>	Column Totals:	<u>82</u>	(A)	<u>168</u> (B)	Prevalence Index = B/A = <u>2.05</u>			
Total % Cover of:		Multiply by:																																		
OBL species	<u>  </u>	x 1 =	<u>0</u>																																	
FACW species	<u>80</u>	x 2 =	<u>160</u>																																	
FAC species	<u>  </u>	x 3 =	<u>0</u>																																	
FACU species	<u>2</u>	x 4 =	<u>8</u>																																	
UPL species	<u>  </u>	x 5 =	<u>0</u>																																	
Column Totals:	<u>82</u>	(A)	<u>168</u> (B)																																	
Prevalence Index = B/A = <u>2.05</u>																																				
<u>Sapling/Shrub Stratum</u>																																				
1. <i>Ficus carica</i>	2	Yes	FACU																																	
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
Total Cover: <u>2 %</u>																																				
<u>Herb Stratum</u>																																				
1. _____																																				
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
Total Cover: <u>  </u> %																																				
<u>Woody Vine Stratum</u>																																				
1. _____																																				
2. _____																																				
Total Cover: <u>  </u> %																																				
% Bare Ground in Herb Stratum <u>  </u> %		% Cover of Biotic Crust <u>  </u> %																																		

**Hydrophytic Vegetation Indicators:**

- Dominance Test is >50%
- Prevalence Index is ≤3.0<sup>1</sup>
- Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Data station is located immediately adjacent to the perennial creek in an area dominated palm trees.

**SOIL**

Sampling Point: 4b

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	7.5 YR 3/3	20					sand	
0-18	7.5 YR 4/4	40					sand	
0-18	7.5 YR 5/6	40					sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b> <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: Despite the lack of indicators, hydric soils are assumed present due to the presence of water within the soil pit.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<u>Primary Indicators (any one indicator is sufficient)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input checked="" type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): 10"	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): 3"	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Water present within soil pit.



**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 3/21/14  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 4c  
 Investigator(s): Callie Ford and Patricia Schuyler Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Slight terrace Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ramona sandy loam, 2% to 5% slopes NWI classification: none

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Data station taken on a slight terrace above DS 4b in an area that visually appears drier than the sample plot for DS 4b.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <u>Quercus agrifolia</u>	20	Yes	Not Listed	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. <u>Washingtonia robusta</u>	10	Yes	FACW	Total Number of Dominant Species Across All Strata:	4 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	25.0 % (A/B)
4. _____					
Total Cover:			30 %		
Sapling/Shrub Stratum				<b>Prevalence Index worksheet:</b>	
1. <u>Ficus carica</u>	10	Yes	FACU	Total % Cover of: _____ Multiply by: _____	
2. _____				OBL species	x 1 = 0
3. _____				FACW species	10 x 2 = 20
4. _____				FAC species	x 3 = 0
5. _____				FACU species	15 x 4 = 60
Total Cover:			10 %	UPL species	20 x 5 = 100
				Column Totals:	45 (A) 180 (B)
				Prevalence Index = B/A = 4.00	
Herb Stratum				<b>Hydrophytic Vegetation Indicators:</b>	
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%	
2. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. _____				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
6. _____					
7. _____					
8. _____					
Total Cover:			%		
Woody Vine Stratum				<b>Hydrophytic Vegetation Present?</b>	
1. <u>Toxicodendron diversilobum</u>	5	Yes	FACU	Yes <input type="radio"/>	No <input checked="" type="radio"/>
2. _____					
Total Cover:			5 %		
% Bare Ground in Herb Stratum _____ %		% Cover of Biotic Crust _____ %			

Remarks: Data station is located outside of the perennial creek and non-native riparian.

**SOIL**

Sampling Point: 4c

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5 YR 3/4	100					sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<p><b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<p><b>Indicators for Problematic Hydric Soils:<sup>4</sup></b></p> <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

<p><b>Restrictive Layer (if present):</b></p> Type: <u>roots</u> Depth (inches): <u>16</u>	<p><b>Hydric Soil Present?</b>    Yes <input type="radio"/>    No <input checked="" type="radio"/></p>
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Remarks: No indicators of hydric soils with the data station.

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (any one indicator is sufficient)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary Indicators (2 or more required)</u></p> <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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<p><b>Field Observations:</b></p> Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p><b>Wetland Hydrology Present?</b>    Yes <input type="radio"/>    No <input checked="" type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No signs of hydrology associated with the data station.

**APPENDIX F**  
*Jurisdictional Delineation Report*



April 26, 2016

7833

Mr. Burnet Wohlford  
Speith-Wohlford Inc.  
P.O. Box 5005 #17  
Rancho Santa Fe, California 92067

***Subject: Jurisdictional Delineation Report for the Bear Valley Parkway Project, San Diego County, California***

Dear Mr. Burnet:

This report documents the results of a jurisdictional delineation for the proposed Bear Valley Parkway project (Study Area). The Study Area contains a total of 40.65 acres and is located in the City of Escondido, San Diego County, California. More specifically, the proposed project is located in southeast Escondido, approximately 1.5 miles east of Interstate 15 (I-5) and south of State Route 78 (SR-78)/San Pasqual Valley Road (Figure 1). The project site is located on the U.S. Geological Survey (USGS) 7.5 minute Escondido quadrangle map in section 26, Township 12 South, and Range 2 West (Figure 2).

This jurisdictional delineation report includes a description of jurisdictional delineation methods, the results of the jurisdictional delineation, an analysis of potential project impacts to jurisdictional resources, recommendations regarding avoidance or minimization of project impacts, and determinations regarding regulatory requirements to permit unavoidable impacts to jurisdictional resources.

## **METHODS**

### **Literature Review**

Baseline hydrology information was obtained from the USGS 7.5-minute quadrangles, National Hydrography Dataset (USGS 2014), and California Regional Water Quality Control Board – San Diego Region (RWQCB) Water Quality Control Plan for the San Diego Region (RWQCB 2007).

### **Jurisdictional Delineation**

An assessment of jurisdictional resources was completed by Dudek biologist Callie Ford on May 23, 2013. A formal jurisdictional delineation was conducted by Dudek biologists Callie Ford and Patricia Schuyler on March 21, 2014 with an update on December 16, 2014. Ms. Ford and Ms. Schuyler delineated the extent of jurisdictional aquatic features in the Study Area. The

*Mr. Burnet*

*Subject: Jurisdictional Delineation Report for the Bear Valley Parkway Project, San Diego County, California*

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delineation defined areas under the jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600–1603 of the California Fish and Game Code, under the jurisdiction of the U.S. Army Corps of Engineers (ACOE) pursuant to Section 404 of the federal Clean Water Act (CWA), and under jurisdiction of RWQCB pursuant to CWA Section 401 and the Porter-Cologne Act. The ACOE wetland delineation was performed in accordance with ACOE methodology (ACOE 1987, 2008; ACOE and EPA 2007).

Specifically, the methodology used for each jurisdiction or regulating agency, including the ACOE, CDFW, and RWQCB, is described as follows.

The ACOE wetlands delineation was performed in accordance with the 1987 *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Technical Report Y-87-1; Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2008), and guidance provided by the ACOE and EPA on the geographic extent of jurisdiction based on the U.S. Supreme Court’s interpretation of the CWA (ACOE and EPA 2008). The ACOE and RWQCB, pursuant to the federal CWA, include all areas supporting all three wetlands criteria described in the ACOE manual: hydric soils, hydrology, and hydrophytic vegetation. The RWQCB may also take jurisdiction over surface waters lacking ACOE regulation pursuant to the state Porter-Cologne Act. These areas generally include areas with at least one of the three wetlands indicators but that are isolated from a tributary of navigable water through lack of evidence of surface water hydrology. Jurisdiction of the RWQCB is coincident with the ACOE in accordance with the federal CWA, except in cases where a resource is determined to be isolated from navigable waters of the United States and where the RWQCB may take jurisdiction under the state Porter-Cologne Act. A predominance of hydrophytic vegetation, where associated with a stream channel, was used to determine CDFW-regulated riparian areas. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology).

Collectively, areas under the jurisdiction of the ACOE, RWQCB, and CDFW are termed jurisdictional aquatic resources. A more detailed description of the methods is described below.

Wetland determinations were made at seven sampling points (see Appendix A for data station forms) to determine which areas are under the jurisdiction of the regulatory agencies mentioned above. The extent of wetland areas was determined by mapping the areas with similar vegetation and topography to sampled locations.

Mr. Burnet

Subject: *Jurisdictional Delineation Report for the Bear Valley Parkway Project, San Diego County, California*

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## Hydrophytic Vegetation

Seasonal changes in species composition, human land-use practices, wildfires, and other natural disturbances can adversely affect the hydrophytic vegetation determination. During the delineation, a data station point was considered positive for hydrophytic vegetation if it passed the basic dominance test (Indicator 1), meaning that more than 50% of the dominant species sampled were characterized as either obligate, facultative wetland, and/or facultative per the *Arid West 2014 Regional Wetland Plant List* (Lichvar et al 2014). In those cases where the dominance test failed, the vegetation parameter was re-evaluated using the prevalence index (Indicator 2), which takes into account all plant species in the community, not just dominants. All plant species observed during the surveys were identified and recorded. Where plant identification could not be made in the field, a sample was taken and later identified in the laboratory.

## Hydric Soils

According to the National Technical Committee for Hydric Soils, hydric soils are “soils that are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part” (U.S. Department of Agriculture (USDA) 1994). Soil pits were prepared using a “sharp shooter” shovel to determine if hydric soils were present. The presence of hydric soils was determined through consultations with the 1987 ACOE manual, *Field Indicators of Hydric Soils in the United States v. 5.01* (USDA 2003), ACOE’s *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (ACOE 2008), and Munsell Soil Color Charts. Where feasible, soil pits were prepared to depths ranging from 10 to 16 inches, and dry soils were moistened to obtain the most accurate color. Excavated soils were examined for evidence of hydric conditions, including low chroma values and mottling, vertical streaking, sulfidic odor, and high organic matter content in the upper horizon. Evidence of previous ponding or flooding was assessed along with the slope, slope shape, existing landform characteristics, soil material/composition, and hydrophytic vegetation to determine if hydric soils were present.

## Hydrology

Per the guidelines prescribed in the Arid West supplement (ACOE 2008), wetland hydrology indicators are separated into four major groups: groups A, B, C, and D. Group A indicators are based on direct observations of surface flow, ponding, and soil saturation/groundwater. Group B indicators consist of evidence that the Study Area has been or is currently subjected to ponding, including, but not limited to, water marks, drift deposits, and sediment deposits. Group C indicators include signs of previous and/or current saturation, including oxidized rhizospheres

*Mr. Burnet*

*Subject: Jurisdictional Delineation Report for the Bear Valley Parkway Project, San Diego County, California*

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surrounding living roots and the presence of reduced iron or sulfur, both of which are indicative of extended periods of soil saturation. Group D indicators consist of “vegetation and soil features that are indicative of current rather than historic wet conditions and include a shallow aquitard and results of the Facultative (FAC)-Neutral test” (ACOE 2008). Each group is subdivided into primary and secondary categories based on their frequency and reliability to occur in the Arid West region. Signs of hydrology were investigated on the Study Area.

## **Biological Resource Mapping**

Vegetation communities and jurisdictional aquatic resources were mapped in the field directly onto a 200-scale (1 inch = 200 feet) aerial photograph (Bing 2013) or using a Trimble GeoXT GPS with submeter accuracy. These boundaries and locations were digitized by Dudek geographic information system (GIS) technician Randy Deodat using ArcGIS software.

Vegetation community classifications used in this report follow Holland (1986) and Oberbauer et al. (2008), with modifications to accommodate the lack of conformity of the observed communities to those of Holland. Ms. Ford and Ms. Schuyler also recorded all identifiable plant species in the Study Area. Latin and common names for plant species with a California Rare Plant Rank (CRPR) (formerly CNPS List) follow the CNPS On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2015). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2015) and common names follow the United States Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2015). Appendix C contains a complete list of plant species observed during surveys of the site.

## **Survey Limitations**

The survey was conducted during the early spring, thereby limiting detection of some annual plant species. However, based on characteristics observed at each of the investigation locations, this limitation is not expected to have affected the jurisdictional determination.

## **PHYSICAL CHARACTERISTICS**

### **Site Description**

The Bear Valley Parkway project is located in southeast Escondido, approximately 1.5 miles east of Interstate 15 (I-5) and south of State Route 78 (SR-78)/San Pasqual Valley Road



*Mr. Burnet*

*Subject: Jurisdictional Delineation Report for the Bear Valley Parkway Project, San Diego County, California*

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(Figure 1). The Study Area is located on the U.S. Geological Survey (USGS) 7.5 minute Escondido quadrangle map in section 26, Township 12S, and Range 2W (Figure 2).

The majority of the Study Area was once an avocado orchard; however, the orchard was removed and now is considered disturbed habitat. There is one residence on site in the central portion of the property that is currently occupied. The remaining portions of the site are undeveloped. An unnamed stream channel, within an understory of oak woodland, traverses the southwestern portion of the Study Area. The Study Area is adjacent to Bear Valley Parkway near Zlatibor Ranch Road. The property is located in a more rural part of Escondido.

The Study Area slopes upward from approximately 590 feet above mean sea level (AMSL) to 680 feet AMSL at the top of the hill. Much of the site is gently sloping or relatively flat.

## **Soils**

Soils on the site are mapped as Fallbrook sandy loam, 9% to 15% slopes, eroded; Fallbrook sandy loam, 15% to 30% slopes, eroded; Ramona sandy loam, 2% to 5% slopes; Ramona sandy loam, 9% to 15% slopes, eroded; and steep gullied land (USDA 2013).

According to the Natural Resource Conservation Service (NRCS), the Fallbrook series consists of deep, well-drained soils formed from weathered granitic rock. These soils occur on rolling hills and steeper slopes, and have a mean annual precipitation of approximately 15 inches (USDA 2013).

The Ramona series consists of mixed “fine-loamy” soils (USDA 2013). Ramona soils are found on flat to moderately steep slopes, with an annual precipitation of approximately 20 inches (USDA 2013).

Steep gullied land is described as “strongly sloping to steep areas that are actively eroding into old alluvium or decomposed rock” and supporting sparse vegetation (Bowman 1973).

## **Hydrology**

The Study Area lies within the San Dieguito Hydrologic Unit (905.00), a rectangular-shaped area of approximately 350 square miles (Figure 3). This Hydrologic Unit lies between the San Luis Rey and Carlsbad Hydrologic Units to the north and San Diego River and Peñasquitos Hydrologic Units to the south. The Study Area lies within the Hodges Hydrologic Area (905.20) within the Del Dios (905.21) and Bear Hydrologic Subareas (905.24). The Study Area is located on border of the two Subareas (Figure 3).

*Mr. Burnet*

*Subject: Jurisdictional Delineation Report for the Bear Valley Parkway Project, San Diego County, California*

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The San Dieguito Hydrologic Unit includes the San Dieguito River and its tributaries, including Santa Ysabel and Santa Maria creeks. The San Dieguito Hydrologic Unit contains two major reservoirs, Lake Hodges and Sutherland Reservoir. The San Dieguito Lagoon is located at the mouth of the San Dieguito River and forms the northerly boundary of the City of Del Mar. The lagoon is typically closed off from the ocean by a sandbar.

The National Hydrography Dataset identifies one tributary within the project site running from north to south through the western portion of the Study Area (USGS 2014). The USGS 7.5-minute quadrangle identifies this feature as a blue-line stream that is tributary to the Lake Hodges-San Dieguito River, which eventually flows into the Pacific Ocean. The tributary travels south through the Study Area, joins with a second stream approximately 0.60 miles south of the Study Area and with the San Dieguito River approximately 2.70 miles south of the Study Area. The San Dieguito River then flows west into Lake Hodges and continues to the Pacific Ocean.

No other stream courses or water features were identified in the literature review.

## **RESULTS OF SURVEY**

### **Vegetation Communities/Jurisdictional Aquatic Resources**

#### **Evaluation Area**

In general, there are three types of potential jurisdictional aquatic resources that were evaluated during the delineation. The first type includes natural canyon drainages in the east, west, and north-central portions of the Study Area containing both ephemeral and perennial channels. Each of these areas exhibit characteristics of ACOE/RWQCB waters and CDFW streambeds (i.e. defined bed and bank). The channels continue to flow from the project site through off-site drainage courses or storm drains into San Dieguito River and are, therefore, hydrologically connected to navigable waters of the U.S. and jurisdictional under ACOE, RWQCB, and CDFW regulations.

The second type of potential jurisdictional aquatic resource studied as part of the survey includes southern coast live oak riparian forest occurring along the perennial stream channel in the southern portion of the Study Area. The southern coast live oak riparian forest did not show signs of wetland hydrology, hydric soils, or hydrophytic vegetation (see data station 3a). However, since this vegetation community is associated with the stream channel, it is considered under the jurisdiction of CDFW.

The third type of jurisdictional aquatic resource onsite is wetlands/associated riparian areas located within the southern coast live riparian forest. These areas are mapped as non-native

riparian due to the presence of non-native vegetation, including Washington fan palm and edible fig. The wetlands/associated riparian areas are located immediately adjacent to the perennial stream channel, and are surrounded by oak woodlands. All three indicators were present within the representative data station associated with these areas. Therefore these patches of non-native riparian are under the jurisdiction of ACOE, RWQCB, and CDFW.

Wetlands and non-wetland waters under the jurisdiction of ACOE/ RWQCB and streambeds and associated riparian areas under CDFW jurisdiction in the Study Area total 3.48 acre of wetlands/associated riparian areas and 0.31 acre of unvegetated waters/streambed. Jurisdictional vegetation communities on site include southern coast live oak riparian forest and non-native riparian habitat. Table 2 lists the jurisdictional aquatic resources and acreages in the Study Area and Figure 4 shows the location of those resources.

**Table 2**  
**Jurisdictional Aquatic Resources**

<b>Jurisdictional Aquatic Resource</b>	<b>CDFW Riparian Area (Acres)</b>	<b>ACOE/RWQCB Wetland (Acres)</b>
Southern Coast Live Oak Riparian Forest	3.35	--
Non-Native Riparian	0.13	0.13
<i>Total Riparian/Wetlands</i>	<i>3.48</i>	<i>0.13</i>
<b>Jurisdictional Aquatic Resource</b>	<b>CDFW Streambed (Acres)</b>	<b>ACOE/RWQCB Non-wetland Waters (Acres)</b>
Ephemeral Stream Channel	0.14	0.14
Perennial Stream Channel	0.17	0.17
<i>Total Streambed/ Non-wetland Waters</i>	<i>0.31</i>	<i>0.31</i>
<b>Total Jurisdictional Area*</b>	<b>3.62**</b>	<b>0.44</b>

\* Ephemeral stream channels are an overlay within the disturbed habitat and southern coast live oak vegetation communities. The perennial stream channel on site is within the understory of the oak canopy and therefore, to avoid double counting of resources, this channel, and the portion of the ephemeral channel within the oak canopy, are not counted toward the total jurisdictional area.

\*\* Acreage may not total due to rounding.

ACOE- and RWQCB-jurisdictional areas on site total 0.44 acre, including 0.13 acre of jurisdictional wetlands composed of non-native riparian areas. The remaining 0.31 acre under ACOE/RWQCB jurisdiction consists of ephemeral and perennial stream channels.

CDFW jurisdiction extends over all areas under ACOE and RWQCB jurisdiction discussed above and includes areas that meet ACOE wetland (i.e., hydrophytic) vegetation criteria but lack wetlands hydrology and/or hydric soils indicators. CDFW-jurisdictional areas on site total 3.48 acres of associated riparian habitat including 3.35 acres of southern coast live oak riparian forests and 0.13 acre of non-native riparian areas. In addition, there are also 0.31 acre of stream channels

under the jurisdiction of CDFW, of which 0.17 acre is already included within the southern coast live oak riparian forest. In total, there are 3.62 acre of CDFW jurisdictional resources on site.

Jurisdictional waters/streambeds on site include perennial and ephemeral drainages flowing generally from north to south and northeast to southwest off site and downstream into San Dieguito River. San Dieguito River flows into Lake Hodges Reservoir and continues to the Pacific Ocean, a navigable water of the U.S. Jurisdictional waters/streambeds exhibit wetlands hydrology and/or hydric soils and signs of a bed and bank and they are therefore considered non-wetland waters under the jurisdiction of ACOE /RWQCB, and CDFW jurisdictional streambeds. The unvegetated perennial stream channel under ACOE/RWQCB/CDFW jurisdiction occurs within oak woodlands which are CDFW-jurisdictional riparian areas.

### Data Stations

Vegetation, hydrology, and soils were examined at seven wetland sampling points (data stations) within the Study Area (Figure 4) to determine the extent of jurisdictional aquatic resources. Table 1 lists the results of these data stations in terms of the three criteria that determine jurisdiction: vegetation, hydrology, and soils.

**Table 1**  
**Jurisdictional Data Station Results**

Data Station	Wetland vegetation	Wetland Soils	Hydrology	Feature Type	Jurisdictional Determination
DS 1	Absent	Absent	Present	Unvegetated ephemeral stream	ACOE/RWQCB non-wetland waters CDFW streambed
DS 2	Absent	Present	Present	Unvegetated perennial stream	ACOE/RWQCB non-wetland waters CDFW streambed
DS 3a	Absent	Absent	Absent	Upland	Non-jurisdictional
DS 3b	Absent	Present	Present	Unvegetated perennial stream	ACOE/RWQCB non-wetland waters CDFW streambed
DS 4a	Absent	Present	Present	Unvegetated perennial stream	ACOE/RWQCB non-wetland waters CDFW streambed
DS 4b	Present	Present	Present	Non-native riparian	ACOE/RWQCB wetland waters CDFW riparian area
DS 4c	Absent	Absent	Absent	Upland	Non-jurisdictional

## **Southern Coast Live Oak Riparian Forest**

Southern coast live oak riparian forest is an open to locally dense evergreen riparian woodland dominated by coast live oak (*Quercus agrifolia*). Compared to other riparian communities, southern coast live oak riparian forest is generally richer in herbs and poorer in understory shrubs. Characteristic species of this vegetation community include coast live oak, mugwort (*Artemisia douglasiana*), California blackberry (*Rubus ursinus*), California laurel (*Umbellularia californica*), and hoary nettle (*Urtica dioica* ssp. *holosericea*). This community occurs on fine-grained, rich alluvium on bottomlands and outer floodplains along larger streams.

Southern coast live oak riparian forest occurs along the perennial stream channel in the southern portion of the Study Area. Onsite, southern coast live oak riparian forest is dominated by coast live oak, scattered palm trees (*Washingtonia robusta* and *Phoenix dactylifera*), poison oak (*Toxicodendron diversilobum*) and edible fig (*Ficus carica*). Because it is associated with the stream channel, all southern coast live oak riparian forest within the Study Area is considered under the jurisdiction of CDFW.

## **Non-native Riparian**

Non-native riparian areas are densely vegetated riparian thickets dominated by non-native, invasive species. According to Oberbauer et al. 2008, this designation should only be used where non-native, invasive species account for greater than 50% of the total vegetative cover within a mapping unit.

In the Study Area, non-native riparian areas are dominated by Washington fan palms interspersed with edible fig. Non-native riparian areas occur in three locations along the western boundary of the project site and adjacent to a perennial stream. The non-native riparian areas on site constitute wetlands under the jurisdiction of ACOE, and RWQCB and is also considered a CDFW associated riparian area.

## **Unvegetated Stream Channel**

Unvegetated stream channel refers to stream channels that are barren or sparsely vegetated and are not wetlands. The lack of vegetation is generally due to the scouring effects of seasonal flooding or lack of flow to support a predominance of hydrophytic vegetation. All areas mapped as stream channel have natural bottoms and are mapped as an overlay to the vegetation communities. These are considered non-wetland waters under the jurisdiction of the ACOE, and RWQCB and CDFW streambed.

*Mr. Burnet*

*Subject: Jurisdictional Delineation Report for the Bear Valley Parkway Project, San Diego County, California*

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## **APPLICABLE REGULATIONS AND PERMIT REQUIREMENTS**

### **Local/City of Escondido**

The Public Review Draft Escondido Subarea Habitat (Subarea Plan) (Ogden and CBI 2001) is intended to be consistent with the Multiple Habitat Conservation Plan (MHCP) and with the plans prepared by the entities participating in the MHCP. The Subarea Plan comprehensively addresses how the City will conserve natural vegetation communities and special-status plant and wildlife species pursuant to the California NCCP. The Subarea Plan qualifies as a stand-alone document to implement the MHCP and forms the basis for an Implementing Agreement, which will be the legally binding agreement between the City of Escondido and the Wildlife Agencies.

The Study Area is located within the southeast portion of the Subarea Plan. It is not located within the Biological Core and Linkage Area (BCLA) (see Figure 3-2 of the Subarea Plan). The Study Area is located outside of any Focused Planning Areas (FPAs); however, the stream channel that runs through the southwestern portion of the Study Area is designated as a Constrained Lands (Wetlands) Outside the FPA (see Figure 4-1 of the Subarea Plan). The Constrained Lands designation includes lands with steep slopes and wetlands regulated by ACOE federal wetland permitting requirements and the MHCP “no net loss of wetlands” policy (Ogden and CBI 2001). However, at this time the City of Escondido is not moving forward with the Subarea Plan.

### **State and Federal**

The following is a summary of permit requirements relative to the jurisdictional waters/wetlands identified on site.

### **ACOE**

ACOE has two permit programs to allow for development of residential uses that would result in fill of jurisdictional waters pursuant to Section 404 of the CWA: Nationwide Permit (NWP) 29 – Residential Development and an Individual Permit. A review of environmental impacts associated with authorizations under NWP 29 has been completed in accordance with the National Environmental Policy Act, and a determination has been made that, based on criteria included in NWP 29, impacts resulting from authorization of its use across the nation will not result in more than minimal adverse effect on aquatic resources. The criteria that allow for this determination include stipulations that impacts must be less than 0.5 acre and no more than 300 linear feet. The 300-linear-foot threshold may be waived by the district engineer for impacts to ephemeral or

*Mr. Burnet*

*Subject: Jurisdictional Delineation Report for the Bear Valley Parkway Project, San Diego County, California*

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intermittent stream channels based on a determination that the adverse affect on the aquatic environment will be minimal.

## **RWQCB**

According to the federal CWA, ACOE may not authorize the fill of jurisdictional waters without certification that the authorized activity will not substantially impact water quality. This provision is known as a Section 401 Water Quality Certification. Within California, the 401 Water Quality Certification is issued by RWQCB where the activity is located. The Study Area lies within the San Diego Region (Region 9) of the State Water Resources Control Board (SWRCB).

RWQCB usually accepts the ACOE jurisdictional determination and will process a 401 certification for the areas considered for authorization of impacts by ACOE following a review of short- and long-term water quality control measures and overall project avoidance, minimization, and mitigation of jurisdictional impacts. In general, water quality control measures are reviewed with greater scrutiny but still based on the applicable local and state discharge requirements. RWQCB has, in select cases, taken jurisdiction over lands not included within the ACOE jurisdiction, generally consisting of additional CDFW-jurisdictional wetlands, and in the case of vernal pools, isolated wetlands. SWRCB is considering adopting a statewide wetlands definition that, as currently contemplated, would include CDFW-jurisdictional riparian areas. RWQCB will not be able to issue the 401 Water Quality Certification until a valid California Environmental Quality Act (CEQA) document covering the project has been certified/adopted by the lead agency.

## **CDFW**

In accordance with the Section 1600 of the California Fish and Game Code, a Streambed Alteration Agreement is required for fill and/or vegetation removal within CDFW-jurisdictional riparian areas and streambeds. CDFW will not issue a Streambed Alteration Agreement until a valid CEQA document is certified/adopted.

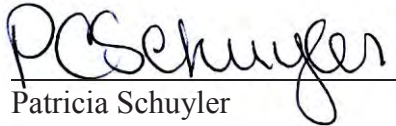
Mr. Burnet

Subject: *Jurisdictional Delineation Report for the Bear Valley Parkway Project, San Diego County, California*

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Should you have any questions regarding this report or require additional information, please do not hesitate to contact me at 760.479.4264 or pschuyler@dudek.com.

Sincerely,



Patricia Schuyler  
Biologist

Att: *Figures 1–4*  
*Appendix A: Wetland Determination Data Forms*  
*Appendix B: Significant Nexus Analysis Forms*  
*Appendix C: Vascular Plant Species Observed in the Study Area*

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Mr. Burnet

Subject: *Jurisdictional Delineation Report for the Bear Valley Parkway Project, San Diego County, California*

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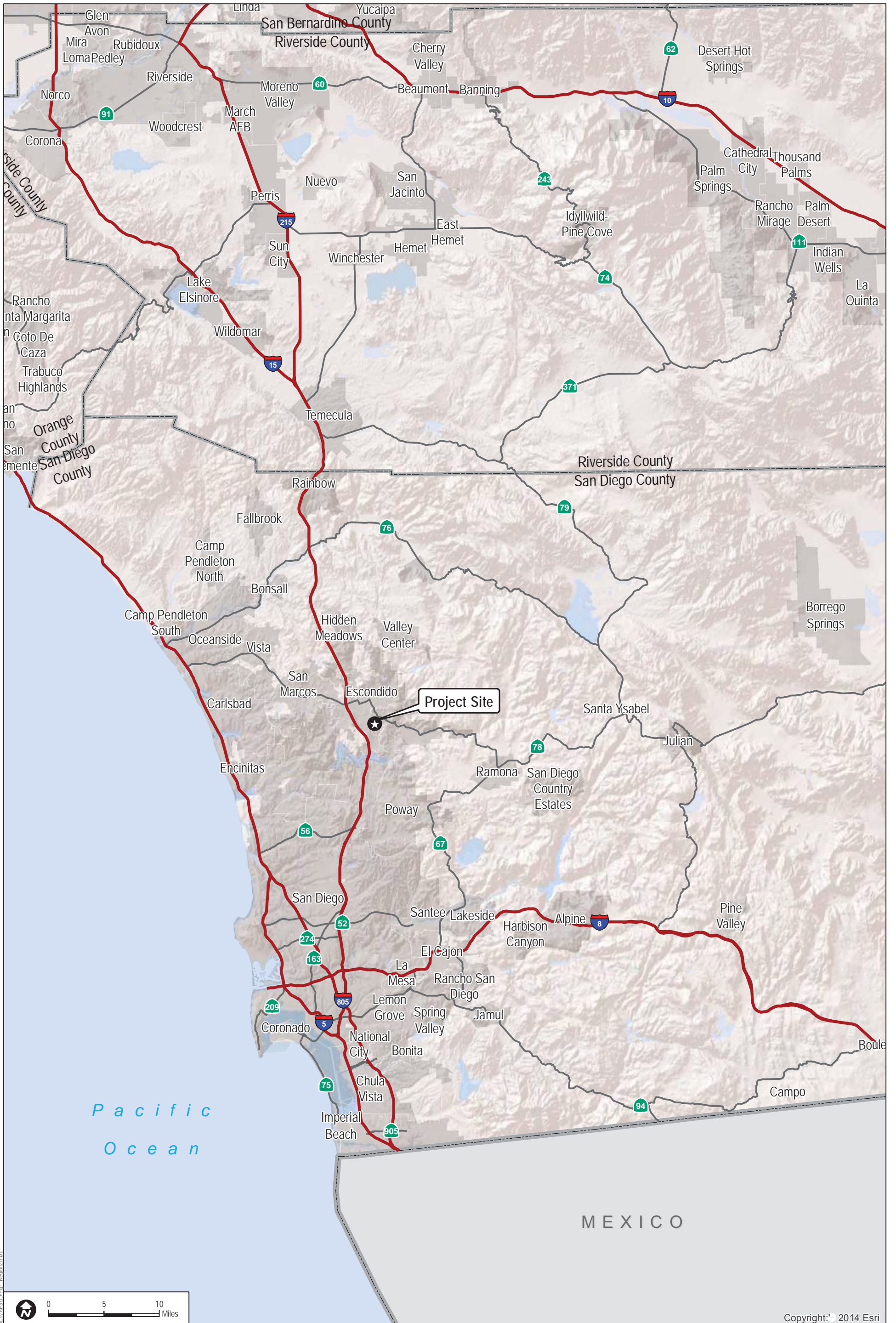
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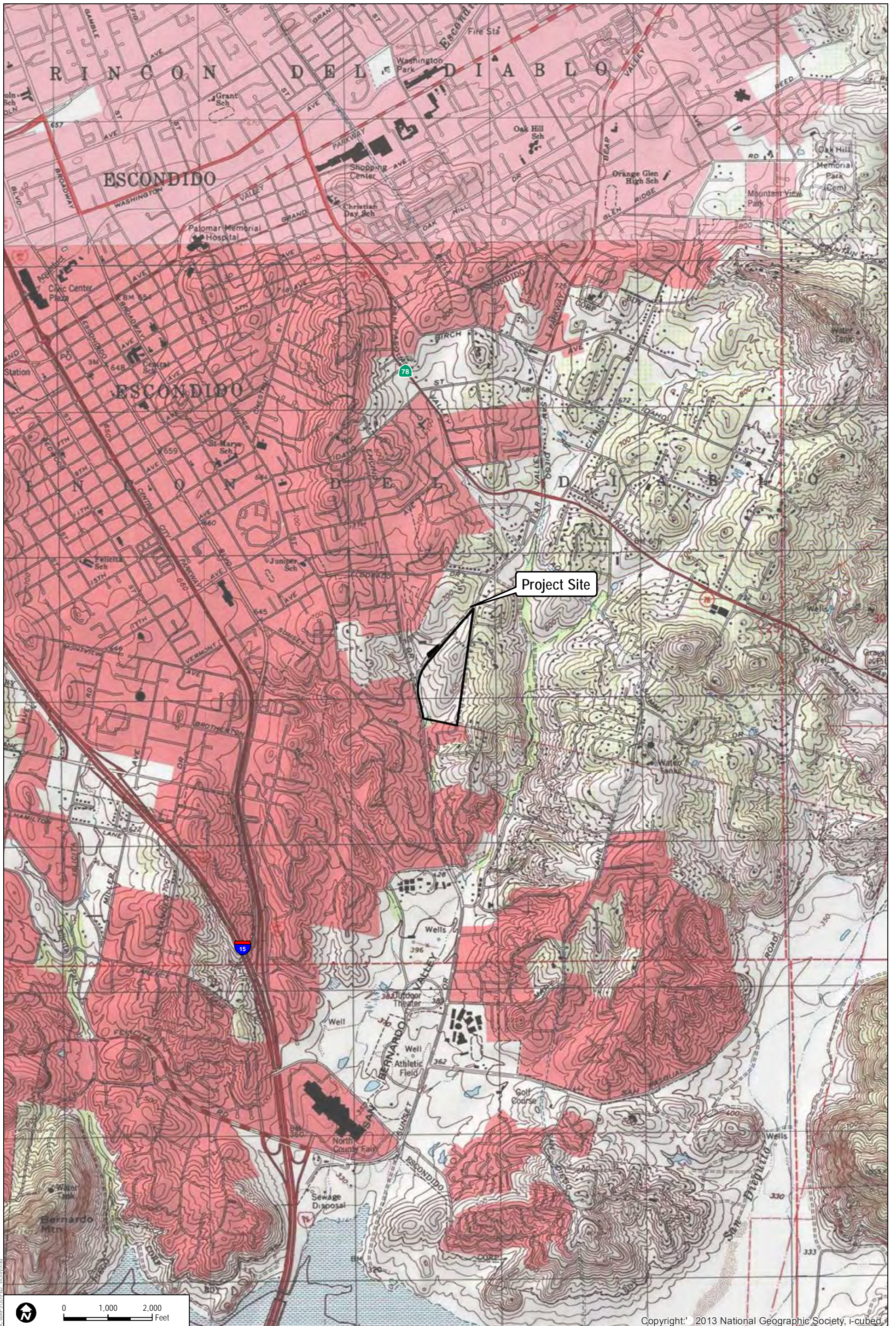
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**DUDEK**

7833  
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Bear Valley Parkway Project

**FIGURE 1**  
**Regional Map**



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SOURCE: USGS 7.5-Minute Series Escondido Quadrangle.

**FIGURE 2**  
**Vicinity Map**

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Bear Valley Parkway Project



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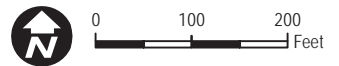
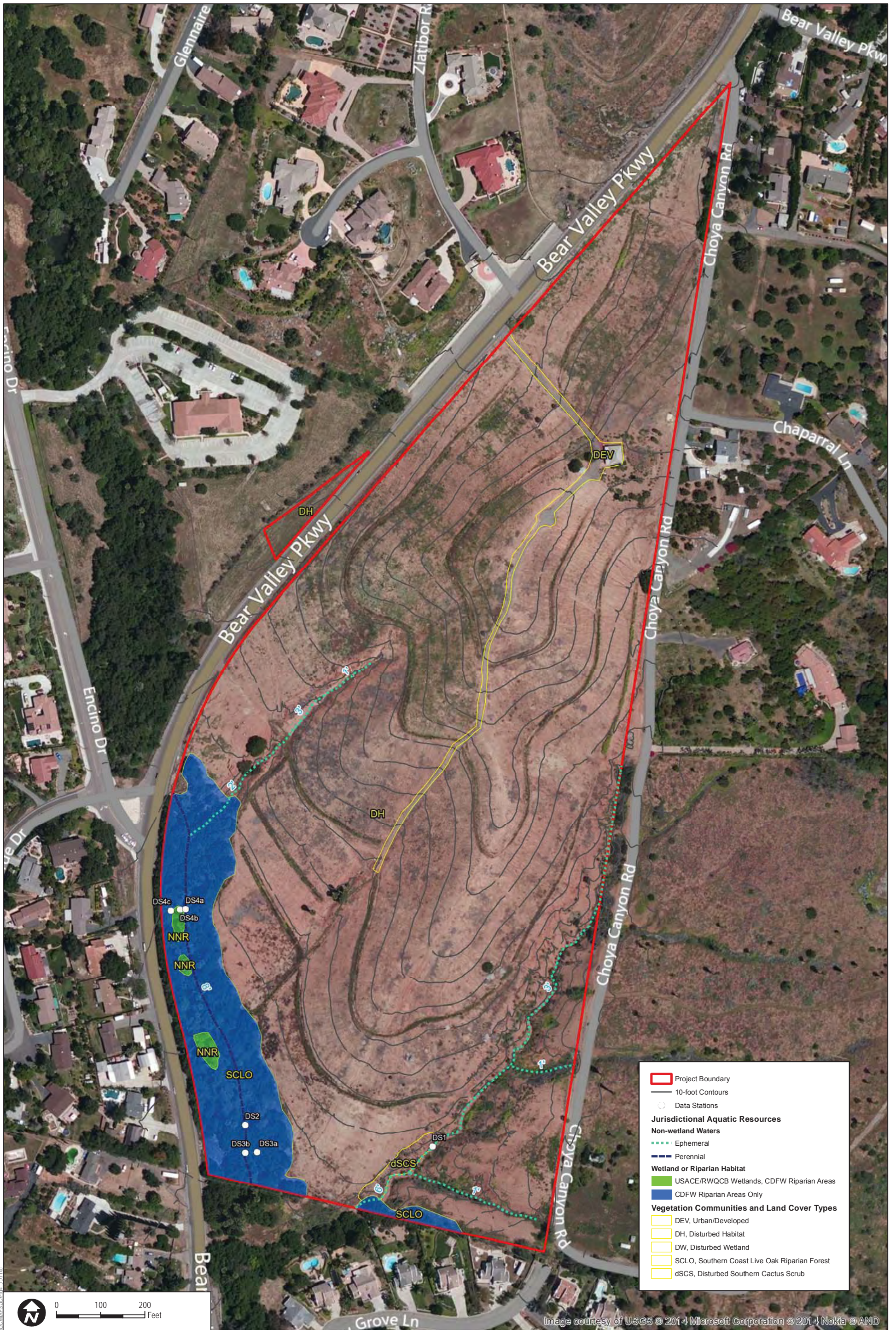
SOURCE: National Hydrography Dataset

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Bear Valley Parkway Project

**FIGURE 3**  
**Watershed Map**



**FIGURE 4**  
**Biological Resources**



# **APPENDIX A**

## *Wetland Determination Data Forms*





**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 5/23/2013  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 1  
 Investigator(s): Callie Ford Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 33.0955 Long: 117.0573 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ramona sandy loam, 9 to 15 percent slopes, eroded NWI classification: n/a

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Data station taken in low flow channel of a primarily unvegetated stream channel.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <u>n/a</u>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0.0 %</u> (A/B)
4. _____					
Total Cover: _____ %					
Sapling/Shrub Stratum				<b>Prevalence Index worksheet:</b>	
1. <u>Ricinus communis</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	Total % Cover of: _____ Multiply by: _____	
2. <u>Mimulus aurantiacus</u>	<u>10</u>	<u>No</u>	<u>Not Listed</u>	OBL species	<u>0</u>
3. <u>Nicotiana glauca</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	FACW species	<u>0</u>
4. <u>Opuntia littoralis</u>	<u>5</u>	<u>No</u>	<u>Not Listed</u>	FAC species	<u>15</u>
5. <u>Opuntia ficus indica</u>	<u>5</u>	<u>No</u>	<u>Not Listed</u>	FACU species	<u>80</u>
Total Cover: <u>45 %</u>				UPL species	<u>175</u>
Herb Stratum				Column Totals:	<u>60</u> (A) <u>270</u> (B)
1. <u>Hirschfeldia incana</u>	<u>15</u>	<u>Yes</u>	<u>Not Listed</u>	Prevalence Index = B/A = <u>4.50</u>	
2. _____				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
Total Cover: <u>15 %</u>					
Woody Vine Stratum				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	
1. <u>n/a</u>					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum _____ %		% Cover of Biotic Crust _____ %			

Remarks: Vegetation present is sparse and consist of non-native species.

**SOIL**

Sampling Point: 1 \_\_\_\_\_

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	7.5 YR 3/4	100					Loamy sand	
4-20	7.5 YR 3/3	100					sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	--	---	--	--

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____ Remarks: _____	<b>Hydric Soil Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
--	---

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators (2 or more required)</b> <input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
---	---	---

<b>Field Observations:</b> Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data station located within an ephemeral stream channel that has been created by erosive soil conditions.

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 5/23/2013  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 2  
 Investigator(s): Callie Ford Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 33.0956 Long: 117.0587 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Steep gullied land NWI classification: Stream/river

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Data station taken in a perennial channel located within an oak woodland understory.	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2. _____				Total Number of Dominant Species Across All Strata:	0 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	0 % (A/B)
4. _____					
Total Cover: _____ %					
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b>	
1. _____				Total % Cover of:	Multiply by:
2. _____				OBL species	x 1 = 0
3. _____				FACW species	x 2 = 0
4. _____				FAC species	x 3 = 0
5. _____				FACU species	x 4 = 0
				UPL species	x 5 = 0
Total Cover: _____ %				Column Totals:	0 (B)
				Prevalence Index = B/A = _____	
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b>	
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%	
2. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. _____				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
6. _____					
7. _____					
8. _____					
Total Cover: _____ %					
Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b>	
1. _____				Yes <input type="radio"/>	No <input checked="" type="radio"/>
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum _____ %		% Cover of Biotic Crust _____ %			

Remarks: Data station is located within a perennial creek. There is no vegetation within the creek. The creek is located under a canopy of coast live oaks (*Quercus agrifolia*) with some palm trees (*Washingtonia robusta*)



## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 3/21/14  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 3a  
 Investigator(s): Callie Ford and Patricia Schuyler Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Bank Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Steep gullied land NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Data station taken on bank above channel in oak woodland.	

### VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Quercus agrifolia</u>	60	Yes	Not Listed	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <span style="background-color: #cccccc; padding: 2px;">0</span> (A) Total Number of Dominant Species Across All Strata: <span style="background-color: #cccccc; padding: 2px;">2</span> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <span style="background-color: #cccccc; padding: 2px;">0.0 %</span> (A/B)																
2. _____																				
3. _____																				
4. _____																				
Total Cover: <span style="background-color: #cccccc; padding: 2px;">60 %</span>				<b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: right;">Total % Cover of:</td> <td style="width: 50%; text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td>x 1 = <span style="background-color: #cccccc; padding: 2px;">0</span></td> </tr> <tr> <td>FACW species</td> <td>x 2 = <span style="background-color: #cccccc; padding: 2px;">0</span></td> </tr> <tr> <td>FAC species</td> <td>x 3 = <span style="background-color: #cccccc; padding: 2px;">0</span></td> </tr> <tr> <td>FACU species</td> <td>x 4 = <span style="background-color: #cccccc; padding: 2px;">40</span></td> </tr> <tr> <td>UPL species</td> <td>x 5 = <span style="background-color: #cccccc; padding: 2px;">300</span></td> </tr> <tr> <td>Column Totals:</td> <td><span style="background-color: #cccccc; padding: 2px;">70</span> (A) <span style="background-color: #cccccc; padding: 2px;">340</span> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <span style="background-color: #cccccc; padding: 2px;">4.86</span></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species	x 1 = <span style="background-color: #cccccc; padding: 2px;">0</span>	FACW species	x 2 = <span style="background-color: #cccccc; padding: 2px;">0</span>	FAC species	x 3 = <span style="background-color: #cccccc; padding: 2px;">0</span>	FACU species	x 4 = <span style="background-color: #cccccc; padding: 2px;">40</span>	UPL species	x 5 = <span style="background-color: #cccccc; padding: 2px;">300</span>	Column Totals:	<span style="background-color: #cccccc; padding: 2px;">70</span> (A) <span style="background-color: #cccccc; padding: 2px;">340</span> (B)	Prevalence Index = B/A = <span style="background-color: #cccccc; padding: 2px;">4.86</span>	
Total % Cover of:	Multiply by:																			
OBL species	x 1 = <span style="background-color: #cccccc; padding: 2px;">0</span>																			
FACW species	x 2 = <span style="background-color: #cccccc; padding: 2px;">0</span>																			
FAC species	x 3 = <span style="background-color: #cccccc; padding: 2px;">0</span>																			
FACU species	x 4 = <span style="background-color: #cccccc; padding: 2px;">40</span>																			
UPL species	x 5 = <span style="background-color: #cccccc; padding: 2px;">300</span>																			
Column Totals:	<span style="background-color: #cccccc; padding: 2px;">70</span> (A) <span style="background-color: #cccccc; padding: 2px;">340</span> (B)																			
Prevalence Index = B/A = <span style="background-color: #cccccc; padding: 2px;">4.86</span>																				
<b>Sapling/Shrub Stratum</b>																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
Total Cover: <span style="background-color: #cccccc; padding: 2px;">%</span>																				
<b>Herb Stratum</b>																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
Total Cover: <span style="background-color: #cccccc; padding: 2px;">%</span>																				
<b>Woody Vine Stratum</b>																				
1. <u>Toxicodendron diversilobum</u>	10	Yes	FACU	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
2. _____																				
Total Cover: <span style="background-color: #cccccc; padding: 2px;">10 %</span>																				
% Bare Ground in Herb Stratum _____ %		% Cover of Biotic Crust <span style="background-color: #cccccc; padding: 2px;">100%</span>		<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>																
Remarks: Data station is located on the bank above the perennial creek. Vegetation is dominated by oaks with leaf litter covering the ground.																				

**SOIL**

Sampling Point: 3a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 3/3	100					silty loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<p><b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <b>(LRR C)</b> <input type="checkbox"/> 1 cm Muck (A9) <b>(LRR D)</b> <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<p><b>Indicators for Problematic Hydric Soils:<sup>4</sup></b></p> <input type="checkbox"/> 1 cm Muck (A9) <b>(LRR C)</b> <input type="checkbox"/> 2 cm Muck (A10) <b>(LRR B)</b> <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

<p><b>Restrictive Layer (if present):</b></p> Type: _____ Depth (inches): _____	<p><b>Hydric Soil Present?</b>    Yes <input type="radio"/>    No <input checked="" type="radio"/></p>
--	--

Remarks: No indicators of hydric soils with the data station.

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (any one indicator is sufficient)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <b>(Nonriverine)</b> <input type="checkbox"/> Sediment Deposits (B2) <b>(Nonriverine)</b> <input type="checkbox"/> Drift Deposits (B3) <b>(Nonriverine)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary Indicators (2 or more required)</u></p> <input type="checkbox"/> Water Marks (B1) <b>(Riverine)</b> <input type="checkbox"/> Sediment Deposits (B2) <b>(Riverine)</b> <input type="checkbox"/> Drift Deposits (B3) <b>(Riverine)</b> <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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<p><b>Field Observations:</b></p> Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<p><b>Wetland Hydrology Present?</b>    Yes <input type="radio"/>    No <input checked="" type="radio"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No signs of hydrology associated with the data station.



**SOIL**

Sampling Point: 3b

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	7.5 YR 3/3	20					sand	
0-18	7.5 YR 4/4	40					sand	
0-18	7.5 YR 5/6	40					sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b> <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)
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<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks: Since the data station is located within a perennial creek, hydric soils are assumed present despite the lack of indicators.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (any one indicator is sufficient) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators (2 or more required)</b> <input checked="" type="checkbox"/> Water Marks (B1) (Riverine) <input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine) <input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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**Field Observations:**

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	3"
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	0"
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	0"

**Wetland Hydrology Present?**    Yes     No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data station within perennial creek with approximately 3 inches of running water.



**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 3/21/14  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 4a  
 Investigator(s): Callie Ford and Patricia Schuyler Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ramona sandy loam, 2% to 5% slopes NWI classification: Stream/River

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Data station taken in a 6-foot wide channel within oak woodland canopy.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>0</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> % (A/B)
4. _____					
Total Cover: _____ %				<b>Prevalence Index worksheet:</b>	
<u>Sapling/Shrub Stratum</u>				Total % Cover of:	Multiply by:
1. _____				OBL species	x 1 = <u>0</u>
2. _____				FACW species	x 2 = <u>0</u>
3. _____				FAC species	x 3 = <u>0</u>
4. _____				FACU species	x 4 = <u>0</u>
5. _____				UPL species	x 5 = <u>0</u>
Total Cover: _____ %				Column Totals:	<u>0</u> (B)
				Prevalence Index = B/A = _____	
<u>Herb Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b>	
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%	
2. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. _____				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
6. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	
7. _____					
8. _____					
Total Cover: _____ %					
<u>Woody Vine Stratum</u>					
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum _____ %		% Cover of Biotic Crust _____ %			

Remarks: Data station is located within a perennial creek. There is no vegetation within the creek. The creek is located under a canopy of coast live oaks (Quercus agrifolia).



**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 3/21/14  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 4b  
 Investigator(s): Callie Ford and Patricia Schuyler Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): none Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ramona sandy loam, 2% to 5% slopes NWI classification: none

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Data station taken adjacent to the 6-foot wide channel within a stand of palm trees. Area is mapped as non-native riparian.	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <i>Washingtonia robusta</i>	80	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0 %</u> (A/B)																																
2. _____																																				
3. _____																																				
4. _____																																				
Total Cover: <u>80 %</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center"><u>  </u></td> <td>x 1 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>80</u></td> <td>x 2 =</td> <td align="center"><u>160</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>  </u></td> <td>x 3 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>2</u></td> <td>x 4 =</td> <td align="center"><u>8</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>  </u></td> <td>x 5 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>82</u></td> <td>(A)</td> <td align="center"><u>168</u> (B)</td> </tr> <tr> <td align="center" colspan="4">Prevalence Index = B/A = <u>2.05</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>  </u>	x 1 =	<u>0</u>	FACW species	<u>80</u>	x 2 =	<u>160</u>	FAC species	<u>  </u>	x 3 =	<u>0</u>	FACU species	<u>2</u>	x 4 =	<u>8</u>	UPL species	<u>  </u>	x 5 =	<u>0</u>	Column Totals:	<u>82</u>	(A)	<u>168</u> (B)	Prevalence Index = B/A = <u>2.05</u>			
Total % Cover of:		Multiply by:																																		
OBL species	<u>  </u>	x 1 =	<u>0</u>																																	
FACW species	<u>80</u>	x 2 =	<u>160</u>																																	
FAC species	<u>  </u>	x 3 =	<u>0</u>																																	
FACU species	<u>2</u>	x 4 =	<u>8</u>																																	
UPL species	<u>  </u>	x 5 =	<u>0</u>																																	
Column Totals:	<u>82</u>	(A)	<u>168</u> (B)																																	
Prevalence Index = B/A = <u>2.05</u>																																				
<b>Sapling/Shrub Stratum</b>																																				
1. <i>Ficus carica</i>	2	Yes	FACU																																	
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
Total Cover: <u>2 %</u>																																				
<b>Herb Stratum</b>																																				
1. _____																																				
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
Total Cover: <u>  </u> %																																				
<b>Woody Vine Stratum</b>																																				
1. _____																																				
2. _____																																				
Total Cover: <u>  </u> %																																				
% Bare Ground in Herb Stratum <u>  </u> %		% Cover of Biotic Crust <u>  </u> %																																		
<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																																				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																																				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>																																				

Remarks: Data station is located immediately adjacent to the perennial creek in an area dominated palm trees.

**SOIL**

Sampling Point: 4b

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	7.5 YR 3/3	20					sand	
0-18	7.5 YR 4/4	40					sand	
0-18	7.5 YR 5/6	40					sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

1 cm Muck (A9) (LRR C)  
 2 cm Muck (A10) (LRR B)  
 Reduced Vertic (F18)  
 Red Parent Material (TF2)  
 Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: Despite the lack of indicators, hydric soils are assumed present due to the presence of water within the soil pit.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<b>Secondary Indicators (2 or more required)</b>
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input checked="" type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Water-Stained Leaves (B9)		

Water Marks (B1) (Riverine)  
 Sediment Deposits (B2) (Riverine)  
 Drift Deposits (B3) (Riverine)  
 Drainage Patterns (B10)  
 Dry-Season Water Table (C2)  
 Thin Muck Surface (C7)  
 Crayfish Burrows (C8)  
 Saturation Visible on Aerial Imagery (C9)  
 Shallow Aquitard (D3)  
 FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): 10"	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): 3"	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Water present within soil pit.

**WETLAND DETERMINATION DATA FORM - Arid West Region**

Project/Site: Bear Valley Parkway City/County: Escondido, San Diego Sampling Date: 3/21/14  
 Applicant/Owner: Spieth-Wohlford, Inc./Burnet Wohlford State: CA Sampling Point: 4c  
 Investigator(s): Callie Ford and Patricia Schuyler Section, Township, Range: Section 26, T12S, R2W  
 Landform (hillslope, terrace, etc.): Slight terrace Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ramona sandy loam, 2% to 5% slopes NWI classification: none

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Data station taken on a slight terrace above DS 4b in an area that visually appears drier than the sample plot for DS 4b.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <u>Quercus agrifolia</u>	20	Yes	Not Listed	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. <u>Washingtonia robusta</u>	10	Yes	FACW	Total Number of Dominant Species Across All Strata:	4 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	25.0 % (A/B)
4. _____					
Total Cover:			30 %		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b>	
1. <u>Ficus carica</u>	10	Yes	FACU	Total % Cover of:	Multiply by:
2. _____				OBL species	x 1 = 0
3. _____				FACW species	10 x 2 = 20
4. _____				FAC species	x 3 = 0
5. _____				FACU species	15 x 4 = 60
Total Cover:			10 %	UPL species	20 x 5 = 100
				Column Totals:	45 (A) 180 (B)
				Prevalence Index = B/A = 4.00	
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b>	
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%	
2. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. _____				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
6. _____					
7. _____					
8. _____					
Total Cover:			%		
Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b>	
1. <u>Toxicodendron diversilobum</u>	5	Yes	FACU	Yes <input type="radio"/>	No <input checked="" type="radio"/>
2. _____					
Total Cover:			5 %		
% Bare Ground in Herb Stratum _____ %		% Cover of Biotic Crust _____ %			

Remarks: Data station is located outside of the perennial creek and non-native riparian.

**SOIL**

Sampling Point: 4c

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5 YR 3/4	100					sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix.    <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.  
<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b> <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)	
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<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

<b>Restrictive Layer (if present):</b> Type: <u>roots</u> Depth (inches): <u>16</u>	<b>Hydric Soil Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks: No indicators of hydric soils with the data station.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (any one indicator is sufficient)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)	

<b>Field Observations:</b> Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No signs of hydrology associated with the data station.

# **APPENDIX B**

*Significant Nexus Analysis Forms*  
*(TO BE PROVIDED DURING PERMITTING)*





# **APPENDIX C**

*Vascular Plant Species Observed in the Study Area*



**APPENDIX C**  
**Vascular Plant Species Observed in the Study Area**

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**VASCULAR SPECIES**

**DICOTS**

***ANACARDIACEAE—SUMAC OR CASHEW FAMILY***

- \* *Schinus molle*—Peruvian peppertree
- Toxicodendron diversilobum*—Pacific poison oak

***APIACEAE—CARROT FAMILY***

- \* *Foeniculum vulgare*—sweet fennel

***ASTERACEAE—SUNFLOWER FAMILY***

- \* *Cynara cardunculus*—cardo
- \* *Erigeron bonariensis*—asthmaweed
- \* *Glebionis coronaria*—crowndaisy
- Isocoma menziesii*—Menzies' goldenbush
- Baccharis salicifolia* ssp. *salicifolia*—mulefat
- \* *Carduus pycnocephalus*—Italian plumeless thistle

***BORAGINACEAE—BORAGE FAMILY***

- Phacelia adenophora*—glandular yellow phacelia

***BRASSICACEAE—MUSTARD FAMILY***

- \* *Brassica nigra*—black mustard
- \* *Hirschfeldia incana*—shortpod mustard
- \* *Raphanus sativus*—cultivated radish

***CACTACEAE—CACTUS FAMILY***

- \* *Opuntia ficus-indica*—Barbary fig
- Opuntia littoralis*—coastal pricklypear

***CHENOPODIACEAE—GOOSEFOOT FAMILY***

- Atriplex canescens*—fourwing saltbush

***EUPHORBIACEAE—SPURGE FAMILY***

- \* *Ricinus communis*—castorbean

***FAGACEAE—OAK FAMILY***

- Quercus agrifolia*—California live oak

***LAMIACEAE—MINT FAMILY***

- \* *Marrubium vulgare*—horehound

## APPENDIX C (Continued)

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### **MORACEAE—MULBERRY FAMILY**

- \* *Ficus carica*—edible fig

### **PHRYMACEAE—LOPSEED FAMILY**

*Mimulus aurantiacus*—orange bush monkeyflower

### **PLATANACEAE—PLANE TREE, SYCAMORE FAMILY**

*Platanus racemosa*—California sycamore

### **SALICACEAE—WILLOW FAMILY**

*Salix exigua*—narrowleaf willow  
*Salix gooddingii*—Goodding's willow  
*Salix lasiolepis*—arroyo willow

### **SOLANACEAE—NIGHTSHADE FAMILY**

- \* *Nicotiana glauca*—tree tobacco  
*Datura wrightii*—sacred thorn-apple

### **TAMARICACEAE—TAMARISK FAMILY**

- \* *Tamarix aphylla*—Athel tamarisk

## MONOCOTS

### **ARECACEAE—PALM FAMILY**

- \* *Washingtonia robusta*—Washington fan palm
- \* *Phoenix dactylifera*—date palm

### **POACEAE—GRASS FAMILY**

- \* *Arundo donax*—giant reed
- \* *Bromus diandrus*—ripgut brome
- \* *Digitaria sanguinalis*—hairy crabgrass

\* signifies introduced (non-native) species