

**APPENDIX C-1:**

***BIOLOGICAL RESOURCES ASSESSMENT AND WESTERN  
RIVERSIDE COUNTY MSHCP CONSISTENCY ANALYSIS, CLINTON  
KEITH ROAD APN 380-250-003, PCR, NOVEMBER 2013.***

BIOLOGICAL RESOURCES ASSESSMENT AND  
WESTERN RIVERSIDE COUNTY MSHCP CONSISTENCY ANALYSIS

**CLINTON KEITH ROAD**  
**APN 380-250-003**

CITY OF WILDOMAR, RIVERSIDE COUNTY, CALIFORNIA



NOVEMBER 2013



BIOLOGICAL RESOURCES ASSESSMENT AND  
WESTERN RIVERSIDE COUNTY MSHCP CONSISTENCY ANALYSIS

**CLINTON KEITH ROAD**  
**APN 380-250-003**

CITY OF WILDOMAR, RIVERSIDE COUNTY, CALIFORNIA

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NOVEMBER 2013



# **Biological Resources Assessment and Western Riverside County MSHCP Consistency Analysis**

Clinton Keith Road  
APN 380-250-003  
City of Wildomar, Riverside County, California

**Project Location:**

U.S. Geological Survey (USGS) 7.5-minute  
Murrieta topographic quadrangle map, Section 6, T. 7 S., R. 3 W.

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**Report Date:**

November 2013



# **Biological Resources Assessment and Western Riverside County MSHCP Consistency Analysis**

Clinton Keith Road  
APN 380-250-003  
City of Wildomar, Riverside County, California

*The undersigned certify that this report is a complete and accurate account of the findings and conclusions of a biological resources assessment and Western Riverside County MSHCP consistency analysis for the above-referenced project.*

PCR Services Corporation



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Ceri Williams-Dodd, Senior Biologist II



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Amir Morales, Principal Regulatory Scientist

November 2013



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# 1.0 INTRODUCTION

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## 1.1 BACKGROUND AND PURPOSE

This report presents the findings of a Biological Resources Assessment (BRA) and a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis conducted by **PCR Services Corporation (PCR)** for Assessor Parcel Number (APN) 380-250-003, Clinton Keith Road, in the City of Wildomar (City), Riverside County (County), California. APN 380-250-003 is proposed for residential and commercial development (Project), comprising 19.4 acres on-site and 2.14 acres off-site. The purpose of this report is to satisfy the requirements of the California Environmental Quality Act (CEQA) and to support approvals that Strata Equity Group, Inc. (Project Applicant) is requesting from the City and Responsible Agencies (Agencies).

## 1.2 SOURCES

This report is based on information compiled through field reconnaissance and appropriate reference materials, in addition to field surveys conducted by PCR. Field surveys included a general biological survey and vegetation mapping, a jurisdictional waters and wetland delineation, and focused surveys for special-status plants and burrowing owl (*Athene cunicularia*). The information sources used in preparation of this report are provided in section 9.0 *References*.

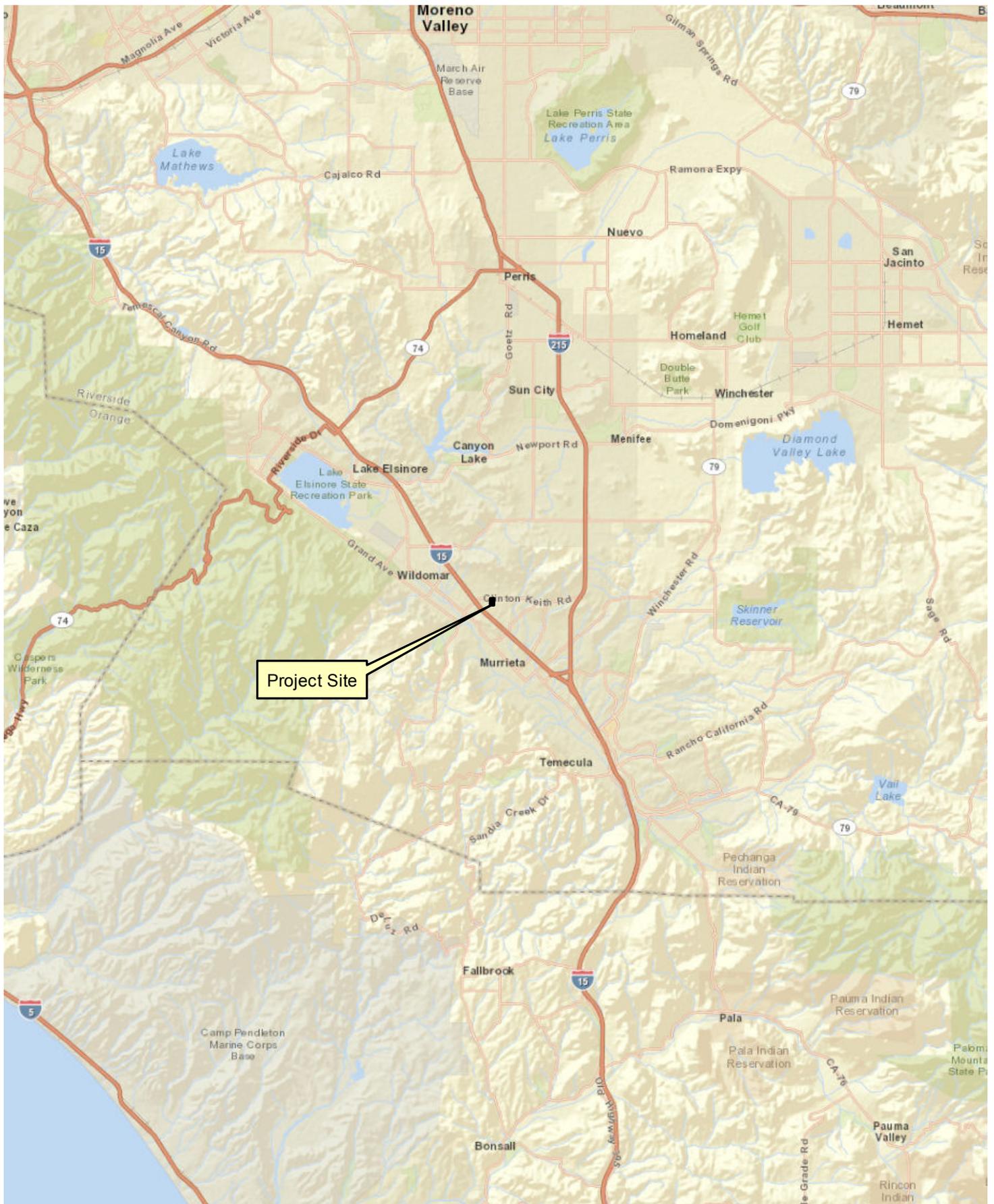
## 1.3 PROJECT SITE LOCATION

The Project site is generally situated just east of Interstate 15 (I-15) and west of I-215, as shown in **Figure 1, Regional Map**. Specifically, the Project site is located directly southwest of the intersection of Clinton Keith Road and unpaved Yamas Road. The Project site can be found on the U.S. Geological Survey (USGS) 7.5' Murrieta topographic quadrangle map, Section 6, T. 7 S., R. 3 W. (USGS 1953), as shown in **Figure 2, Vicinity Map**.

## 1.4 SCOPE OF STUDY

The scope of this BRA encompasses descriptions of the Project, methods of study, and existing site conditions, in addition to an evaluation of potential impacts to sensitive biological resources pursuant to CEQA thresholds and regulatory requirements including the Western Riverside County MSHCP. Avoidance, minimization, and mitigation measures are proposed to reduce any significant impacts.

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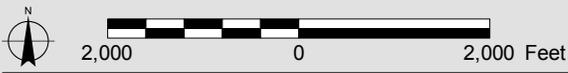
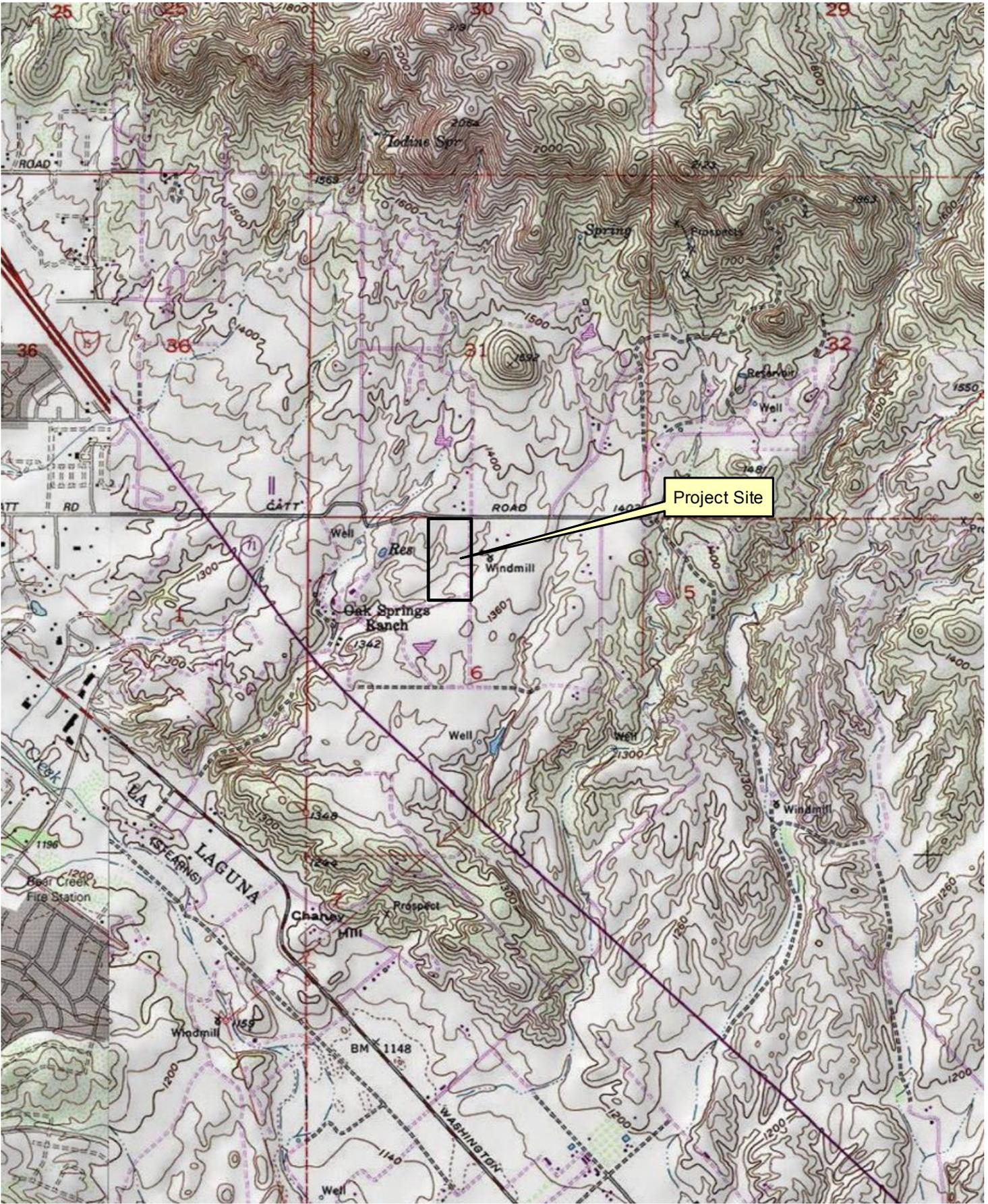
### Regional Map

Clinton Keith Road APN 380250003

Source: ESRI Street Map, 2009; PCR Services Corporation, 2013.

FIGURE

**1**



**Vicinity Map**

Clinton Keith Road APN 380250003

Source: USGS Topographic Series (Murrieta, Wildomar, CA); PCR Services Corporation, 2013.

FIGURE

**2**

## 2.0 PROJECT DESCRIPTION

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### 2.1 PROJECT DESCRIPTION

The proposed 19.4-acre Project is a mixed-use residential and commercial development as depicted on **Figure 3, Conceptual Site Plan**. The residential component of the project is located within the approximately 9.0 acre “South Site” while the commercial component is located within the approximately 10.3 acre “North Site.” Specifically, the proposed approximately 9.0 acre South Site area comprises apartments within 6.8 acres of the central and southern portions of the site, a detention basin within 1.3 acres of the southwest corner of the property, 0.9 acre of public roads and manufactured slopes, and a trail. A recreation and leasing building is also proposed as part of the apartment complex, in addition to 302 parking spaces. The proposed commercial component of the Project is located on the North Site that fronts Clinton Keith Road and comprises 4.8 acres of office and retail space, a 1.8 acre park, a 1.3 acre oak tree preservation area, and 2.4 acres of public roads and manufactured slopes including 275 parking spaces.

The 2.14 acres of off-site areas include an approximate 40-foot buffer to the east and an approximately 30-foot buffer to the west and southwest of the Project site. The off-site areas are proposed to accommodate disturbance from grading activities associated with manufactured slopes, as well as road improvements associated with Yamas Road to be constructed along the eastern Project limits as required by the City of Wildomar.

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### Conceptual Site Plan

Clinton Keith Road APN 380250003  
Source: KTG, 2014.

FIGURE

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## 3.0 METHODS OF STUDY

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### 3.1 APPROACH

This report is based on information compiled through a review of appropriate databases and reference materials, and field reconnaissance. A general biological survey and vegetation mapping was conducted, in addition to a jurisdictional waters and wetlands delineation, and focused surveys for special-status plants and the burrowing owl.

### 3.2 LITERATURE REVIEW

The report began with a review of relevant literature on the biological resources of the Project site and surrounding vicinity. The California Natural Diversity Database (CNDDDB), a California Department of Fish and Wildlife (CDFW<sup>1</sup>) species account database, was reviewed for all pertinent information regarding the localities of known observations of sensitive species and habitats in the vicinity of the Project site (CNDDDB 2013). The vicinity of the Project site included the following eight USGS topographic quadrangles: Romoland, Winchester, Bachelor Mountain, Pechanga, Temecula, Fallbrook, Wildomar, Lake Elsinore. Federal register listings, protocols, and species data provided by the United States Fish and Wildlife Service (USFWS) (USFWS 2013a), CDFW, and the California Native Plant Society (CNPS) (CNPS 2013) were reviewed in conjunction with anticipated federally and state listed species potentially occurring within the vicinity. Other data sources reviewed include USFWS critical habitat maps (USFWS 2013b) and United States Department of Agriculture Natural Resources Conservation Service (NRCS) soils mapping (NRCS 2012). In addition, numerous regional flora and fauna field guides were utilized to assist in the identification of species and suitable habitats, and relevant local policies were referenced such as the *Western Riverside County Multiple Species Habitat Conservation Plan* (Western Riverside County MSHCP) (Dudek and Associates 2003). A list of all relevant references reviewed is included in section 9.0 *References*.

### 3.3 FIELD INVESTIGATIONS

On November 27, 2012, a general biological survey and vegetation mapping was conducted by PCR Senior Biologist Ezekiel Cooley to document existing conditions relating to plant communities, and a delineation of jurisdictional waters and wetlands was conducted by PCR Principal Regulatory Scientist Amir Morales to identify the presence of drainages and/or wetland features. The observed vegetation communities and drainage features were mapped on aerial photographs for the on- and off-site areas of the Project. Survey coverage of these areas, with special attention to sensitive habitats or those areas potentially supporting sensitive flora or fauna or drainage and wetland features, was ensured using aerial photographs. Focused surveys were also conducted for special-status plants and burrowing owls in April, May, June and August 2013. During the course of all field visits, an inventory of plant and wildlife species observed was compiled. The methods for these field investigations are described in detail below.

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<sup>1</sup> Previously known as the California Department of Fish and Game (CDFG). The name change was effective on January 1, 2013.

### 3.3.1 Natural Community Mapping

Natural vegetation communities were mapped directly in the field utilizing a 100-scale (1"=100') aerial photograph based on dominant species. Natural community names and descriptions follow Oberbauer (2008), which is based on Holland (1986). After completing the fieldwork, the natural community polygons were digitized using Geographic Information System (GIS) technology to calculate acreages.

### 3.3.2 General Plant Inventory

All plant species observed during the field surveys were either identified in the field and recorded in field notes, or collected and later identified using taxonomic keys and added to the inventory. Regional field guides were utilized for the identification of plants, as necessary. Plant taxonomy follows Hickman (1993). Common plant names, when not available from Hickman, were taken from Munz (1974) and/or Clarke (2007). The NRCS PLANTS Database was also utilized (NRCS 2013). Scientific names are used during the first mention of a species; common names only are used in the remainder of the text. Since common names vary significantly between references, one common name per species is used consistently throughout the report. Special-status plant species are discussed below in section 3.3.4 *Special-Status Plant Species*.

### 3.3.3 General Wildlife Inventory

All wildlife species observed during the field surveys, as well as any diagnostic sign (call, tracks, nests, scat, remains, or other sign), were recorded in field notes. Binoculars and regional field guides were utilized for the identification of wildlife, as necessary. Wildlife taxonomy follows Stebbins (2003) for amphibians and reptiles, the American Ornithologists' Union (2012 and 1998) for birds, and Jameson and Peeters (1988) for mammals. Scientific names are used during the first mention of a species; common names only are used in the remainder of the text. Since common names vary significantly between references, one common name per species is used consistently throughout the report. Special-status wildlife species are discussed below in section 3.3.5 *Special-Status Wildlife Species*.

### 3.3.4 Sensitive Habitats

Sensitive habitats are listed by CDFW on their *List of California Terrestrial Natural Communities* (CDFW 2003).<sup>2</sup> Sensitive habitats for the Project site were identified based on the natural communities mapped for the Project site (see section 3.3.1 *Natural Community Mapping*).

### 3.3.5 Special-Status Plant Species

The potential for special-status plant species was assessed based upon the known occurrence of species in the area as identified from USFWS, CDFW, and CNPS databases (see section 3.2 *Literature Review*), and the presence or absence of suitable habitat within the Project site based on natural community vegetation mapping (see section 3.3.1 *Natural Community Mapping*). Suitable habitat was defined as areas with appropriate vegetation communities, soils and/or elevation at mean sea level (MSL) to support the species based on known occurrences in those habitats and/or CDFW and CNPS documented habitat descriptions for

<sup>2</sup> Available online at: [http://www.dfg.ca.gov/biogeodata/vegcamp/natural\\_comm\\_list.asp](http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp). Sensitive (also referred to by CDFW as 'rare' or 'special status') natural communities are asterisked on the list.

the species. The definitions of suitable habitat were then compared against the vegetation mapping conducted for the Project site and local knowledge. A table of special-status plant species was prepared for the Project site based on the databases, and the potential for each species to occur was determined following completion of the field surveys.

Based on the presence of suitable habitat for special-status species, focused plant surveys were conducted by PCR Senior Biologist Ezekiel Cooley, and PCR Biologists Bob Huttar, Florence Chan, and/or Amy Lee on April 11 and August 19, 2013. The focused surveys were conducted pursuant to published CDFW and USFWS protocols (CDFW 2009; CDFW 2000; USFWS 2000), including walking transects and making close observations at ground level during the blooming periods of the special-status plants with potential to occur on the Project site (both on- and off-site) to ensure detection.

All plant species observed during the field surveys were identified and recorded using scientific and common names, as described in section 3.3.2 *General Plant Inventory*

### 3.3.6 Special-Status Wildlife Species

The potential for special-status wildlife species was assessed based upon the known occurrence of species in the area as identified from USFWS and CDFW databases (see section 3.2 *Literature Review*), and the presence or absence of suitable habitat within the Project site based on natural community mapping (see section 3.3.1 *Natural Community Mapping*). Suitable habitat was defined as areas with appropriate vegetation communities and/or topography (elevation at MSL) to support the species based on known occurrences in those habitats and/or USFWS and CDFW documented habitat descriptions for the species. The definitions of suitable habitat were then compared against the vegetation mapping conducted for the Project site and local knowledge. A table of special-status wildlife species was prepared for the Project site based on the databases, and the potential for each species to occur was determined following completion of the field surveys.

Based on the presence of suitable habitat and regulatory requirements, including compliance with the Western Riverside County MSHCP, focused surveys were conducted for burrowing owl by PCR biologists Ezekiel Cooley, Bob Huttar, Florence Chan, and/or Amy Lee. This methodology is described below in section 3.3.5.1 *Focused Burrowing Owl Surveys*. All wildlife species observed during the field surveys were identified and recorded using scientific and common names, as described in section 3.3.3 *General Wildlife Inventory*

#### 3.3.6.1. Focused Burrowing Owl Surveys

Focused Step I and Step II burrowing owl surveys were conducted on April 11, 2013 (PCR Senior Biologist Ezekiel Cooley and Biologist Bob Huttar), May 10, 2013 (PCR Senior Biologist Ezekiel Cooley and Biologist Amy Lee), June 13, 2013 (PCR Biologists Florence Chan and Amy Lee), and August 19, 2013 (PCR Biologists Amy Lee, Florence Chan, and Bob Huttar). The surveys were conducted in accordance with the County of Riverside's *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (County of Riverside, 2006), including Step I, Habitat Assessment, and Step II, Locating Burrows and Burrowing Owls. Surveys were conducted within the Project site plus a 150-meter (approximately 500 feet) buffer zone around the Project site perimeter; binoculars were used to survey any inaccessible areas. The Step I survey was conducted to identify the presence or absence of suitable burrowing owl habitat (e.g., annual and perennial grasslands, deserts, and arid scrublands characterized by low-growing vegetation). The Step II surveys focused on the detection of small fossorial mammal burrows potentially suitable for

burrowing owl, burrowing owl burrows, individual burrowing owls, and any diagnostic sign of their occurrence (e.g., molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance). Transects were utilized, spaced no more than 100 feet apart, to allow 100 percent visual coverage of the ground surface. The four surveys were conducted during the burrowing owl breeding season (March 1 to August 31) on separate days between two hours before sunset to one hour after or one hour before sunrise to two hours after.<sup>3</sup>

### 3.3.7 Jurisdictional Delineation

A jurisdictional delineation of all existing on-site drainage features was conducted by PCR Principal Regulatory Scientist Amir Morales and Senior Biologist Ezekiel Cooley on November 27, 2012 to assess the extent of “waters of the U.S.” and/or wetlands under the jurisdiction of the U.S. Army Corps of Engineers (USACE)/Regional Water Quality Control Board (RWQCB), and/or streambed and associated riparian habitat under the jurisdiction of the CDFW. All areas were delineated using the protocol stipulated by the USACE under Section 404 of the Clean Water Act (CWA) and by the CDFW under Section 1600-1607 of the California Fish and Game Code. Any wetlands were delineated using the procedures stipulated in the USACE Wetland Delineation Manual (Environmental Laboratory 1987) and Arid West Supplement (USACE 2008a, USACE 2008b). Given the ephemeral nature of the drainages features associated with the Project site, the potential for USACE jurisdictional “waters of the U.S.” was based primarily on the presence or absence of jurisdictional field indicators consistent with the USACE guidelines pursuant to *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (ACOE 2008a) such as the presence of an OHWM and/or secondary indicators of hydrology, including evidence of the deposition of debris, scour, sediment sorting, and changes in vegetation. The extent of CDFW jurisdiction was assessed based on the limits of the defined bed and bank and includes riparian streambed associated vegetation, where applicable. If these criteria were met, data was collected to estimate the length and width of jurisdictional features potentially regulated by the resource agencies. Upon completion of the field work, documentation of all jurisdictional wetlands, “waters of the U.S.,” and CDFW jurisdictional areas were completed. The documentation included a map illustrating the location, extent and acreage of all jurisdictional features. Downstream surface connections to known USACE jurisdictional waters were also evaluated in the field and by using satellite imagery and mapping, for the purpose of establishing a connection to “waters of the U.S.,” where applicable.

## 3.4 REGIONAL CONNECTIVITY/WILDLIFE MOVEMENT CORRIDOR

An analysis of wildlife movement was conducted based on information compiled from the literature, analysis of aerial photographs and topographic maps, direct observations made in the field during survey work, and an analysis of existing wildlife movement functions. Relative to corridor issues, the focus of this assessment is to determine if the change of the existing land use within the Project site will have significant impacts on the regional wildlife movement associated with the Project site and the immediate vicinity.

The Western Riverside County MSHCP was reviewed to identify any Linkage or Core Areas proposed for preservation on the Project site (Dudek and Associates 2003). Additionally, the *South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion* document was reviewed (South Coast Wildlands 2008).

<sup>3</sup> For projects within the Western Riverside County MSHCP plan area, it has been PCR's experience that the County of Riverside has recently preferred that Step II surveys be conducted approximately one week apart.

## 4.0 EXISTING CONDITIONS

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### 4.1 CHARACTERISTICS OF THE PROJECT SITE AND SURROUNDING AREA

The approximately 19.4-acre Project site and 2.14-acres of off-site areas are located within the City of Wildomar in Riverside County. The Project site and off-site areas are not within any USFWS designated critical habitat, but are within the Elsinore Area Plan of the Western Riverside County MSHCP (**Figure 4, Locations within the Elsinore Area Plan of the MSHCP**).

The Project site consists primarily of disturbed fallow agricultural fields, with a smaller component of native vegetation dominated by California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), chamise (*Adenostoma fasciculatum*), and coast live oaks (*Quercus agrifolia*). The Project site supports four ephemeral drainage features identified as Drainages A, B, B1, and C. Drainages A, B and B1 are associated with headwaters which commence in the foothills located approximately 1.25-mile to the northeast, while Drainage C is an erosional feature that initiates on the Project site. Drainages B and B1 originate from the eastern boundary, while Drainage A originates near the northern boundary and Drainage C is located near the southern boundary. No USGS blue-line streams are mapped within the Project site.

The topography of the Project site consists of gently rolling hills. The site slopes gently in a northeast to southwest direction, with the elevations ranging from approximately 1,330 feet above MSL along the southwestern boundary to approximately 1,380 feet above MSL along the northern boundary. Mapped soils in the Project site include ten soil types as follows (NRCS 2012):

- Arlington and Greenfield fine sandy loams, 2 to 8 percent slopes, eroded
- Handford sandy loam, 2 to 15 percent slopes
- Monserate sandy loam, 8 to 15 percent slopes, eroded
- Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded
- Monserate sandy loam, shallow, 15 to 25 percent slopes, severely eroded
- Placentia fine sandy loam, 5 to 15 percent slopes
- Ramona and Buren sandy loams, 15 to 25 percent slopes, severely eroded
- Ramona and Buren loams, 5 to 15 percent slopes, eroded
- Ramona and Buren loams, 5 to 25 percent slopes, severely eroded
- San Timoteo loam, 8 to 25 percent slopes, eroded

Surrounding land uses include a mix of rural and suburban residential development and open space in all directions, in addition to a few commercial developments to the east, south and west.

## 4.2 NATURAL COMMUNITIES

Descriptions of each of the natural communities found within the Project site and off-site areas are provided below, and the locations of each community are shown in **Figure 5, Natural Communities**. **Table 1, Natural Communities** lists each of the natural communities observed, as well as the acreage both on- and off-site. Representative photographs of natural communities found are included in **Figure 6, Site Photographs**.

**Table 1**  
**Natural Communities**

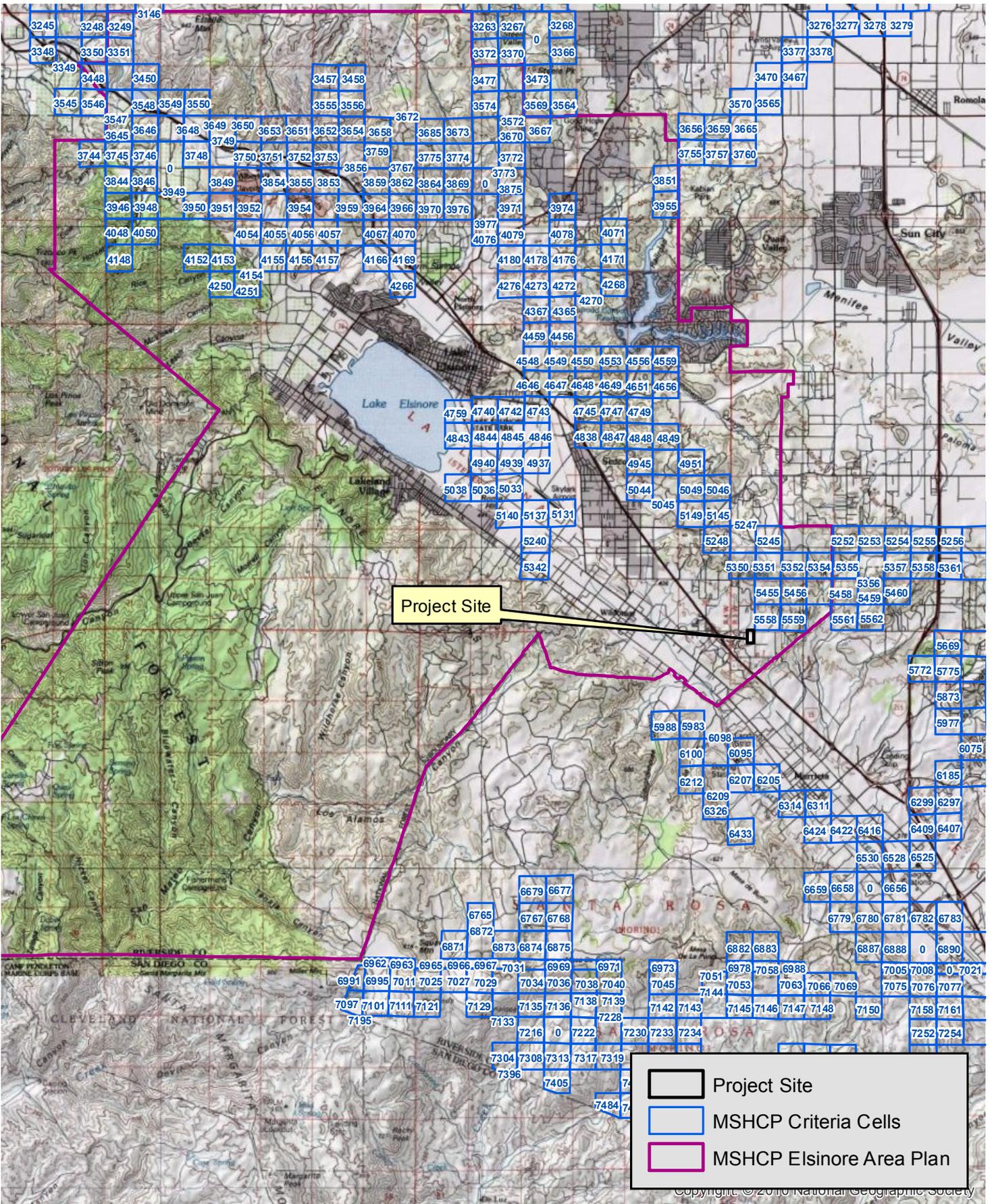
<b>Natural Community</b>	<b>On-Site (acres)</b>	<b>Off-Site (acres)</b>	<b>Total (acres)</b>
Buckwheat Scrub	0.47	-	<b>0.47</b>
Buckwheat Scrub/Chamise Chaparral	0.19	-	<b>0.19</b>
Buckwheat Scrub/Ruderal	0.51	0.43	<b>0.94</b>
Chamise Chaparral	0.12	-	<b>0.12</b>
Chamise Chaparral/Buckwheat Scrub	0.34	-	<b>0.34</b>
Coast Live Oak Woodland	0.81	0.01	<b>0.82</b>
Riversidean Sage Scrub	0.89	-	<b>0.89</b>
Riversidean Sage Scrub/Ruderal	0.61	-	<b>0.61</b>
Southern Willow Scrub/Ruderal	0.06	-	<b>0.06</b>
Ornamental	0.01	-	<b>0.01</b>
Ruderal	0.21	0.11	<b>0.32</b>
Ruderal/Buckwheat Scrub	0.91	0.51	<b>1.42</b>
Ruderal/Riversidean Sage Scrub	0.83	-	<b>0.83</b>
Disturbed	13.4	1.08	<b>14.5</b>
Developed	0.02	-	<b>0.02</b>
<b>Total</b>	<b>19.4</b>	<b>2.14</b>	<b>21.54</b>

Source: PCR Services Corporation, 2013.

### 4.2.1 Buckwheat Scrub (Holland Code: 32000)

California buckwheat scrub is a shrubland with an alliance of plants dominated by California buckwheat (*Eriogonum fasciculatum*). In coastal California this community is usually one of the first to establish in mechanically disturbed areas.

The pioneering California buckwheat community on the Project site was dominant in three small patches. One patch was found in the northeast corner of the site near Clinton Keith road, one patch in the northern portion of the project site, and one patch near the center of the parcel. In these areas, the buckwheat scrub community is well developed with mature individuals that are closely spaced with non-native grasses and forbs filling those spaces. This community occupies a small acreage, including 0.47 acre within the on-site portion of the Project only.



0 2.5 Miles

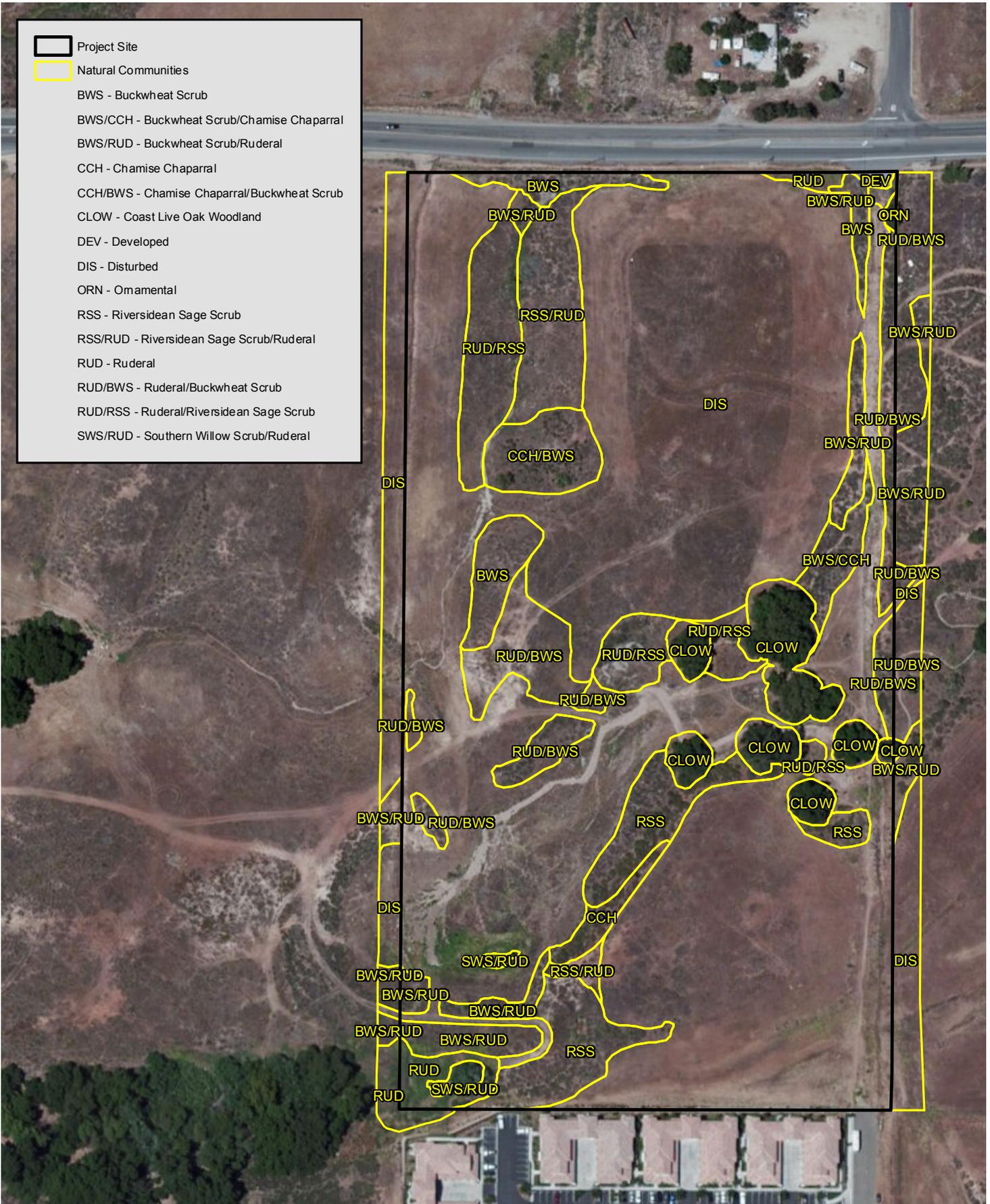
**Location within the Elsinore Area Plan of the MSHCP**

FIGURE

**4**

Clinton Keith Road APN 380250003

Source: USGS Topographic Series; MSHCP; PCR Services Corporation, 2013.



- Project Site
- Natural Communities
- BWS - Buckwheat Scrub
- BWS/CCH - Buckwheat Scrub/Chamise Chaparral
- BWS/RUD - Buckwheat Scrub/Ruderal
- CCH - Chamise Chaparral
- CCH/BWS - Chamise Chaparral/Buckwheat Scrub
- CLOW - Coast Live Oak Woodland
- DEV - Developed
- DIS - Disturbed
- ORN - Ornamental
- RSS - Riversidean Sage Scrub
- RSS/RUD - Riversidean Sage Scrub/Ruderal
- RUD - Ruderal
- RUD/BWS - Ruderal/Buckwheat Scrub
- RUD/RSS - Ruderal/Riversidean Sage Scrub
- SWS/RUD - Southern Willow Scrub/Ruderal



**Natural Communities**

Clinton Keith Road APN 380250003  
 Source: Aerial Express, 2010; PCR Services Corporation, 2013.



Photograph 1: Photograph of Disturbed habitat in the foreground with Coast Live Oak Woodland in the background.



Photograph 2: Photograph of Disturbed habitat located in the northeastern corner of the project site.



Photograph 3: Photograph of Chamise Chaparral areas in the foreground with Disturbed and Coast Live Oak Woodland in the back ground. The Photograph was taken in the central portion of the project site facing northwest.



Photograph 4: Photograph of Disturbed areas in the foreground with Riversidean Sage Scrub to the right and Southern Willow Scrub/Ruderal to the left in the back ground. The Photograph was taken in the southern portion of the project site facing west.

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#### **4.2.2 Buckwheat Scrub/Chamise Chaparral (Holland Codes: 32000/37200)**

Buckwheat scrub/chamise chaparral is a shrubland with an alliance of plants co-dominated by California buckwheat and chamise (*Adenostoma fasciculatum*).

The buckwheat scrub/chamise chaparral community is found in one small patch on the Project site. The patch was found along the eastern boundary of the site. In this area, the buckwheat scrub community is interspersed with mature chamise individuals. This community occupies a small acreage, including 0.19 acre within the on-site portion of the Project only.

#### **4.2.3 Buckwheat Scrub/Ruderal (Holland Codes: 32000/11000)**

Buckwheat scrub/ruderal is a shrubland with an alliance of plants dominated or co-dominated by California buckwheat and primarily non-native ruderal vegetation.

The pioneering buckwheat/ruderal community is found scattered throughout the Project site. In these areas, the buckwheat scrub/ruderal community consists of mature individuals of California buckwheat that are interspersed with non-native grasses and forbs filling open spaces and disturbed areas. These apparently remnant patches do not appear to have been disced in recent years. Other associated species generally include species found in disturbed areas such as tocalote (*Centaurea melitensis*), short-podded mustard (*Hirschfeldia incana*), ripgut brome (*Bromus diandrus*), foxtail chess (*Bromus madritensis* ssp. *rubens*) and other brome grasses (*Bromus* spp.). This community occupies a small acreage, including 0.51 acre on-site and 0.43 acre off-site.

#### **4.2.4 Chamise Chaparral (Holland Code: 37200)**

Chamise is the most characteristic and widespread chaparral species in the state of California. In chamise chaparral, the shrub accounts for at least half of the cover and the ground cover is sparse to intermittent.

In the southern portion of the Project site, a small patch of chamise chaparral is found on a slope which does not appear to have been disced at any time in the past. The only shrub found in this community is chamise and the associated species include understory species of brome grasses and tocalote. This community occupies a small acreage, including 0.12 acre within the on-site portion of the Project only.

#### **4.2.5 Chamise Chaparral/Buckwheat Scrub (Holland Codes: 37200/32000)**

Chamise chaparral/buckwheat scrub is co-dominated by chamise and California buckwheat.

In the approximate central portion of the Project site, a small patch of chamise chaparral/buckwheat scrub is found on a west facing slope. In this area, the community is interspersed with individuals of mature chamise and California buckwheat. This community occupies a small acreage, including 0.34 acre within the on-site portion of the Project only.

#### **4.2.6 Coast Live Oak Woodland (Holland Code: 71160)**

Coast live oak woodlands are dominated by coast live oak trees with an understory of primarily non-native grasses such as brome grasses (*Bromus* spp.) and occasionally native and non-native herbaceous species.

This community in southern California is often associated with drainage systems and south facing canyon slopes.

Within the Project site, coast live oak trees in this community grow close together with their canopies occasionally touching. The shrub layer underneath is poorly developed likely due to historic livestock grazing. Some non-native species found in the understory included olive (*Olea* sp.), tocalote, short-podded mustard, ripgut brome, and other brome grasses. Coast live oak woodland occupies 0.81 acre within the on-site portion of the Project and 0.01 acre off-site. Further details on the coast live oak trees within this community are described below in section 4.6.3 *Oak Tree Assessment*.

#### **4.2.7 Riversidean Sage Scrub (Holland Code: 32700)**

Riversidean sage scrub is the driest, most inland expression of the collection of sage scrub or coastal scrub series and ranges throughout southern California. It typically occurs on steep slopes, severely drained soils, or clays that release soil moisture slowly. Typical stands of this type of sage scrub are fairly open and dominated by California sagebrush (*Artemisia californica*), California buckwheat, and foxtail chess. Additional species characteristic of this plant community include deerweed (*Acmispon glaber*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*).

The Riversidean sage scrub areas within the Project site were primarily dominated by California buckwheat in addition to other species such as California sagebrush, deerweed, white sage, and an understory of ruderal species including doveweed (*Eremocarpus setigerus*), California cholla (*Cylindropuntia californica*), shortpod mustard, and California brittlebush (*Encelia californica*). Riversidean sage scrub was observed along slopes throughout the middle of the southern on-site portion of the Project site only, occupying approximately 0.89 acre.

#### **4.2.8 Riversidean Sage Scrub/Ruderal (Holland Codes: 32700/11000)**

The plant species observed in the Riversidean sage scrub/ruderal areas were comparable to the Riversidean sage scrub areas described above in section 4.2.7 *Riversidean Sage Scrub (Holland Code: 32700)*, with the exception that this community was characterized by a higher density of ruderal species and a lower density of native species due to disturbance. Two small areas of Riversidean sage scrub/ruderal areas were observed on-site only at the northern and southern limits, encompassing 0.61 acre.

#### **4.2.9 Southern Willow Scrub/Ruderal (Holland Codes: 63320/11000)**

Southern willow scrub/ruderal communities consist of a dominance of red willow (*Salix laevigata*) trees. This community is generally associated with intermittent drainage systems throughout Southern California.

Within the Project site, two small patches of southern willow scrub/ruderal areas occur in the southwestern portion including one near the southern boundary and one just north of the southern boundary. The patch near the southern boundary consists of five red willow trees growing in one colony with a few mulefat (*Baccharis salicifolia*) plants on a down slope portion of this area. The tallest willow in this colony is over 20 feet. Since the willows are growing in very close proximity this colony has the appearance of a single tree. The patch just north of the southern boundary consists of one large red willow tree with a few mulefat plants around it. The understory of both patches is dominated by ruderal species. The two small patches occur on-site totaling approximately 0.06 acre.

#### **4.2.10 Ornamental (Holland Code: 11000)**

Ornamental vegetation includes pepper trees (*Schinus* spp.) and other non-native tree species generally used for landscaping. A total of 0.01 acre of ornamental vegetation occurs in one small patch near the northeastern corner of the on-site portion of the Project site.

#### **4.2.11 Ruderal (Holland Code: 11000)**

Ruderal vegetation is found in areas heavily disturbed by human activities, such as roadsides, graded fields, former agricultural areas or dump sites, and frequently the plants are introduced as a consequence of the activity. There is a wide variability in the types of species found due to many factors including the site location and frequency of disturbance.

Within the Project site, typical species included many brome grasses, tocalote, tree tobacco (*Nicotiana glauca*), telegraph weed (*Heterotheca grandiflora*), black mustard (*Brassica nigra*), cryptantha (*Cryptantha* sp.), phacelia (*Phacelia* sp.) and prickly Russian thistle (*Salsola tragus*). Ruderal areas comprise 0.21 acre within the on-site portion and 0.11 acre within the off-site portion of the Project site.

#### **4.2.12 Ruderal/Buckwheat Scrub (Holland Codes: 11000/32000)**

The ruderal/ buckwheat scrub community on the Project site is dominated by the ruderal species described above in section 4.2.11 *Ruderal (Holland Code: 11000)*, with a higher density of California buckwheat. The California buckwheat species are scattered and at a low density (less than approximately 20 percent) within this community. The ruderal/buckwheat scrub occupies 0.91 acre within the on-site portion and 0.51 acre off-site.

#### **4.2.13 Ruderal/Riversidean Sage Scrub (Holland Codes: 11000/32700)**

The plant species observed in the ruderal/Riversidean sage scrub areas were comparable to the Riversidean sage scrub areas described above in 4.2.7 *Riversidean Sage Scrub (Holland Code: 32700)*, with the exception that this community was dominated by a high density of ruderal species and a lower density of native species due to disturbance. Three areas of ruderal/Riversidean sage scrub were observed within the central and northern on-site portion of the Project site only, encompassing 0.83 acre.

#### **4.2.14 Disturbed (Holland Code: 11300)**

Disturbed areas consist of regularly maintained areas that lack vegetation. Disturbed areas within the Project site primarily include frequently disced fallow agricultural fields, and dirt access roads. These areas occupy approximately 13.4 acres within the on-site portion and 1.08 acres within the off-site portion of the Project site.

#### **4.2.15 Developed (Holland Code: 12000)**

Developed areas are paved, or are unpaved, maintained areas that consist of compacted soils with no vegetation. One driveway apron is located in the northeastern portion of the Project site, occupying a small acreage totaling 0.02 acre within the on-site portion only.

### 4.3 GENERAL PLANT INVENTORY

The natural communities discussed above are composed of numerous plant species. Observations regarding the plant species present were made during each field visit, and a list of all plant species observed is provided in **Appendix A, *Floral and Faunal Compendium***. Special-status plant species occurring or potentially occurring are discussed below in section 4.7.3 *Special-Status Plant Species*.

### 4.4 GENERAL WILDLIFE INVENTORY

The natural communities discussed above can provide habitat for common wildlife species. Observations regarding the wildlife species present were made during each field visit, and a list of all species observed is provided in Appendix A. Special-status wildlife species occurring or potentially occurring are discussed below in section 4.7.4 *Special-Status Wildlife Species*.

### 4.5 WILDLIFE MOVEMENT

#### 4.5.1 Overview

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic material (MacArthur and Wilson 1967, Soulé 1987, Harris and Gallagher 1989, Bennet 1990).

Corridors effectively act as links between different populations of a species. A group of smaller populations (termed “demes”) linked together via a system of corridors is termed a “metapopulation.” The long-term health of each deme within the metapopulation is dependent upon its size and the frequency of interchange of individuals (immigration vs. emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population’s genetic variability is generally associated with an increase in a population’s health and long-term viability.

Corridors mitigate the effects of habitat fragmentation by: (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Noss 1983, Fahrig and Merriam 1985, Simberloff and Cox 1987, Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and, (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies,

such as “wildlife corridor,” “travel route,” and “wildlife crossing” to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

**Travel Route:** A landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den areas). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relatively direct link between target habitat areas.

**Wildlife Corridor:** A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as “habitat or landscape linkages”) can provide both transitory and resident habitat for a variety of species.

**Wildlife Crossing:** A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often “choke points” along a movement corridor.

#### 4.5.2 Wildlife Movement Within the Project Site

As previously described, wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). Although the nature of each of these types of movement is species specific, large open spaces will generally support a diverse wildlife community representing all types of movement. Each type of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds on a “local” level to home ranges encompassing many square-miles for large mammals moving on a “regional” level.

Regional movement through the Project site to the surrounding vicinity immediately adjacent to the Project site is restricted in all directions due to the surrounding development and the I-15 freeway. The Project site is situated approximately 0.75 mile from the foothills of the Sedco Hills located to the north, and approximately 0.4 mile northeast of the I-15 freeway (refer to **Figure 7, Aerial Photograph**). Due to the urbanization of the region, the Project site is immediately surrounded by suburban residential development to the south, commercial development to the southwest, and sparse rural residential development to the north. Vacant land occurs to the immediate east, northeast, and west, but developed areas and the I-15 freeway occur beyond these open areas, restricting potential wildlife movement. Movement through the Project site could potentially occur via Drainage A due to off-site connections to the north and an ultimate downstream connection to Murrieta Creek approximately 1 mile to the southwest. However, Drainage A within the on- and off-site areas of the Project is primarily unvegetated and is therefore not expected to

support much wildlife movement; dispersing animals prefer the protection of vegetation cover to avoid being seen by predators. Drainages B, B1 and C are not considered suitable to support regional wildlife movement due to the absence of a downstream connection. Furthermore, Drainage C is only 160 linear feet and originates and terminates on-site.

The Project site is not within any core or linkage areas as identified by the MSHCP (Dudek and Associates 2003). The closest linkage to the Project site, Linkage 8, is just over approximately one mile to the north associated with Sedco Hills. The closest Core areas occur just over approximately five miles to the northwest (Proposed Extension of Existing Core 3, Lake Elsinore Soils), west (Existing Core B, Cleveland National Forest), south (Existing Core F, Santa Rosa Plateau), and east (Proposed Core 2, Antelope Valley). The Project site is also not within any linkages identified by the South Coast Missing Linkages document; the nearest linkage design identified is for the Palomar-San Jacinto-Santa Rosa Connection located approximately 17 miles to the east (South Coast Wildlands 2008). Since the Project site is not identified as a linkage by the MSHCP or South Coast Wildlands, and it does not support habitat that connects two or more habitat patches that would otherwise be fragmented or isolated from one another, the Project site is not considered a wildlife corridor. The Project site may provide limited opportunities for wildlife movement, more likely for local wildlife movement as described below.

Movement on a smaller or “local” scale could occur within the Project site for species that are less restricted in movement pathway requirements or are adapted to urban areas (e.g., raccoon/*Procyon lotor*, striped skunk/*Mephitis mephitis*, coyote/*Canis latrans*, and bird species in general). The Project site is routinely disced and was likely historically used for agriculture. Limited habitat within the Project site therefore consists of small patches of native vegetation such as buckwheat scrub, chamise chaparral, coast live oak woodland, and Riversidean sage scrub communities, in addition to a dominance of non-native habitats such as disturbed, ornamental and ruderal. Although the habitat on-site is disturbed, it likely supports some wildlife movement within the Project site for foraging. Data gathered from the biological survey indicates that the Project site contains habitat that supports common species of invertebrates, reptiles, birds, and small mammals. The home range and average dispersal distance of many of these species may be entirely contained within the Project site and immediate vicinity. Populations of animals such as insects, reptiles, small mammals, and a few bird species may find all their resource requirements without moving far or outside of the Project site at all. Occasionally, individuals expanding their home range or dispersing from their parental range will attempt to move outside of the Project site, if feasible, based on the surrounding restrictions to movement from development (see above). Bird species may fly over the development and I-15 freeway and utilize the Project site for foraging, although this is expected to be limited due to the high level of human activity in the region and higher quality foraging habitats in nearby open areas such as Sedco Hills.

Although the Project site supports live-in and movement habitat for species on a local scale (i.e., some limited live-in and at least marginal movement habitat for reptile, bird, and mammal species), it likely provides little to no function to facilitate wildlife movement for wildlife species on a regional scale, and is not identified as a regionally important dispersal or seasonal migration corridor.



1,500 0 1,500 Feet

### Aerial Photograph

Clinton Keith Road APN 380250003

Source: Google, 2013; Aerial Express, 2010; PCR Services Corporation, 2013.

FIGURE

7

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## 4.6 JURISDICTIONAL WATERS AND WETLANDS

Based on the results of the jurisdictional assessment, the site supports four ephemeral drainage features identified as Drainages A, B, B1, and C (**Figure 8, Drainage Features**). Drainages A, B, and B1 are associated with headwaters which commence in the foothills located approximately 1.25-mile to the northeast, while Drainage C is an erosional feature that initiates on the Project site.

Historically, Drainage B was a main stem drainage feature that conveyed flow directly to Murrieta Creek approximately 1-mile southwest of the Project site, while Drainages A, B1, and C were all ephemeral<sup>4</sup> tributaries to Drainage B. Based on review of historic aerial imagery, it appears that Drainage B was hydraulically severed, or isolated, from downstream drainage features through the placement of a large earthen basin at the southwest corner of the Project site which is estimated to have been constructed in the late-1960's and remains intact today.<sup>5</sup> Given the current hydrologic conditions of the site, Drainage A is an ephemeral drainage feature that conveys flow downstream into what was historically the downstream extent of Drainage B off-site, Drainage B is an isolated ephemeral drainage feature that supports one (1) minor tributary identified as Drainage B1, and Drainage C is a minor erosional feature within the southwest corner of the site that has also been isolated from downstream drainage features due to the placement of earthen berms that inhibit the conveyance of runoff from a very limited on-site watershed. Consequently, Drainages B, B1, and C are isolated from downstream jurisdictional features and are therefore presumed not to support USACE/RWQCB jurisdictional "waters of the U.S." It should be noted that the USACE is currently evaluating the man-made isolated nature of the on-site isolated drainage features by way of a Jurisdictional Determination to determine if they concur with PCR's assessment.<sup>6</sup> However, CDFW and the RWQCB reserve the right to regulate these features as isolated "waters of the State." As such, drainage features associated with the proposed Project total approximately 0.02 acre of unvegetated ephemeral USACE "waters of the U.S.," 0.08 acre of RWQCB "waters of the U.S./"waters of the State", and 0.94 acre of CDFW jurisdictional streambed and riparian vegetation. No wetlands or other special aquatic sites occur within on or off-site drainages associated with the proposed Project.

Photographs of the drainage features are provided in **Figures 9a and 9b, Drainage Photographs**. **Table 2, Drainage Features**, provides a summary of all the jurisdictional features assessed, followed by a brief description of each drainage feature.

### Drainage A

Drainage A is a first order streambed associated with an approximately 35-acre watershed that functions primarily as an unvegetated ephemeral tributary drainage that enters the Project site through a culvert beneath Clinton Keith Road. Drainage A then meanders toward the south/southwest for approximately 759 linear feet prior to leaving the property near the center of the western site boundary and joining the historic

<sup>4</sup> Ephemeral drainages are defined by the USACE as streambeds that exhibit flow only during, and immediately following a storm event.

<sup>5</sup> Based on review of historic aerial imagery on [historicaerials.com](http://historicaerials.com) accessed on June 2, 2013.

<sup>6</sup> If the USACE determines that Drainages B, B1, and C are subject to regulation under the Clean Water Act as "waters of the U.S.," the total extent of USACE jurisdiction on the Project site will be consistent with the total acreage of RWQCB jurisdiction.

**Table 2**  
**Drainage Features<sup>a</sup>**

Drainage	Length (feet) <sup>b</sup>	Area (acres)			
		USACE/RWQCB		CDFW	
		On-site	Off-Site	On-Site	Off-Site
A (Ephemeral)	795	0.02	<0.01	0.06	<0.01
B (Isolated Ephemeral)	939	0.05 <sup>c</sup>	<0.01 <sup>c</sup>	0.58	0.02
B1 (Isolated Ephemeral)	504	0.01 <sup>c</sup>	<0.01 <sup>c</sup>	0.27	<0.01
C (Isolated Ephemeral)	160	<0.01 <sup>c</sup>	<0.01 <sup>c</sup>	0.01	-
<b>Total</b>		<b>0.08<sup>d</sup></b>	<b>0.01</b>	<b>0.92</b>	<b>0.02</b>

<sup>a</sup> Jurisdictional acreages overlap and are not additive (e.g., USACE/RWQCB acreages are included in the total CDFW jurisdictional acreages).

<sup>b</sup> Includes on- and off-site lengths. The breakdown is as follows: Drainage A, 759 ft on-site and 36 ft off-site; Drainage B, 765 ft on-site and 174 ft off-site; Drainage B1, 438 ft on-site and 66 ft off-site; and Drainage C, 160 ft on-site only.

<sup>c</sup> If Drainages B, B1 and C are considered non-jurisdictional pending processing of a Jurisdictional Determination that is currently being reviewed by USACE, there will be no USACE jurisdiction on-site or off-site.

<sup>d</sup> Total acreage of USACE jurisdiction will total 0.02 acre if USACE concurs with the Jurisdictional Determination.

Source: PCR Services Corporation, 2013.

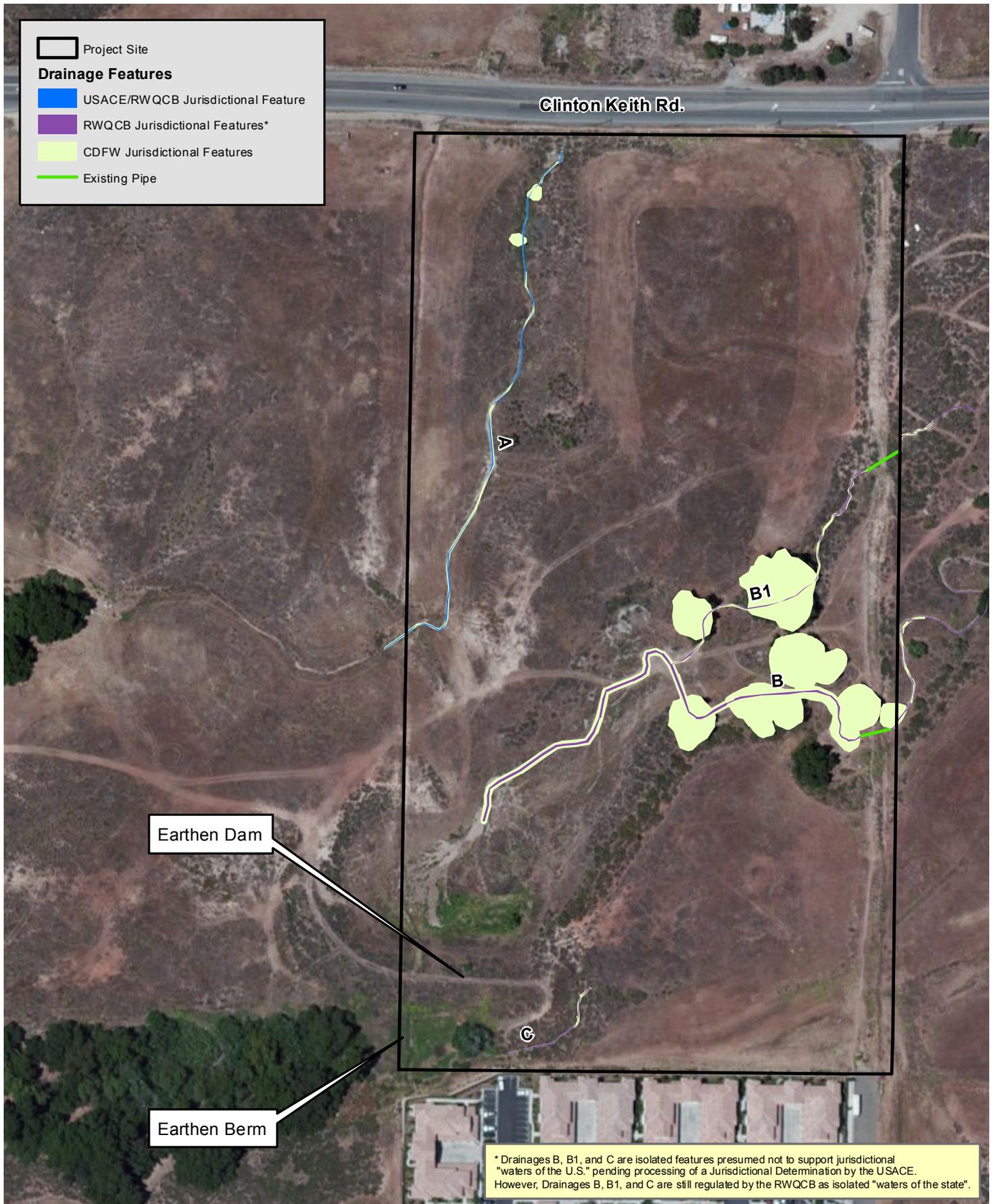
downstream extent of the Drainage B<sup>7</sup> main stem, which ultimately joins Murrieta Creek approximately 1-mile southwest of the Project site. The drainage feature supports well drained sandy loam soils of the Monserate soils series (NRCS 2012) and is largely unvegetated with the exception of one blue elderberry (*Sambucus nigra*) shrub located approximately 160 feet south of the northern Project boundary. The Drainage A streambed exhibits significant disturbance that appears to be associated with historic and ongoing weed abatement activities typical of surrounding areas. Drainage A supports a USACE/RWQCB jurisdictional channel width of approximately 1 foot and a CDFW jurisdictional streambed width ranging from 1-6 feet.

Drainage A within the Project footprint supports a total of approximately 795 linear feet and 0.02 acre of ephemeral USACE/RWQCB “waters of the U.S.” and 0.06 acre of CDFW jurisdictional streambed and associated vegetation, of which 36 linear feet and <0.01 acre are off-site “waters of the U.S.” and <0.01 acre are off-site CDFW jurisdictional streambed.

### Drainages B and B1

Drainages B and B1 are ephemeral drainages associated with an approximately 240-acre upstream watershed. Drainage B enters the site near the center of the eastern Project boundary and meanders toward the west/southwest for approximately 765 linear feet prior to terminating into a large earthen basin located on the Project site that was constructed in the late 1960’s. Drainage B1 enters the eastern site boundary approximately 300 feet north of Drainage B and extends toward the southeast for 438 linear feet prior to

<sup>7</sup> Drainage B on-site currently does not support a surface connection to the historic extent of Drainage B off-site due to the presence of an earthen basin on-site that appears to have been created in the late-1960’s based on review of historic aerial imagery.





Photograph 1: Drainage A looking upstream/north from northern portion of the site.



Photograph 2: Drainage B looking downstream/west near center of eastern site boundary.



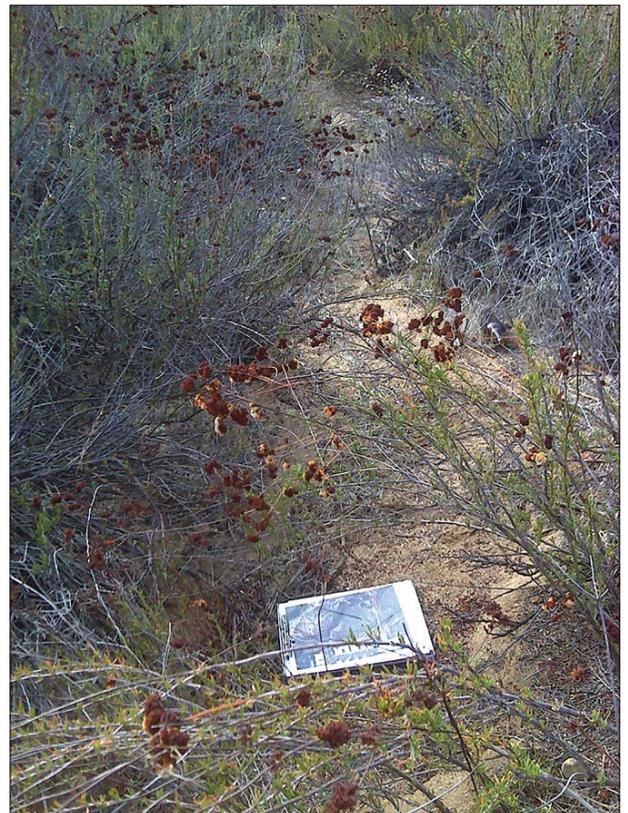
Photograph 3: Drainage B looking upstream/northeast near center of project site approximately 250 linear feet north of earthen basin.



Photograph 4: View of Drainage B looking north from top of earthen basin with Drainage B & B1 oak woodland in background.



Photograph 5: Drainage B1 looking downstream/southwest from the unpaved Yamas Rd. along the eastern site boundary (note existing culvert in foreground).



Photograph 6: Drainage C looking downstream/ west within erosional feature.

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joining Drainage B near the center of the Project site. The earthen basin does not exhibit any indication of overtopping, therefore Drainages B and B1 are isolated from downstream "waters of the U.S." and are presumed not to support "waters of the U.S." pending concurrence by USACE of the jurisdictional determination.

Drainages B and B1 support well drained sandy loam soils of the Monserate and Hanford series. With the exception of several streambed associated coast live oak trees near the eastern site boundary, Drainages B and B1 are completely unvegetated. Drainage B downstream of the oak trees exhibits severe degradation due to decades of weed abatement and supports several inches of sand deposition likely due to the reduction in stream velocity during rain events as flows enter the earthen basin. Drainages B and B1 supports RWQCB jurisdictional channel widths ranging from 2 to 6 feet and approximately 4 to 80 feet in CDFW jurisdictional widths. Drainages B and B1 within the Project footprint support a total of approximately 1,443 linear feet of streambed, 0.06 acre of ephemeral RWQCB "waters of the State," and 0.87 acre of CDFW jurisdictional streambed and associated vegetation.

Drainage B contains a total of 939 linear feet of streambed, 0.05 acre of RWQCB "waters of the State," and 0.60 acre of CDFW jurisdictional streambed and riparian vegetation, of which 174 linear feet and <0.01 acre are off-site "waters of the State" and 0.02 acre are off-site CDFW jurisdiction. Drainage B1 supports a total of 504 linear feet of streambed, 0.01 acre of RWQCB "waters of the State" and 0.27 acre of CDFW jurisdictional streambed and riparian vegetation, of which 66 linear feet and <0.01 acre are off-site RWQCB and CDFW jurisdictional waters. If Drainages B and B1 are considered to support "waters of the U.S." following USACE review of the Jurisdictional Determination, jurisdictional acreages will be equivalent to the RWQCB "waters of the State".

### Drainage C

Drainage C is a first order headwater erosional feature with an approximately 1-acre watershed area that is a remnant in nature, dominated by upland vegetation, and terminates on-site prior to reaching two earthen berms located at the southwest corner of the site which inhibit a surface connection to the historic extent of Drainage B directly off-site to the west. The drainage feature does not support a surface connection to downstream "waters of the U.S." and is presumed isolated and therefore not subject to regulation by the USACE. Drainage C is dominated by sandy loam soils of the Ramona and Buren series. The isolated erosional feature supports approximately 1 foot in RWQCB jurisdictional channel width and a range of 1-3 feet in CDFW jurisdictional streambed width.

Drainage C within the Project footprint supports a total of approximately 160 linear feet and <0.01 acre of isolated ephemeral RWQCB "waters of the State" and 0.01 acre of CDFW jurisdictional streambed. If Drainage C is considered to support "waters of the U.S." following USACE review of the Jurisdictional Determination, jurisdictional acreages will be equivalent to the RWQCB "waters of the State".

## **4.7 SENSITIVE BIOLOGICAL RESOURCES**

Protected sensitive species are classified by either federal or state resource management agencies, or both, as threatened or endangered, under provisions of the federal and state Endangered Species Acts (FESA and CESA, respectively). The following discussion describes the federal and state resource protection and

classifications, followed by the plant and wildlife species present, or potentially present, within the study area that have been afforded special recognition by federal, state, or local resource conservation agencies and organizations. These species have declining or limited population sizes, usually resulting from habitat loss. Also discussed are habitats that are unique, of relatively limited distribution, or of particular value to wildlife.

#### 4.7.1 Federal Sensitive Resource Protection and Classifications

##### FESA

The Federal Endangered Species Act of 1973 (FESA) defines an “endangered” species as “any species which is in danger of extinction throughout all or a significant portion of its range”. A “threatened” species is defined as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range”. Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to “take” any listed species. “Take” is defined in Section 3(18) of FESA as to: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the U.S. Fish and Wildlife Service (USFWS), through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification as forms of “take”. These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action which could affect a federally listed plant or animal species, the property owner and agency are required to consult with USFWS pursuant to Section 7 of the ESA if there is a federal nexus, or pursuant to Section 10 of the ESA. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

The status of federally listed species is assigned by USFWS as one of the following:

- Federally Endangered (FE)
- Federally Threatened (FT)
- Federally Proposed as Endangered (FPE)
- Federally Proposed as Threatened (FPT)
- Federally Proposed for Delisting (FPD)
- Federal Candidate for a Proposed Species (FC)

Some of the USFWS offices maintain a database of listed species within their jurisdiction, for example the Sacramento<sup>8</sup> and Carlsbad<sup>9</sup> offices. The Carlsbad USFWS Office jurisdiction encompasses the counties of Los Angeles, Orange, Riverside, San Bernardino, Imperial, and San Diego.

##### Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) protects individuals as well as any part, nest, or eggs of any bird listed as migratory. In practice, federal permits issued for activities that potentially impact migratory birds typically have conditions that require pre-disturbance surveys for nesting birds. In the event nesting is

<sup>8</sup> [http://www.fws.gov/sacramento/ES\\_Species/Lists/es\\_species\\_lists-overview.htm](http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-overview.htm)

<sup>9</sup> [http://www.fws.gov/carlsbad/SpeciesStatusList/CFWO\\_Species\\_Status\\_List.htm](http://www.fws.gov/carlsbad/SpeciesStatusList/CFWO_Species_Status_List.htm)

observed, a buffer area with a specified radius must be established, within which no disturbance or intrusion is allowed until the young have fledged and left the nest, or it has been determined that the nest has failed. If not otherwise specified in the permit, the size of the buffer area varies with species and local circumstances (e.g., presence of busy roads, intervening topography, etc.), and is based on the professional judgment of a monitoring biologist. A list of migratory bird species protected under the MBTA is published by USFWS (USFWS, 2012c).

### **Federal Clean Water Act, Section 404**

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredged or fill material into waters of the U.S. and authorizes the Secretary of the Army, through the Chief of Engineers, to issue permits for such actions. Implementing regulations for the CWA define waters of the U.S. as “rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands.” Wetlands are defined as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.” The permit review process entails an assessment of potentially adverse impacts to USACE jurisdictional waters of the U.S..

Over the years, the USACE has modified its regulations, typically due to evolving policy or judicial decisions, through the issuance of Regulatory Guidance Letters, memorandums, or more expansive instruction guidebooks. These guidance documents help to update and define how jurisdiction is claimed, and how these waters of the U.S. will be regulated. The most recent, significant modification occurred on June 5, 2007, subsequently updated in December 2008, when the USACE and the U.S. Environmental Protection Agency (USEPA) issued a series of guidance documents outlining the requirements and procedures, effective immediately, to establish jurisdiction under Section 404 of the CWA and the Section 10 of the Rivers and Harbors Act of 1899. These documents are intended to be used for all jurisdictional delineations and provide specific guidance for the jurisdictional determination of potentially jurisdictional features affected by the U.S. Supreme Court rulings in *Rapanos v. the United States* and *Carabell v. the United States* 547 U.S. 715 (2006) (jointly referred to as *Rapanos*).

The *Rapanos* case outlines the conditions and criteria used by the USACE to assess and claim jurisdiction over non-isolated, non-navigable, ephemeral tributaries. Under a plurality ruling, the Court noted that certain “not relatively permanent” (i.e., ephemeral), non-navigable tributaries must have a “significant nexus” to downstream traditional navigable waters to be jurisdictional. An ephemeral tributary has a significant nexus to downstream navigable “waters” when it has “more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a Traditional Navigable Water (TNW).” A significant nexus is established through the consideration of a variety of hydrologic, geologic and ecological factors specific to the particular drainage feature in question. For drainage features that do not meet the significant nexus criteria, a significant nexus determination is provided by the USACE to the USEPA for the final determination of federal jurisdiction. Drainage features that do not meet the significant nexus criteria based on completion of an AJD, and/or are determined to be isolated pursuant to the SWANCC ruling (see below), may still be regulated by California Department of Fish and Wildlife (CDFW) under Fish and Game Code Section 1600 or the Regional Water Quality Control Board (RWQCB) under the Porter-Cologne Water Quality Act.

On January 15, 2003, the USACE and USEPA issued a Joint Memorandum to provide clarifying guidance regarding the United States Supreme Court ruling in the *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, No. 99-1178 (January 9, 2001) (“the SWANCC ruling”), (Federal Register:

Vol. 68, No. 10.). This ruling held that the CWA does not give the federal government regulatory authority over non-navigable, isolated, intrastate waters. As a result of this decision, some previously regulated depressional areas such as mudflats, sandflats, wetlands, prairie potholes, wet meadows, playa lakes, natural ponds, and vernal pools, which are not hydrologically connected to other intra- or inter-state “waters of the U.S.,” are no longer regulated by the USACE.

### **Federal Clean Water Act, Section 401**

The mission of the RWQCB is to develop and enforce water quality objectives and implement plans that will best protect the beneficial uses of the state’s waters, recognizing local differences in climate, topography, geology, and hydrology. The California RWQCB is responsible for implementing compliance not only with state codes such as the California Water Code, but also some federal acts such as Section 401 of the CWA. Section 401 of the CWA requires that any applicant for a federal permit for activities that involve a discharge to waters of the state shall provide the federal permitting agency with a certification from the state in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal CWA.<sup>10</sup> As such, before the USACE will issue a CWA Section 404 permit, applicants must apply for and receive a Section 401 water quality certification (WQC) from the RWQCB. The RWQCB regulates “discharging waste, or proposing to discharge waste, within any region that could affect “waters of the state” (Water Code § 13260 (a)), pursuant to provisions of the Porter-Cologne Water Quality Control Act which defines RWQCB jurisdictional “waters of the state” as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code § 13050 (e)).

With the exception of isolated waters and wetlands, most discharges of fill to waters of the state are also subject to a CWA Section 404 permit. If a CWA Section 404 permit is not required for the project, the RWQCB may still require issuance of Waste Discharge Requirements (WDR) under the Porter-Cologne Water Quality Control Act. The RWQCB may regulate isolated waters that are not under jurisdiction of the USACE through issuance of WDR’s. However, projects that obtain a Section 401 WQC are simultaneously enrolled in a statewide general WDR. Processing of Section 401 WQC’s generally requires submittal of 1) a construction storm water pollution prevention plan (SWPPP), 2) a final water quality technical report that demonstrates that post-construction storm water Best Management Practices (BMPs) comply with the local design standards for municipal storm drain permits (MS4 permits) implemented by the State Water Resources Control Board effective January 1, 2011, and 3) a conceptual Habitat Mitigation and Monitoring Plan (HMMP) to compensate for permanent impacts to RWQCB waters, if any. In addition to submittal of a draft CEQA document, a WQC application typically requires a discussion of avoidance and minimization of impacts to RWQCB jurisdictional resources, and efforts to protect beneficial uses as defined by the local RWQCB basin plan for the project. The RWQCB cannot issue a Section 401 WQC until the project CEQA document is certified by the lead agency.

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<sup>10</sup> 33 USC 1341 (a) (1).

## 4.7.2 State of California Sensitive Resource Protection and Classifications

### CESA

CESA defines an endangered species as:

*...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.*

The State defines a threatened species as:

*...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species.*

Candidate species are defined as:

*...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.*

Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened or endangered species by stating:

*...no person shall import into this State, export out of this State, or take, possess, purchase, or sell within this State, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided.*

Under the CESA, “take” is defined as, “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.”

Additionally, some sensitive mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively.

California Species of Special Concern are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. Informally listed species are not protected per se, but warrant consideration in the preparation of biological assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest areas.

For the purposes of this BRA, the following acronyms are used for State status species, as applicable:

- State Endangered (SE)
- State Threatened (ST)
- State Rare (SR)
- State Candidate for Endangered (SCE)
- State Candidate for Threatened (SCT)
- State Fully Protected (SFP)
- California Species of Special Concern (SSC)

### **Protection of Birds**

Section 3503.5 of the California Fish and Game Code states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Activities that result in the abandonment of an active bird of prey nest may also be considered in violation of this code. In addition, California Fish and Game Code, Section 3511 prohibits the taking of any bird listed as fully protected, and California Fish and Game Code, Section 3515 states that it is unlawful to take any non-game migratory bird protected under the MBTA.

### **State of California Fish and Game Code, Section 1602**

Section 1602 of the California Fish and Game Code requires any entity (e.g., person, state or local government agency, or public utility) who proposes a project that will substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake to notify the CDFW of the proposed project. In the course of this notification process, the CDFW will review the proposed project as it affects streambed habitats within the project area. The CDFW may then place conditions in the Section 1602 Streambed Alteration Agreement to avoid, minimize, and mitigate any potentially significant adverse impacts within CDFW jurisdictional limits.

### **California Native Plant Society**

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California (CNPS, 2012). The list serves as the candidate list for listing as Threatened and Endangered by CDFW. CNPS has developed five categories of rarity, of which Lists 1A, 1B, and 2 are particularly considered sensitive:

- List 1A Presumed extinct in California.
- List 1B Plants Rare, Threatened, or Endangered in California and elsewhere.
- List 2 Plants Rare, Threatened, or Endangered in California, but more common elsewhere.

- List 3      Plants about which we need more information – a review list.
- List 4      Plants of limited distribution – a watch list.

The CNPS recently added “threat ranks” which parallel the ranks used by the CNDDDB, referred to as the California Rare Plant Rank (CRPR). The CRPRs are added as a decimal code after the CNPS List (e.g., List 1B.1). The threat codes are as follows:

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

Sensitive species that occur or potentially could occur within the study area are based on one or more of the following: (1) the direct observation of the species within the study area during any field surveys; (2) a record reported in the CNDDDB; and (3) the study area is within known distribution of a species and contains appropriate habitat.

### Sensitive Natural Communities

CDFW maintains a natural plant community list, the *List of California Terrestrial Natural Communities*.<sup>11</sup> Sensitive natural communities (also referred to by CDFW as ‘rare’ or ‘special-status’) are identified on the list by an asterisk.

### Western Riverside County MSHCP

The Project site is within the Western Riverside County MSHCP which was adopted by the Riverside County Board of Supervisors on June 17, 2003. The MSHCP functions as an Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the FESA and as a Natural Communities Conservation Plan (NCCP) under the NCCP Act of 2001. The USFWS and CDFW have authorized the take of a number of sensitive plant and wildlife species (Covered Species) within the MSHCP Plan Area in exchange for the assembly and management of a coordinated MSHCP Conservation Area.

#### 4.7.3 Sensitive Natural Communities

One sensitive natural community occurs within the Project site: southern willow scrub/ruderal (0.06 acre on-site), as shown on Figure 5. Southern willow scrub (CNDDDB Code 61.211.05) is considered a high priority, sensitive community pursuant to CDFW.

Eight additional native dominated natural communities totaling 3.94 acres occur on-site, including buckwheat scrub (0.47 acre), buckwheat scrub/chamise chaparral (0.19 acre), buckwheat scrub/ruderal

<sup>11</sup> Available online at: [http://www.dfg.ca.gov/biogeodata/vegcamp/natural\\_comm\\_list.asp](http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp).

(0.51 acre), chamise chaparral (0.12 acre), chamise chaparral/buckwheat scrub (0.34 acre), coast live oak woodland (0.81 acre), Riversidean sage scrub (0.89 acre), and Riversidean sage scrub/ruderal (0.61 acre). A total of 0.44 acre of native natural communities also occur off-site, including buckwheat scrub/ruderal (0.43 acre) and coast live oak woodland (0.01 acre). However, these communities are not considered sensitive habitats by wildlife agencies such as CDFW and USFWS, or in the Western Riverside County MSHCP, and no tree ordinance currently exists in the City of Wildomar. Furthermore, the native communities within the Project site are small, scattered, and are of low quality for sensitive plant and wildlife species. The remaining habitats are non-native dominated and are not considered sensitive habitats, including ornamental, ruderal, ruderal/buckwheat scrub, ruderal/Riversidean sage scrub, and disturbed.

#### 4.7.4 Special-Status Plant Species

Special-status plants include those listed, or candidates for listing, by the USFWS and CDFW, and species listed by the CNPS (particularly Lists 1A, 1B, and 2). Several special-status plant species were reported in the vicinity based on CNDDDB, totaling 65 species within the 9-quadrangle search. Of these, a total of 31 species were considered to have no potential to occur on-site due to the lack of suitable habitat or the Project site's location outside of the species' range. Based on the focused surveys, 33 of the species were determined absent from the Project site and 1 species was observed. A summary table of these species is provided in **Appendix B**, *Special-Status Plant Species*.

The one species observed on-site, paniculate tarplant (*Deinandra paniculata*), is a CNPS List 4, which is classified as 'Plants of limited distribution – a watch list'. The species was located in four patches on-site totaling 2.28 acres, including 1.74 acres of moderate density patches and 0.54 acre of low density patches. The two patches of moderate density areas are located along the northern site boundary, one small low density patch is located in the central portion of the site, and one low density patch is located in the southeastern corner, as shown on **Figure 10**, *Paniculate Tarplant Locations*. The species was flowering at the time of the survey. Based on CNDDDB records, this species is found throughout Riverside County. In addition, it is not a species covered by the MSHCP, nor was it considered for coverage under the MSHCP. Based on the wide distribution of this species within Riverside County, and the CNPS listing of 4, paniculate tarplant is not considered sensitive.

#### 4.7.5 Special-Status Wildlife Species

Special-status wildlife include those species listed as Endangered or Threatened under the FESA or CESA, candidates for listing by the USFWS or CDFW, and species of special concern to the CDFW. Several special-status wildlife species were reported in the vicinity based on CNDDDB, totaling 40 species within the 9-quadrangle search. Of these, a total of 22 species were considered to have no potential to occur due to the lack of suitable habitat or the Project site's location outside of the species' range, 1 species (burrowing owl) was determined absent based on focused surveys, 15 species were determined to have a very low, low or moderate potential to inhabit or forage on-site, and 2 species were observed on the Project site (coastal California gnatcatcher/*Polioptila californica californica* and San Diego black-tailed jackrabbit/*Lepus californicus bennettii*). A summary table of these species is provided in **Appendix C**, *Special-Status Wildlife Species*. The results of the focused burrowing owl survey are provided below, in addition to a summary of the 2 species observed and the 15 species with potential to occur on-site; 4 of those species are migratory bird and raptor species and are described in a separate subsection below. Best Management Practices for wildlife species are recommended in section 7.3 *General Recommendations* of this BRA.



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## Burrowing Owl Focused Survey

Burrowing owl is a California Species of Special Concern that is known to occur in the Project vicinity based on CNDDDB and the MSHCP. The Project site is within an overlay in the MSHCP that requires additional surveys. Therefore, focused Step I and Step II surveys for burrowing owls were conducted on the Project site. Suitable habitat was identified on-site during the Step I survey, including disturbed, low-growing vegetation; bare ground; and small fossorial mammal burrows. Burrowing owls often use the burrows of California ground squirrels (*Spermophilus beecheyi*); ground squirrels were observed on-site on the slopes of the drainage feature in the northwest corner of the Project site (on-site). Numerous burrows (unidentified species) were observed on-site along the slopes of the drainage in the northwest corner, in the southwest corner, along the eastern boundary, and on slopes near the coast live oak trees. The site is fairly open, which burrowing owls prefer, and potential perch features were observed including an earthen berm along the western portion of the site, and concrete rubble in the center of the site west of the oak trees. However, a high volume of foot traffic was observed through the Project site (e.g., dog walkers and bikers). Although the Project site supports some suitable habitat, no owls were observed on-site during the focused Step II surveys, or within approximately 500-feet of the Project site as required by the survey protocol. Therefore, the site and adjacent area does not currently support burrowing owls.

## Species Observed On-site

**Coastal California Gnatcatcher (*Polioptila californica californica*):** This bird species is listed as federally Threatened, a state species of special concern, and a Covered Species pursuant to the Western Riverside County MSHCP. It prefers coastal sage scrub vegetation below 2,500 feet elevation.

An occurrence of coastal California gnatcatcher was reported in the CNDDDB on the Project site dated 2001, and one individual of this species was incidentally observed by PCR in scrub habitat off-site to the east of the Project site during a survey conducted on August 19, 2013.

**San Diego black-tailed jackrabbit (*Lepus californicus bennettii*):** This mammal species is a California Species of Special Concern and a Covered Species pursuant to the Western Riverside County MSHCP. It prefers open brushlands and scrub habitats.

An occurrence of San Diego black-tailed jackrabbit was reported in the CNDDDB on the Project site dated 1998, and the species was incidentally observed on-site by PCR during surveys.

## Species With Potential to Occur On-site

**Coast horned lizard (*Phrynosoma blainvillii*):** This reptile species is a state species of special concern and is a Covered Species pursuant to the Western Riverside County MSHCP. It prefers sandy riparian and sage scrub habitats, but also occurs in valley-foothill, hardwood, conifer, pine-cypress, juniper and annual grassland habitats below 6,000 feet. Habitats include open country, especially sandy areas, washes, flood plains, and windblown deposits.

Coast horned lizard was determined to have a moderate potential to occur within the Project site and off-site areas based on the presence of limited scrub and wash habitat. However, the potential to occur was

considered moderate due to the scattered and disturbed nature of the habitat. No incidental sightings of this species were made during site surveys conducted in 2012 and 2013.

**Orange-throated whiptail (*Aspidoscelis hyperythra*):** This reptile species is a state species of special concern and a Covered Species pursuant to the Western Riverside County MSHCP. It prefers chaparral, non-native grassland, Riversidean sage scrub, and juniper and oak woodlands. It is often associated with riparian areas and alluvial fan sage scrub habitats.

Orange-throated whiptail was determined to have a potential to occur within the Project site and off-site areas based on the presence of scrub, dry and disturbed habitats. However, the potential to occur was considered moderate due to the high level of disturbance and scattered habitat. No incidental sightings of this species were made during site surveys conducted in 2012 and 2013.

**Red-diamond rattlesnake (*Crotalus ruber*):** This reptile species is a state species of special concern and a Covered Species pursuant to the Western Riverside County MSHCP. It prefers rocky areas and dense chaparral, woodland, and grassland.

Red-diamond rattlesnake was determined to have a potential to occur within the Project site and off-site areas based on the presence of suitable habitat such as woodland areas and chaparral. However, the potential to occur was considered moderate due to the high level of disturbance and scattered habitat. No incidental sightings of this species were made during site surveys conducted in 2012 and 2013.

**Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*):** This mammal species is listed as a state species of special concern and a Covered Species pursuant to the Western Riverside County MSHCP. It prefers chaparral and coastal sage scrub habitats.

Northwestern San Diego pocket mouse was determined to have a potential to occur within the Project site and off-site areas based on the presence of scrub habitat. Numerous burrows (unidentified species) were also observed on-site along the slopes of the drainage in the northwest corner, in the southwest corner, along the eastern boundary, and on slopes near the coast live oak trees. However, the potential to occur was considered very low due to the limited habitat on-site that is scattered and highly disturbed.

**Stephen's kangaroo rat (*Dipodomys stephensi*):** This mammal species is listed as federally endangered, state threatened, and a Covered Species pursuant to the Western Riverside County MSHCP. It prefers open coastal sage scrub and grassland habitats.

Stephen's kangaroo rat was determined to have a potential to occur within the Project site and off-site areas based on the presence of scrub habitat. Numerous burrows (unidentified species) were also observed on-site along the slopes of the drainage in the northwest corner, in the southwest corner, along the eastern boundary, and on slopes near the coast live oak trees. However, the potential to occur was considered very low due to the limited habitat on-site that is scattered and highly disturbed.

**Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*):** This mammal species is listed as federally endangered, state threatened, and a Covered Species pursuant to the Western Riverside County

MSHCP (with additional surveys required in survey overlay areas). It prefers coastal sage scrub and grassland habitats.

Los Angeles pocket mouse was determined to have a potential to occur within the Project site and off-site areas based on the presence of scrub habitat and potential burrows observed within 1 mile of the Project site. Numerous burrows (unidentified species) were also observed on-site along the slopes of the drainage in the northwest corner, in the southwest corner, along the eastern boundary, and on slopes near the coast live oak trees. However, the potential to occur was considered low due to the limited habitat on-site that is scattered and highly disturbed.

**Jacumba Pocket Mouse (*Perognathus longimembris internationalis*):** This mammal species is listed as a state species of special concern. It prefers arid coastal sage scrub and chaparral habitats.

Jacumba pocket mouse was determined to have a potential to occur within the Project site and off-site areas based on the presence of scrub habitat and potential burrows observed within 1 mile of the Project site. Numerous burrows (unidentified species) were also observed on-site along the slopes of the drainage in the northwest corner, in the southwest corner, along the eastern boundary, and on slopes near the coast live oak trees. However, the potential to occur was considered low due to the limited habitat on-site that is scattered and highly disturbed.

**Western Mastiff Bat (*Eumops perotis californicus*):** This mammal species is a state species of special concern. It prefers open scrub and grassland habitats.

Western mastiff bat was determined to have a potential to occur within the Project site and off-site areas for foraging only based on the presence of open habitat. However, the potential to occur was considered low due to the limited habitat supported by the Project site. No suitable roosting habitat was determined present on- or off-site.

**San Diego Desert Woodrat (*Neotoma lepida intermedia*):** This mammal species is a state species of special concern. It prefers a variety of habitats with moderate to dense canopies.

San Diego desert woodrat was determined to have a potential to occur within the Project site and off-site areas based on the presence of open habitat. However, the potential to occur was considered very low based on the limited habitat supported by the Project site and the absence of any recorded observations in CNDDDB within 10 miles of the site.

**Southern Grasshopper Mouse (*Onychomys torridus ramona*):** This mammal species is a state species of special concern. It prefers grasslands, desert areas, and especially scrub with friable soils.

Southern grasshopper mouse was determined to have a potential to occur within the Project site and off-site areas based on the presence of potentially suitable habitat. However, the potential to occur was considered very low based on the limited habitat supported by the Project site and the absence of any recorded observations in CNDDDB within 8 miles of the site since 1932.

**Pallid Bat (*Antrozous pallidus*):** This mammal species is a state species of special concern. It prefers a variety of habitats, but mostly open, dry habitats.

Pallid bat was determined to have a potential to occur within the Project site and off-site areas for foraging only based on the presence of open habitat. However, the potential to occur was considered low based on the limited habitat.

### **Migratory Birds and Raptors**

The Project site and off-site areas support potential nesting and foraging habitat for birds (limited to shrubs and trees for nesting), and also potential foraging habitat for birds including raptors (primarily in the disturbed areas and more open scrub habitat). Several species of non-listed birds were observed on-site (see Appendix A) and special-status birds were identified by CNDDDB as potentially occurring within the 9-quadrangle search area (see Appendix C). Only one of the special-status non-raptor species, loggerhead shrike (*Lanius ludovicianus*), was determined to have the potential to occur within the Project on- or off-site areas (low potential for nesting, and moderate potential for foraging).

According to CNDDDB, there is also a potential for special-status raptors such as northern harrier (*Circus cyaneus*/Species of Special Concern), bald eagle (*Haliaeetus leucocephalus*/Fully Protected), golden eagle (*Aquila chrysaetos*/Fully Protected), and white-tailed kite (*Elanus leucurus*/Fully Protected) within the 9-quadrangle search area. Of these only bald eagle was determined to have no potential to occur due to the lack of aquatic habitats associated with the Project site; the remaining species were determined to have potential to occur for foraging only but were not incidentally observed by PCR during any surveys. Raptors observed on-site were limited to non-listed species including red-tailed hawk (*Buteo jamaicensis*) and Cooper's hawk (*Accipiter cooperii*).

## **4.7.6 Project Site Relationship to the Western Riverside County MSHCP**

This section provides a discussion of the Project site's relationship to the MSHCP policies, including the location within the MSHCP Area Plan, Criteria Cells, and cores and linkages, and the presence of MSHCP protected biological resources.

### **4.7.6.1 Location of the Project Site within the MSHCP Area Plan and Criteria Cells**

The entire Project site is within the Elsinore Area Plan (see Figure 4) but is not within a Criteria Cell, a designated Cell Group, or a subunit within the Elsinore Area Plan that requires conservation of land for inclusion in the MSHCP Conservation Area (Riverside County TLMA 2013a). However, the Project site is directly adjacent to a Criteria Cell to the northeast; specifically Cell Group L', cell 5558 (Riverside County TLMA 2013b).

### **4.7.6.2 Location of the Study Area within MSHCP Cores and Linkages**

As mentioned previously in section 3.5.2 *Wildlife Movement within the Project Site*, the Project site is not within any cores or linkages (i.e., Special Linkage Areas) as identified in the Elsinore Area Plan. The Elsinore Area Plan supports the following cores and linkages: all of Proposed Constrained Linkage 5, all of Proposed Constrained Linkage 6, most of Proposed Core 1, a portion of Proposed Extension of Existing Core 2, all of

Proposed Extension of Existing Core 3, all of Proposed Linkage 1, all of Proposed Linkage 2, a portion of Proposed Linkage 3, a portion of Proposed Linkage 7, and a large portion of Proposed Linkage 8. The closest linkage to the Project site is Proposed Linkage 8 just over approximately one mile to the north associated with Sedco Hills. The closest Core areas are approximately located just over five miles to the northwest (Proposed Extension of Existing Core 3, Lake Elsinore Soils), west (Existing Core B, Cleveland National Forest), south (Existing Core F, Santa Rosa Plateau), and east (Proposed Core 2, Antelope Valley).

#### 4.7.6.3 Riparian/Riverine Areas and Vernal Pools

Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, of the MSHCP provides for the protection of Riparian/Riverine Areas and Vernal Pools within the MSHCP Plan Area. Riparian/Riverine areas are defined in the MSHCP as “lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.” Vernal pools are defined in the MSHCP as “seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season.”

The on-site Drainage A meets the definition of a Riverine Area pursuant to the MSHCP (“*areas with fresh water flow during all or a portion of the year*”) due to the downstream connection of ephemeral flows from the on-site drainage to Murrieta Creek. The drainage is unvegetated apart from one blue elderberry shrub near the northern site boundary; therefore the biological functions and values of Riparian/Riverine Areas do not exist in Drainage A due to the lack of riparian/riverine associated vegetation. As such, the protection of the MSHCP list of associated riparian/riverine species (amphibians, birds, fish, invertebrate-crustacean, and plant species) is not required.

Drainages B and B1 are considered to meet the MSHCP definition of a Riverine Area pursuant to the MSHCP based on the presence of coast oak trees that grow close to the drainages and the limited (ephemeral) signs of flow. The drainages are not considered riparian since coast live oak trees are not restricted to drainage areas and are often found in dry, upland areas; also, they do not have a wetland plant rating. Drainages B and B1 are considered to support limited function and value as Riverine Areas due to the absence of a downstream connection; no evidence of off-site flows was evident. The hydrology of these drainages has been altered as a result of historical agricultural activities and construction of a berm in the southwest corner of the site. Although an upstream connection was observed, the on-site portions of the drainages exhibited signs of only ephemeral flows. As such, the drainages do not support the vegetation or hydrology suitable for supporting the majority of the MSHCP list of associated riparian/riverine species. However, the oak trees could provide potential habitat for two MSHCP protected riparian/riverine associated species, specifically bald eagle and American peregrine falcon (*Falco peregrinus anatum*).

Drainage C is not considered to meet the MSHCP definition of a Riparian/Riverine Area. Although it exhibits signs of ephemeral flow, the drainage is located on-site only totaling 160 linear feet; there is no upstream or downstream connection to other MSHCP Riparian/Riverine Areas. Furthermore, the drainage does not support riparian/riverine vegetation suitable for supporting the MSHCP list of associated riparian/riverine species. As such, Drainage C is not considered to support the functions and values of an MSHCP Riparian/Riverine Area, or connect to such areas off-site, and no further surveys are considered required.

The 0.06 acre of southern willow scrub/ruderal vegetation mapped on-site was also not considered to meet the MSHCP definition of a Riparian/Riverine Area due to the absence of hydrology, the remnant and isolated nature of the two patches of vegetation, and the small acreage and vegetation structure of the two patches, making it unsuitable as species habitat. The two mapped areas of southern willow scrub/ruderal were not considered CDFW, USACE or RWQCB jurisdictional due to the absence of any field indicators of hydrology including a bed and bank or OHWM. The areas appear to be remnant, isolated patches of vegetation as a result of historic activities (i.e., historic dry-farming activities on the site and the earthen berm in the southwest corner of the site); there are no field indicators suggesting association of the vegetation to any drainage features or other sources of hydrology. Furthermore, the vegetation was not considered suitable breeding or foraging habitat for least Bell's vireo or other riparian/riverine associated species based on acreage and habitat structure (see below). As such, no focused surveys are warranted.

Based on the above assessment the Project site supports three Riverine Areas associated with Drainages A, B and B1, and preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis will be required providing details on any proposed impacts and compensatory mitigation in compliance with MSHCP requirements.

Other kinds of aquatic features that could provide suitable habitat for Riparian/Riverine species, such as fairy shrimp, are not present within the on- or off-site portions of the Project site (i.e. vernal pools, swales, vernal pool-like ephemeral ponds, seasonal ponds, stock ponds, or other human-modified depressions such as tire ruts, etc.).

### Riparian/Riverine Plant Species

A habitat assessment was conducted for species listed in Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, of the MSHCP. The results are presented in **Table 3, MSHCP Riparian/Riverine Plant Species**. No Riparian/Riverine plant species are expected to occur within the on- or off-site portions of the Project site due to the lack of suitable habitat, the location of the Project site outside of the species range, or based on the negative results of focused surveys.

**Table 3**

#### MSHCP Riparian/Riverine Plant Species

Species	Potential to Occur within the Study Area
Brand's phacelia <i>Phacelia stellaris</i>	Suitable habitat occurs; however, none were observed during the 2013 focused plant surveys.
California Orcutt grass <i>Orcuttia californica</i>	Not expected to occur due to the lack of vernal pools.
Coulter's matilija poppy <i>Romneya coulteri</i>	Suitable habitat occurs; however, none were observed during the 2013 focused plant surveys.
Engelmann oak <i>Quercus engelmannii</i>	Not observed and not expected to occur. This is a conspicuous tree species that would have been detected if present.
Fish's milkwort <i>Polygala cornuta</i> var. <i>fishiae</i>	Suitable habitat occurs; however, none were observed during the 2013 focused plant surveys.

Table 3 (Continued)

## MSHCP Riparian/Riverine Plant Species

Species	Potential to Occur within the Study Area
Graceful tarplant <i>Holocarpha virgata</i> ssp. <i>elongata</i>	Suitable habitat occurs; however, none were observed during the 2013 focused plant surveys.
Lemon lily <i>Lilium parryi</i>	Not expected to occur due to the lack of suitable habitat. Also, the Project site is outside the species range; this species is restricted to the San Jacinto Mountains.
Mojave tarplant <i>Deinandra mohavensis</i>	Not expected to occur due to the lack of suitable habitat. Also, the Project site is outside the species range; this species is restricted to the San Jacinto Mountains.
Mud nama <i>Nama stenocarpum</i>	Not expected to occur due to the lack of wetlands. Also, none were observed during the 2013 focused plant surveys (this species can occasionally occur in non-wetlands).
Ocellated Humboldt lily <i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	Not expected to occur due to the lack of suitable habitat.
Orcutt's brodiaea <i>Brodiaea orcuttii</i>	Suitable habitat occurs; however, none were observed during the 2013 focused plant surveys. Also, the Project site is outside the species range; this species occurs in wetland areas at the Santa Rosa Plateau, Miller Mountain, and San Jacinto River.
Parish's meadowfoam <i>Limnanthes gracilis</i> ssp. <i>parishii</i>	Not expected to occur due to the lack of suitable habitat. Also, the Project site is outside the species range; this species is restricted to the Santa Rosa Plateau within the MSHCP Plan Area.
Prostrate navarretia <i>Navarretia prostrata</i>	Not expected to occur due to the lack of suitable habitat. Also, the Project site is outside the species range; this species is restricted to the Santa Rosa Plateau within the MSHCP Plan Area.
San Diego button-celery <i>Eryngium aristulatum</i> var. <i>parishii</i>	Not expected to occur due to the lack of suitable habitat. Also, the Project site is outside the species range; this species is restricted to the Santa Rosa Plateau within the MSHCP Plan Area.
San Jacinto Valley crownscale <i>Atriplex coronata</i> var. <i>notatior</i>	Suitable habitat occurs; however, none were observed during the 2013 focused plant surveys.
San Miguel savory <i>Satureja chandleri</i>	Suitable habitat occurs; however, none were observed during the 2013 focused plant surveys.
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Not expected to occur. The Project site is outside the species range; this species is restricted to the Santa Ana River and alluvial fan sage scrub habitat which does not occur within the Project site.
Slender-horned spineflower <i>Dodecahema leptoceras</i>	Not expected to occur due to the lack of alluvial fan habitat. None were observed during the 2013 focused plant surveys.
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	Suitable habitat occurs; however, none were observed during the 2013 focused plant surveys.
Southern California black walnut <i>Juglans californica</i>	Not expected to occur. This is a conspicuous tree species that would have been detected if present.
Spreading navarretia <i>Navarretia fossalis</i>	Not expected to occur due to the lack of vernal pools.

Table 3 (Continued)

## MSHCP Riparian/Riverine Plant Species

Species	Potential to Occur within the Study Area
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	Not expected to occur due to the absence of clay soils based on the NRCS soils map. Also, none were observed during the 2013 focused plant surveys.
Vernal barley <i>Hordeum intercedens</i>	Not expected to occur due to the lack of alkaline areas and vernal pools. Also, none were observed during the 2013 focused plant surveys (this species can also occasionally occur in coastal scrub).

Source: PCR Services Corporation 2013.

## Riparian/Riverine Wildlife Species

Habitat assessments were conducted for wildlife species listed in Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, of the MSHCP. One species has the potential to occur, namely the American peregrine falcon (on- and off-site), as indicated in **Table 4**, *MSHCP Riparian/Riverine Wildlife Species*. The American peregrine falcon has a very low potential to forage only within both the on- and off-site portions of the Project; no suitable breeding habitat (cliffs or tall buildings) occurs. This species can be found foraging in nearly any open habitat, but most likely near areas such as lake edges and mountain chains. The nearest of these areas is Lake Elsinore approximately 6 miles to the northwest, and Sedco Hills approximately 0.75 mile to the north. No other species are expected to occur due to the lack of suitable habitat, including least Bell's vireo as discussed below.

Despite the presence of southern willow scrub/ruderal vegetation on the Project site, least Bell's vireo was determined to have no potential to occur on the Project site based on the extent and composition of the vegetation community. The vegetation occupied only 0.06 acre in two patches near the southern site boundary and just north of the southern boundary. The patch near the southern site boundary supported five willows growing very close together in one colony, with a few mulefat plants and an understory dominated by ruderal non-native species. The patch north of the southern site boundary supported only one mature willow with a few mulefat plants and an understory dominated by ruderal non-native species. These small patches were not considered suitable for nesting least Bell's vireo due to the small acreage and structure of the vegetation. Least Bell's vireo are known to require a dense, stratified canopy for foraging with a typical territory size of between 0.5 and 7.5 acres (USFWS, 1998). The habitat is also remnant based on alteration of the natural hydrology due to historic agricultural dry-farming activities on the site, and from any downstream connection due to the earthen berm. As such, no signs of a drainage feature or other sources of hydrology were observed in association with this vegetation community. The habitat is isolated from nearby similar habitats; the nearest patch of riparian habitat from the Project site is approximately 1 mile southwest (downstream) within Murrieta Creek and approximately 1 mile northwest associated with an unnamed tributary within Bundy Canyon. In consideration of these factors, this species was considered to have no potential occur to occur on-site.

Table 4

## MSHCP Riparian/Riverine Wildlife Species

Species	Potential to Occur within the Study Area
Arroyo toad <i>Anaxyrus californicus</i>	Not expected to occur due to the lack of suitable habitat.
Mountain yellow-legged frog <i>Rana muscosa</i>	Not expected to occur due to the lack of suitable habitat.
California red-legged frog <i>Rana aurora draytonii</i>	Not expected to occur due to the lack of suitable habitat.
Bald eagle <i>Haliaeetus leucocephalus</i>	Not expected to occur due to the lack of suitable habitat.
Least Bell's vireo <i>Vireo bellii pusillus</i>	Not expected to occur due to the lack of suitable habitat.
American peregrine falcon <i>Falco peregrinus anatum</i>	Very low potential for foraging (not observed). No suitable breeding habitat occurs within the Project site (on- or off-site).
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	Not expected to occur due to the lack of suitable habitat.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	Not expected to occur due to the lack of suitable habitat.
Santa Ana sucker <i>Catostomus santaanae</i>	Not expected to occur due to the lack of suitable habitat.
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	Not expected to occur due to the lack of suitable habitat.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	Not expected to occur due to the lack of suitable habitat.
Santa Rosa Plateau fairy shrimp <i>Linderiella santarosae</i>	Not expected to occur due to the lack of suitable habitat.

Source: PCR Services Corporation 2013.

#### 4.7.6.4 Narrow Endemic Plant Species Survey Area

The Project site and off-site areas are not within the Narrow Endemic Plant Species Survey Area; therefore, no surveys were required for Narrow Endemic plant species.

#### 4.7.6.5 Additional Survey Needs and Procedures

Section 6.3.2, *Additional Survey Needs and Procedures*, of the MSHCP provides for additional survey needs for the burrowing owl, as well as a number of sensitive plant, amphibian, and mammal species.

### **Burrowing Owl Survey Area**

The Project site is within the Burrowing Owl Survey Area; therefore, in compliance with the Western Riverside County MSHCP, surveys are required for this species. As discussed above in section 4.7.5 *Special-Status Wildlife Species*, Step I and Step II surveys conducted for the Project following Western Riverside County MSHCP protocol were negative. Although the site does not currently support burrowing owls, pre-construction surveys are required within 30 days of ground disturbance based on the presence of suitable habitat.

### **Criteria Area Species Survey Area**

The Project site and off-site areas are not within the Criteria Area Species Survey Area; therefore, no surveys were required for Criteria Area plant species.

### **Amphibian Species Survey Area**

The Project site and off-site areas are not within the Amphibian Species Survey Area; therefore, no surveys are required.

### **Mammal Species Survey Area**

The Project site and off-site areas are not within the Mammal Species Survey Area; therefore, no surveys are required.

#### **4.7.6.6 Urban/Wildlands Interface**

Section 6.1.4, *Guidelines Pertaining to the Urban/Wildlands Interface*, of the MSHCP presents a number of guidelines that are intended to address indirect effects associated with locating developments in proximity to a Western Riverside County MSHCP Conservation Area. These guidelines address the quantity and quality of any runoff generated by the development (i.e., drainage and toxics), night lighting, noise, non-native invasive plant species, barriers to humans and animal predators, and grading/land development encroachment. The Project site is directly adjacent to a Criteria Cell to the northeast, therefore there is a potential for indirect edge effects. Project design features and best management practices incorporated into the proposed Project to minimize these edge effects are discussed in detail in Section 6.3.6, *Consistency with Adopted Habitat Conservation Plan*.

## 5.0 THRESHOLDS OF SIGNIFICANCE

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

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

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

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

Appendix G of the State CEQA Guidelines is more specific in addressing biological resources and encompasses a broader range of resources to be considered, including: candidate, sensitive, or special status species; riparian habitat or other sensitive natural communities; federally protected wetlands; fish and wildlife movement corridors; local policies or ordinances protecting biological resources; and, adopted HCPs. This is done in the form of a checklist of questions to be answered during the Initial Study leading to the preparation of the appropriate environmental documentation for a project [i.e., Negative Declaration, Mitigated Negative Declaration, or Environmental Impacts Report (EIR)]. Because these questions are derived from standards in other laws, regulations, and other commonly used thresholds, it is reasonable to use these standards as a basis for defining significance thresholds in an EIR. Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following conditions would result from implementation of the proposed project.

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

- Threshold BIO-B** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service.
- Threshold BIO-C** Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Threshold BIO-D** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery areas.
- Threshold BIO-E** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Threshold BIO-F** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

For the purposes of this impact analysis the following definitions apply, where applicable:

- “Significant Impact” means loss or harm of a magnitude which, based on current scientific data and knowledge would: (1) substantially reduce population numbers of a listed, candidate, sensitive, rare, or otherwise special status species; (2) substantially reduce the distribution of a sensitive natural community/habitat type; or (3) eliminate or substantially impair the functions and values of a biological resource (e.g., streams, wetlands, or woodlands) in a geographical area defined by interrelated biological components and systems. In the case of this analysis the prescribed geographical area is considered to be the region that includes the USGS topographic quadrangles for the Project, namely Murrieta. For some species, the geographic area may extend to the vicinity of the study area based on known distributions of the species. The vicinity of the Project is considered to comprise the following USGS topographic quadrangles: Romoland, Winchester, Bachelor Mountain, Pechanga, Temecula, Fallbrook, Wildomar, Lake Elsinore.
- “Conflict” means contradiction of a magnitude, which based on foreseeable circumstances, would preclude or prevent substantial compliance.
- “Rare” means: (1) that the species exists in such small numbers throughout all, or a significant portion of, its range that it may become endangered if its environment worsens; or (2) the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened” as that term is used in the FESA.

## 6.0 PROJECT RELATED IMPACTS

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### 6.1 REGULATORY SETTING

Sensitive species are provided protection by either federal or state resource management agencies, or both, under provisions of the FESA and CESA. There are a number of performance criteria and standard conditions that must be met as part of any review and approval of projects. These include compliance with all of the terms, provisions, and requirements with applicable laws that relate to federal, state, and local regulating agencies related to potential impacts to sensitive plant and wildlife species, wetlands, riparian habitats, and blue lined stream courses. The following summarizes federal and state regulations, and CNPS, as previously discussed in section 4.7 *Sensitive Biological Resources*.

#### 6.1.1 Federal Regulations

As previously discussed in section 4.7.1 *Federal Sensitive Resource Protection and Classifications* of this BRA, under provisions of Section 9(a)(1)(B) of the FESA, unless properly permitted, it is unlawful to “take” any listed species. In a case where a property owner seeks permission from a federal agency for an action which could affect a federally-listed plant and animal species, the property owner and agency are required to consult with USFWS to obtain appropriate permits. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants. In addition to FESA, take of migratory birds, or bald or golden eagles, require permits pursuant to the MBTA and the Bald and Golden Eagle Protection Act, respectively. Furthermore, any impacts to USACE and RWQCB jurisdictional waters may require permitting pursuant to Sections 404 and 401 of the CWA, respectively.

#### 6.1.2 State of California Regulations

As previously discussed in section 4.7.2 *State of California Sensitive Resource Protection and Classifications* of this BRA, Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened or endangered species. Exceptions authorized by the state to allow “take” require permits or memoranda of understanding and can be authorized for “endangered species, threatened species, or candidate species for scientific, educational, or management purposes.” Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required by an initiator prior to disturbance. State regulations also exist for protection of birds pursuant to the MBTA, and for acquiring permits for impacts to CDFW jurisdictional streambeds pursuant to Section 1602 of the Fish and Game Code.

#### 6.1.3 California Native Plant Society

As previously discussed in section 4.7.2 *State of California Sensitive Resource Protection and Classifications* of this BRA, the CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California which classifies plant species into categories of rarity. Informally listed species are not protected per se, but warrant consideration in the preparation of biological assessments.

## 6.2 PROJECT IMPACTS

The analysis in section 6.3 *Impact Analysis* of this BRA examines the potential impacts to plant and wildlife resources that may occur as a result of implementation of the Project. For the purpose of this BRA, project-related impacts take two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of natural habitats (i.e., vegetation or plant communities), which in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts also include the destruction of individual plants or wildlife, which is typically the case in species of low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals in these manners may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and, hence, population stability.

Indirect impacts are considered to be those that involve the effects of increases in ambient levels of sensory stimuli (e.g., noise, light), unnatural predators (e.g., domestic cats and other non-native animals), and competitors (e.g., exotic plants, non-native animals). Indirect impacts may be associated with the construction and/or eventual habitation/operation of a project; therefore, these impacts may be both short-term and long-term in their duration. These impacts are commonly referred to as “edge effects” and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to study areas.

The determination of impacts in this analysis is based on both the Project site’s existing uses and the biological values of the habitat and/or sensitivity of plant and wildlife species to be affected. Any required mitigation measures to address impacts are discussed in section 7.0 below; compliance with existing regulations are outlined in section 7.0 as Conditions of Approval, and recommendations for Best Management Practices are also provided.

The biological values of resources within, adjacent to, and outside the area to be affected by the Project were determined by consideration of several factors, as applicable. These included the overall size of habitats to be affected, the Project site’s previous land uses and disturbance history, the Project site’s surrounding environment and regional context, the on-site biological diversity and abundance, the presence of sensitive and special-status plant and wildlife species, the Project site’s importance to regional populations of these species, and the degree to which on-site habitats are limited or restricted in distribution on a regional basis and, therefore, are considered sensitive in themselves. Therefore, the focus of this impacts analysis is on sensitive plant communities/habitats, resources that play an important role in the regional biological system, and special-status species.

Impacts to biological resources as a result of Project development were analyzed in GIS using Computer-Aided Design (CAD) data of the Project footprint provided by the project architect, KTG Group, Inc., on October 25, 2013. Acreages of impacts were calculated by overlaying the CAD data over GPS data of biological resources collected by PCR during the surveys.

## 6.3 IMPACT ANALYSIS

### 6.3.1 Impacts to Sensitive Species

**Threshold BIO-A: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Wildlife Service?**

*Less than Significant with Regulatory Compliance*

#### 6.3.1.1 Special-Status Plant Species

Development of the Project would result in the direct removal of numerous common plant species; a list of plant species observed within the Project site is included in Appendix A. Common plant species present within the Project site occur in large numbers throughout the region and their removal does not meet the significance thresholds defined in section 5.0 *Thresholds of Significance* above. Therefore, impacts to common plant species would be considered a less than significant impact and no mitigation measures would be required.

As discussed in section 4.7.4 *Special-Status Plant Species*, only one listed species was observed on the Project site, paniculate tarplant (CNPS List 4). The occupied areas on-site total 2.28 acres including two moderate density patches of the species (1.74 acres), and two low density patches (0.54 acre). The entire 2.28 acres of paniculate tarplant would be permanently impacted as a result of the Project, as shown on **Figure 11, Impacts to Paniculate Tarplant**. This species is widely distributed in Riverside County, as documented on Calflora, including 31 CNPS and other records, in addition to georeferenced coordinates for several hundred observations (Calflora, 2012). Based on the distribution of this species within Riverside County, the lack of consideration of this species for coverage under the MSHCP, and the CNPS listing of 4, this species is not considered sensitive. Therefore, impacts to paniculate tarplant would be considered a less than significant impact and no mitigation measures would be required.

#### 6.3.1.2 Special-Status Wildlife Species

Development of the Project would result in the disruption and removal of habitat and the loss and displacement of non-sensitive common wildlife species. A list of wildlife species observed within the Project site is included in Appendix A. Due to the limited amount of native habitat to be removed and the high level of existing disturbance from human activity, these impacts would not be expected to reduce the general wildlife populations below self-sustaining levels within the region and impacts to non-sensitive wildlife species do not meet the significance thresholds defined in section 5.0 *Thresholds of Significance* above. Therefore, impacts to common wildlife species would be considered less than significant impact and no mitigation measures would be required.

As outlined above in section 4.7.5 *Special-Status Wildlife Species* and Appendix C, 15 special-status species were determined to have a potential to occur on the Project site or off-site areas, 1 species (burrowing owl) was determined absent following focused surveys, and two species were observed on-site (coastal California gnatcatcher and San Diego black-tailed jackrabbit). Of the 15 species with potential to occur, 6 are Covered Species pursuant to the Western Riverside County MSHCP (coast horned lizard, orange-throated whiptail,

red diamond rattlesnake, northwestern San Diego pocket mouse, Stephen's kangaroo rat, Los Angeles pocket mouse). Both of the species observed, namely coastal California gnatcatcher and San Diego black-tailed jackrabbit, are also MSHCP Covered Species. No surveys or mitigation is required for these Covered Species assuming payment of the MSHCP development fee and implementation of MSHCP measures, including the Standard Best Management Practices provided in Appendix C of the Western Riverside County MSHCP (see also section 6.3.6 *Consistency with Adopted Natural Community Conservation Plan* below). For the remaining 8 species that are not MSHCP Covered Species, three species are state species of special concern with very low or low potential based on the limited, scattered and disturbed scrub habitat on- or off-site and occurrences in the region (Jacumba pocket mouse, San Diego desert woodrat and southern grasshopper mouse), two species are state species of special concern bats with potential for foraging only (western mastiff bat and pallid bat – foraging habitat is limited), and three species are migratory birds/raptors (loggerhead shrike, northern harrier, and golden eagle; two non-listed raptors were also observed on-site, include red-tailed hawk and Cooper's hawk). No significant impacts to these species are expected as summarized below.

- No significant impacts to Jacumba pocket mouse, southern grasshopper mouse, or San Diego desert woodrat based on the very low or low potential to occur, and the limited, disturbed habitat that would not be expected to support large populations of these species, if present. Furthermore, these species were not considered for coverage under the MSHCP, indicating that regionally significant populations of these species do not exist within the MSHCP boundaries, and no CNDDDB records occur within 8 to 10 miles of the Project site. As such, any impacts to these species would be less than significant and no mitigation measures would be required.
- No significant impacts to western mastiff bat and pallid bat foraging habitat based on the limited and disturbed nature of the habitat on the Project site and off-site areas, the high level of development surrounding the Project site, and the availability of alternative, higher quality foraging habitat within the region. As such, any impacts to foraging habitat for these species would be less than significant and no mitigation measures would be required.
- No significant impacts to foraging habitat for migratory birds and raptors based on the low quality of habitat as a result of historical disturbance on-site and due to surrounding development. The loss of foraging habitat as a result of the Project would not expect to impact the foraging of these species. Therefore, impacts to foraging habitat would be considered less than significant and no mitigation measures would be required. Direct impacts to these species would be avoided through compliance with the Migratory Bird Treaty Act (MBTA), as discussed in section 6.3.4 *Impacts to Wildlife Movement and Migratory Species* below.

Despite negative surveys for burrowing owl, a pre-construction survey is required within 30 days prior to ground disturbance due to the presence of potentially suitable habitat, to avoid potential direct take of burrowing owls in the future. A Condition of Approval is provided for burrowing owl in section 7.2.4 *Measures to Mitigate Potentially Significant Impacts to the MSHCP* of this BRA in compliance with the Western Riverside County MSHCP, in addition to a recommended mitigation measure should burrowing owls be present in the future (see section 6.3.6 *Consistency with Adopted Natural Community Conservation Plan* below).



**Impacts to Paniculate Tarplant Locations**

Clinton Keith Road APN 380250003  
 Source: Aerial Express, 2010; PCR Services Corporation, 2013.

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### 6.3.2 Impacts to Sensitive Plant Communities

**Threshold BIO-B: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?**

*Less than Significant with Regulatory Compliance*

#### 6.3.2.1 Sensitive Plant Communities

The Project site supports one sensitive native habitat on-site, southern willow scrub/ruderal, totaling 0.06 acre (see Table 1). Southern willow scrub (CNDDDB Code 61.211.05) is considered a sensitive, high priority community for inventory in the CNDDDB. Impacts to southern willow scrub are considered potentially significant if a community is high quality habitat or supports plant or animal species of significance. High quality habitats are considered by CDFW as those displaying characteristics such a lack of invasive exotic species, no human-caused disturbances, evidence of reproduction (e.g., sprouts, seedlings), and no significant insect or disease damage.

The entire 0.06-acre of southern willow scrub/ruderal on-site is proposed for permanent impacts by the Project, as summarized in **Table 5, Impacts to Natural Communities**. However, the on-site habitat is not considered high quality due to the limited native component (six red willow trees and a few mulefat plants), the understory of non-native species, and historical disturbance from agricultural activities. The community is also considered remnant and isolated from other similar habitats in the vicinity, and does not support or have the potential to support any protected plant or animal species. As a result, impacts to the on-site southern willow scrub/ruderal would not threaten the existence of high quality stands of this vegetation community. Impacts to this vegetation community are therefore not considered a significant impact and no mitigation measures would be required.

The remainder of the Project site supports native (buckwheat scrub, buckwheat scrub/chamise chaparral, buckwheat scrub/ruderal, chamise chaparral, chamise chaparral/buckwheat scrub, coast live oak woodland, Riversidean Sage Scrub, and Riversidean Sage Scrub/Ruderal) and non-native dominated (disturbed, ornamental, ruderal, ruderal/buckwheat scrub, and ruderal/Riversidean sage scrub) communities which are not considered sensitive pursuant to CDFW, USFWS, or the Western Riverside County MSHCP. Furthermore, the native communities within the Project site are small, scattered, and are of low quality for sensitive plant and wildlife species. Since these habitats are not sensitive, impacts would be less than significant and no mitigation measures would be required.

All but one of the natural communities on-site would be entirely impacted either permanently or temporarily by the Project. Habitat avoidance is limited to a 0.70 acre consisting primarily of coast live oak woodland. A figure showing impacts to natural plant communities is provided as **Figure 12, Impacts to Natural Communities**, and acreages are summarized in Table 5.

#### 6.3.2.2 CDFW Jurisdiction

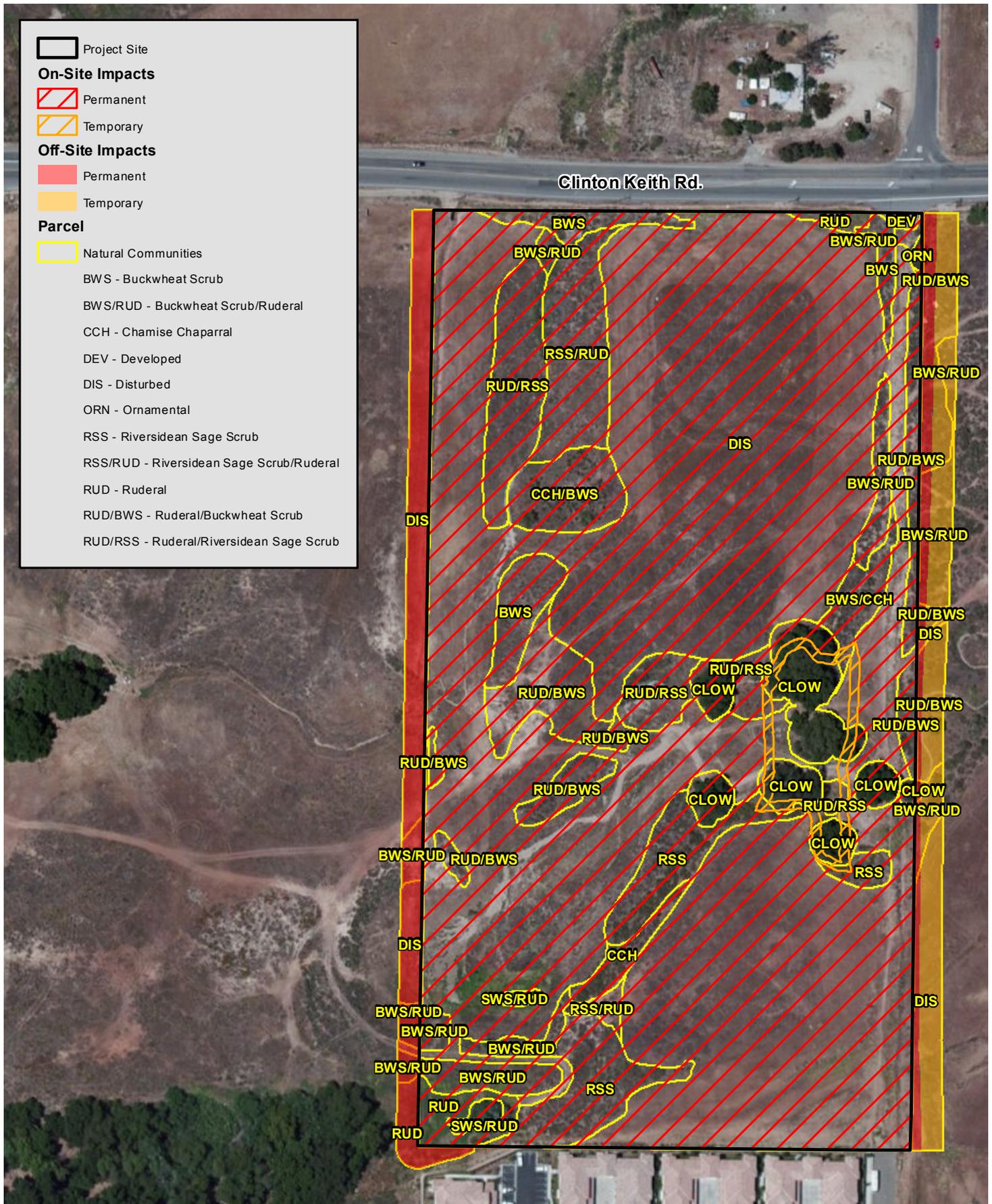
The Project site supports drainages that are considered jurisdictional streambed pursuant to Section 1602 of the California Fish and Game Code, as regulated by CDFW. This includes Drainages A, B, B1 and C both on-

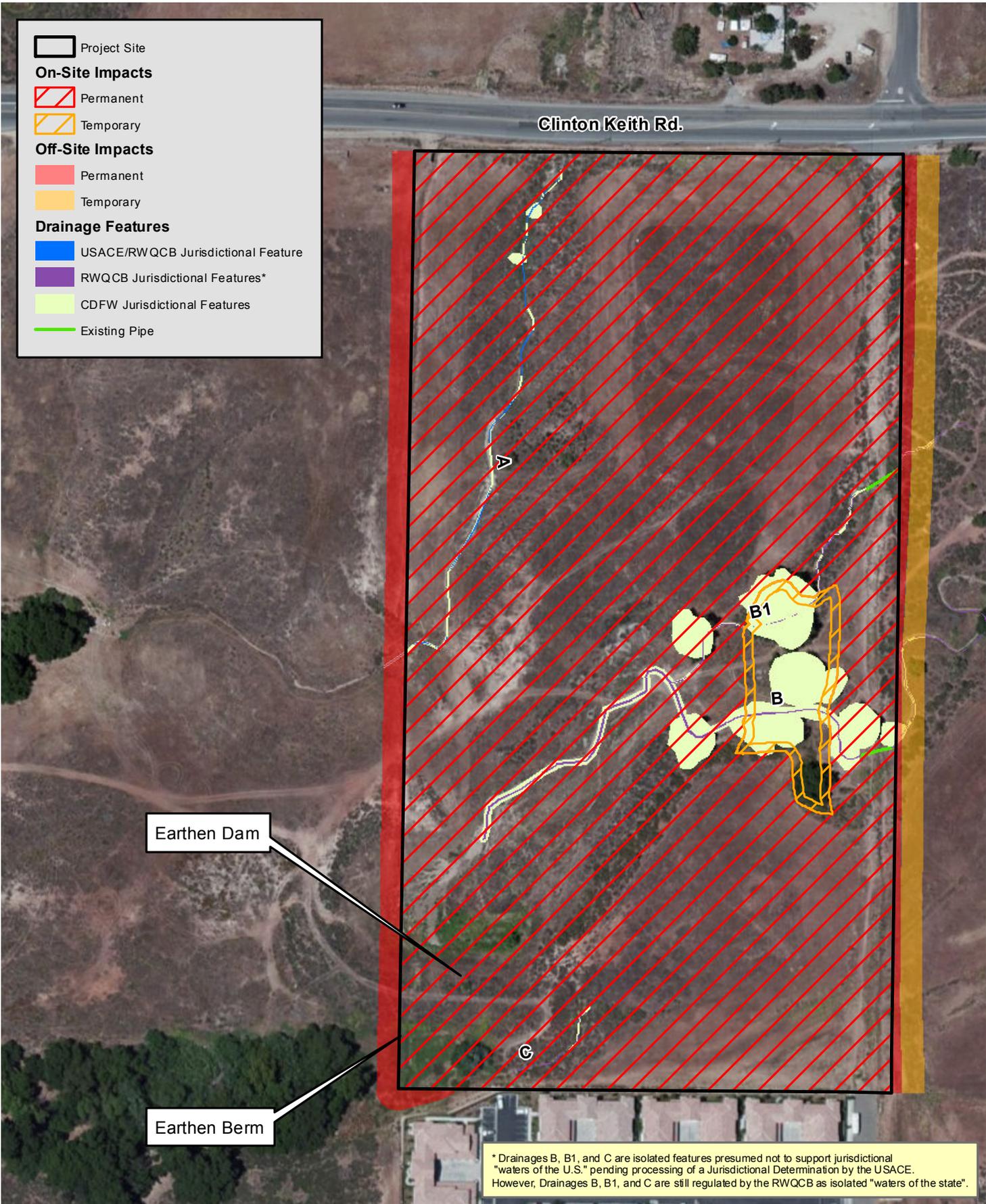
**Table 5**  
**Impacts to Natural Communities**

Natural Community	On-Site (acres)		Off-Site (acres)	
	Permanent	Temporary	Permanent	Temporary
Buckwheat Scrub	0.47	-	-	-
Buckwheat Scrub/Chamise Chaparral	0.17	0.01	-	-
Buckwheat Scrub/Ruderal	0.51	-	0.35	0.07
Chamise Chaparral	0.12	-	-	-
Chamise Chaparral/Buckwheat Scrub	0.35	-	-	-
Coast Live Oak Woodland	0.36	0.11	-	0.01
Riversidean Sage Scrub	0.88	0.02	-	-
Riversidean Sage Scrub/Ruderal	0.62	-	-	-
Southern Willow Scrub/Ruderal	0.06	-	-	-
Ornamental	0.01	-	-	-
Ruderal	0.21	-	0.11	-
Ruderal/Buckwheat Scrub	0.91	-	0.33	-
Ruderal/Riversidean Sage Scrub	0.79	0.02	-	0.17
Disturbed	13.2	0.07	1.0	0.08
Developed	0.02	-	-	-
<b>Total</b>	<b>18.7</b>	<b>0.23</b>	<b>1.79</b>	<b>0.33</b>

Source: PCR Services Corporation, 2013.

and off-site. Permanent or temporary impacts are proposed to the majority of these jurisdictional drainages on the Project site and off-site, as shown in **Figure 13, Impacts to Jurisdictional Features**. Avoidance of a small portion of Drainages B and B1 is proposed to preserve oak trees. Permanent and temporary impact acreages are summarized in **Table 6, Impacts to CDFW Jurisdictional Drainages**, totaling 0.63 acre of on-site impacts (0.54 acre of permanent impacts and 0.09 acre of temporary impacts) and 0.02 acre of off-site impacts (0.01 acre of permanent impacts and 0.01 acre of temporary impacts). Impacts to these jurisdictional drainages would be required to comply with Section 1602 of the California Fish and Game Code, including applying for a permit and compensatory mitigation. A Condition of Approval is proposed in section 7.2.1 *Measures to Mitigate Potentially Significant Impacts to Jurisdictional Features* of this BRA to comply with the compensatory mitigation requirement of this regulation, subject to approval by CDFW. Compliance with Section 1602 of the California Fish and Game Code would reduce impacts to a less than significant level.





**Table 6**  
**Impacts to CDFW Jurisdictional Drainages**

Drainage	Area (acres)			
	On-Site		Off-Site	
	Permanent	Temporary	Permanent	Temporary
A	0.06	-	<0.01	-
B	0.34	0.05	0.01	0.01
B1	0.13	0.04	<0.01	<0.01
C	0.01	-	-	-
<b>Total</b>	<b>0.54</b>	<b>0.09</b>	<b>0.01</b>	<b>0.01</b>

Source: PCR Services Corporation, 2013.

### 6.3.3 Impacts to Wetlands

**Threshold BIO-C: Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

*Less than Significant with Regulatory Compliance*

No federally protected wetlands occur within the on- or off-site portions of the Project. The Project site does, however, support non-wetland, ephemeral drainages that are regulated by the Clean Water Act (CWA). Drainages B, B1 and C are considered isolated ephemeral drainages and do not support indicators of a surface connection to downstream “waters of the U.S.” Therefore, these drainages may be considered isolated non-jurisdictional streambeds by the USACE pending processing of a Jurisdictional Determination, that would not be regulated under Section 404 of the CWA. These drainages could, however, be considered RWQCB “waters of the State” regulated pursuant to Section 401 of the CWA. Permanent or temporary impacts are proposed to the majority of these jurisdictional drainages on the Project site and off-site, as shown in Figure 13. Avoidance of a small portion of Drainages B and B1 is proposed to preserve oak trees that are within CDFW jurisdiction. Permanent and temporary impact acreages are summarized in **Table 7, Impacts to USACE/RWQCB Jurisdictional Drainages**, totaling 0.07 acre of on-site impacts (0.07 acre of permanent impacts and <0.01 acre of temporary impacts), and <0.01 acre of off-site impacts (<0.01 acre of permanent impacts and <0.01 acre of temporary impacts). Impacts to these jurisdictional areas would be required to comply with Sections 404 and 401 of the CWA, including applying for a permit and mitigation subject to approval by USACE and RWQCB, respectively. A Condition of Approval is proposed in section 7.2.1 *Measures to Mitigate Potentially Significant Impacts to Jurisdictional Features* of this BRA to comply with the compensatory mitigation requirement of these regulations, subject to approval by USACE and RWQCB. Compliance with Sections 404 and 401 of the CWA would reduce impacts to a less than significant level.

Table 7

## Impacts to USACE/RWQCB Jurisdictional Drainages

Drainage	Impact Length (feet) <sup>b</sup>	Area (acres)			
		On-Site <sup>a</sup>		Off-Site <sup>a</sup>	
		Permanent	Temporary	Permanent	Temporary
A	795	0.02	-	<0.01	-
B	853	0.04	<0.01	<0.01	<0.01
B1	433	0.01	<0.01	<0.01	<0.01
C	160	<0.01	-	-	-
<b>Total</b>	<b>2,241</b>	<b>0.07</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>

<sup>a</sup> Drainages B, B1 and C may be considered non-jurisdictional by USACE pending processing of a Jurisdictional Determination. If USACE concurs, permanent impacts to USACE jurisdictional drainages would be limited to on-site Drainage A either on-site or off-site.

<sup>b</sup> Impact lengths includes permanent and temporary impacts to on-site and off-site portions. The breakdown of impacts is as follows for on-site: Drainage A, 759 ft permanent impacts only; Drainage B, 652 ft permanent impacts and 27 ft temporary impacts; Drainage B1, 326 ft permanent impacts and 41 ft temporary impacts; and Drainage C, 160 ft permanent impacts only. The breakdown for off-site impacts is as follows: Drainage A, 36 ft of permanent impacts only; Drainage B, 28 ft permanent impacts and 146 ft temporary impacts; Drainage B1, 29 ft permanent impacts and 37 ft temporary impacts; Drainage C, no permanent or temporary off-site impacts.

Source: PCR Services Corporation, 2013.

### 6.3.4 Impacts to Wildlife Movement and Migratory Species

**Threshold BIO-D: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery areas?**

*Less than Significant with MBTA Compliance*

#### 6.3.4.1 Wildlife Movement

As described in section 4.5.2 *Wildlife Movement Within the Project Site* above, the Project site supports potential live-in and movement habitat for species on a local scale (i.e., some limited live-in and at least marginal movement habitat for reptile, bird, and small mammal species), but it likely provides little to no function to facilitate wildlife movement for wildlife species on a regional scale, and is not identified as a regionally important dispersal or seasonal migration corridor. Movement on a local scale likely occurs with species adapted to urban environments due to the high level of development in the vicinity of the Project site. Although implementation of the Project would result in disturbances to local wildlife movement within the Project site, those species are considered to comprise primarily of those adapted to urban areas and would be expected to persist in the vicinity following construction. As such, impacts would be less than significant and no mitigation measures would be required. Since the Project site does not function as a regional wildlife corridor and is not known to support wildlife nursery area(s), no impacts would occur and no mitigation measures would be required.

### 6.3.4.2 Migratory Species

The Project site has the potential to support songbird nests due to the presence of limited trees, shrubs and ground cover both on- and off-site. Nesting activity typically occurs from February 15 to August 31. Disturbing or destroying active nests is a violation of the MBTA (16 U.S.C. 703 et seq.). In addition, nests and eggs are protected under Fish and Game Code Section 3503. The removal of vegetation during the breeding season is considered a potentially significant impact as defined by the thresholds of significance (Threshold BIO-D) in section 5.0 *Thresholds of Significance* above. Any potential impacts to raptor and songbird nests would be considered potentially significant. A mitigation measure is proposed in section 7.2.2 *Measures to Mitigate Potentially Significant Impacts to Migratory or Nesting Birds* of this BRA to comply with the MBTA and reduce impacts to a less than significant level.

### 6.3.5 Consistency with Local Policies and Ordinances

**Threshold BIO-E: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

*No Impacts*

There is no local tree ordinance for the City of Wildomar, nor other local ordinances with which the proposed Project would conflict.

### 6.3.6 Consistency with Adopted Natural Community Conservation Plan

**Threshold BIO-F: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

*Less than Significant with MSHCP Compliance*

As discussed in section 4.7.6 *Project Site Relationship to the Western Riverside County MSHCP* of this report, the Project site is within the Elsinore Area Plan of the Western Riverside County MSHCP and requires compliance with the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (Section 6.1.2 of the MSHCP), the Guidelines Pertaining to the Urban/Wildlands Interface (Section 6.1.4 of the MSHCP), and the Burrowing Owl Survey Area (Section 6.3.2 of the MSHCP). The Project site is not within a cell, a designated cell group, or a subunit within the Elsinore Area Plan; therefore, conservation of land on the Project site is not required pursuant to the MSHCP. The Project site is also not within the survey overlays for Narrow Endemic Plant Species (Section 6.1.3 of the MSHCP), Criteria Area Species, Amphibian Species, or Mammal Species (Section 6.3.2 of the MSHCP). Compliance with the Riparian/Riverine, Burrowing Owl, and Urban/Wildlands sections of the MSHCP are summarized below. Compliance with these sections, in addition to payment of the MSHCP development fee and implementation of required measures, including the Standard Best Management Practices provided in Appendix C of the Western Riverside County MSHCP, will reduce impacts to a less than significant level. A Condition of Approval is proposed in section 7.2.3 *Measures to Mitigate Potentially Significant Impacts to the MSHCP* of this BRA to comply with the Western Riverside County MSHCP.

### 6.3.6.1 Riparian/Riverine Areas and Vernal Pools

Drainages A, B and B1 are considered to meet the definition of MSHCP Riverine Areas due to the presence of vegetation, hydrology, and/or downstream connection to other MSHCP Riparian/Riverine Areas.

Drainage A is considered to meet the definition of a Riverine Area based on the ultimate downstream connection of ephemeral flows to Murrieta Creek approximately 1 mile southwest. For the Riverine Area associated with Drainage A, the biological functions and values of Riparian/Riverine Areas do not exist due to the absence of riparian/riverine associated vegetation (the area is mapped as native and non-native upland plant communities and the drainage itself is unvegetated apart from one blue elderberry plant). As such, no habitat exists for MSHCP associated riparian/riverine species and no further surveys or mitigation is required for protected species.

Drainages B and B1 are considered to meet the MSHCP definition of a Riverine Area pursuant to the MSHCP based on the presence of coast oak trees that grow close to the drainages and the limited (ephemeral) signs of flow. The drainages are considered to support limited function and value as Riverine Areas due to the absence of a downstream connection; the hydrology of these drainages has been altered as a result of historical agricultural activities and construction of a berm in the southwest corner of the site. Although an upstream connection was observed, the on-site portions of the drainages exhibited signs of only ephemeral flows. As such, the drainages do not support the vegetation or hydrology suitable for supporting the majority of the MSHCP list of associated riparian/riverine species. Oak trees can provide habitat for two MSHCP protected riparian/riverine associated species, specifically bald eagle and American peregrine falcon. However, the site was determined not suitable for bald eagle, with a low potential for foraging habitat only for the American peregrine falcon.

Drainage C is not considered to meet the MSHCP definition of a Riparian/Riverine Area. Although it exhibits signs of ephemeral flow, the drainage is located on-site only totaling 160 linear feet; there is no upstream or downstream connection to other MSHCP Riparian/Riverine Areas. The hydrology of this drainage has been altered as a result of historical agricultural activities and construction of a berm in the southwest corner of the site. Furthermore, the drainage does not support riparian/riverine vegetation suitable for supporting the MSHCP list of associated riparian/riverine species. As such, Drainage C is not considered to support the functions and values of an MSHCP Riparian/Riverine Area, or connect to such areas off-site, and no further surveys are considered required.

The two small remnant patches of southern willow scrub/ruderal on-site totaling 0.06 acre are also not considered to meet the definition of Riparian/Riverine Areas pursuant to the MSHCP based on the isolation from other contiguous habitats and lack of hydrology. The patches support six red willow trees and a few mulefat plants, and lack the structure and size to support MSHCP associated species such as least Bell's vireo. Based on the lack of suitable habitat for plant and animal species afforded protection under the MSHCP, no focused surveys or mitigation is required.<sup>12</sup>

No other aquatic features that could provide suitable habitat for Riparian/Riverine species occur within the on- or off-site portions of the Project site.

<sup>12</sup> *The southern willow scrub/ruderal vegetation on-site is considered a sensitive community pursuant to CDFW but due to the low quality and small size of the on-site habitat (6 willow trees and a few mulefat plants), impacts are not considered significant (see also Section 6.3.2 of this BRA).*

Based on the assessment of Riparian/Riverine resources, the Project will result in permanent impacts to Riverine Areas associated with Drainages A, B and B1 including 0.63 acre of on-site impacts (0.54 acre of permanent impacts and 0.09 acre of temporary impacts) and 0.02 acre of off-site impacts (0.01 acre of permanent impacts and 0.01 acre of temporary impacts). The impacts are equivalent to the jurisdiction and associated impacts to CDFW jurisdictional streambed and associated vegetation within Drainages A, B and B1. Due to these impacts, preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis will be required providing details on the impacts and compensatory mitigation in compliance with MSHCP requirements. A Condition of Approval is proposed in section 7.2.3 *Measures to Mitigate Potentially Significant Impacts to the MSHCP* of this BRA to comply with the Riparian/Riverine requirements of the MSHCP.

### **Burrowing Owl**

As discussed above in section 6.3.1.2 *Special-Status Wildlife Species* of this BRA, the on- and off-site portions of the Project do not currently support burrowing owls. However, in compliance with the Western Riverside County MSHCP, pre-construction surveys are required within 30 days of ground disturbance based on the presence of suitable habitat. These surveys should be conducted in accordance with the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (County of Riverside 2006). A Condition of Approval is proposed in section 7.2.3 *Measures to Mitigate Potentially Significant Impacts to the MSHCP* of this BRA to comply with the burrowing owl requirements of the Western Riverside County MSHCP, in addition to a recommended mitigation measure pursuant to CDFW published guidelines (CDFW 2012) should burrowing owls be present within the Project site in the future.

### **Guidelines Pertaining to the Urban/Wildlands Interface**

The guidelines presented in Section 6.1.4, *Guidelines Pertaining to the Urban/Wildlands Interface*, of the MSHCP are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. Development located in proximity to the MSHCP Conservation Area may result in edge effects that will adversely affect biological resources within the Conservation Area. Edge effects are considered to be impacts associated with altering the existing habitat and increasing the human population or predator species as a result of a project. These impacts may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to the project. Indirect impacts include the effects of increases in ambient levels of sensory stimuli (e.g., noise and light), unnatural predators (e.g., domestic cats and other non-native animals), competitors (e.g., exotic plants and non-native animals), and trampling and unauthorized recreational use due to the increase in human population. Other permanent indirect effects may occur that are related to water quality and storm water management, including trash/debris, toxic materials, and dust.

Indirect effects resulting from the proposed Project may occur within the MSHCP Conservation Area as a result of drainage, toxics, and invasives if applicable measures are not implemented. Therefore, to minimize indirect effects at the urban/wildlands interface, project design features have been incorporated into the project design to ensure consistency with Section 6.1.4, *Guidelines Pertaining to the Urban/Wildlands Interface*, of the MSHCP. No impacts are anticipated pertaining to lighting, noise, and grading/land development, and the installation of barriers is not considered necessary for this Project. An analysis of the guidelines as they relate to the Project is provided below.

**Drainage:** Although the Project is downstream of the nearest MSHCP cell, potential impacts could occur to MSHCP Conservation Areas located downstream. The project will comply with all applicable water quality

regulations, including obtaining a CWA Section 401 Water Quality Certification and complying with those conditions established by the San Diego RWQCB, including Municipal Storm Drain Permit 4 (MS4) requirements pursuant to the Memorandum of Understanding between the San Diego RWQCB and the City of Wildomar. The project design includes a detention basin to treat storm water runoff, the implementation of applicable BMPs during construction activities, and appropriate BMPs and Low Impact Development (LID) features where feasible to meet National Pollutant Discharge Elimination System (NPDES) and County of Riverside standards. It is anticipated that the BMPs will prevent the release of toxins, chemicals, petroleum products, exotic plant material, or other elements that might degrade or harm biological or aquatic resources to the maximum extent possible.

**Toxics:** Toxic sources within the Project would be limited to those commonly associated with residential and commercial (restaurants, retail, and medical) developments, such as bacteria, nutrients, sediments, trash and debris, oxygen demanding substances, metals, organic compounds, and oil and grease. In order to mitigate the potential effects of these toxics, the Project will comply with all applicable water quality regulations and BMPs, as described above under *Drainage*, to reduce the level of toxins introduced into the downstream drainage system and the surrounding areas.

**Lighting:** Clinton Keith Road separates the Project from the nearest MSHCP Conservation Area (i.e., Cell Group L', cell 5558). Therefore, no impacts from night lighting are anticipated.

**Noise:** The Project will not result in noise levels that exceed residential noise standards established for Riverside County. In addition, the Project is separated from the nearest MSHCP Conservation Area (i.e., Cell Group L', cell 5558) by Clinton Keith Road. Therefore, the Project will not result in long-term noise impacts to wildlife within the adjacent MSHCP Conservation Area. Short-term construction-related noise impacts are also not anticipated due to Clinton Keith Road separating the Project from cell 5558.

**Invasives:** The landscape plans for the proposed Project shall avoid the use of invasive species to avoid water-borne or air-borne dispersal of seeds into the MSHCP Conservation Area. Invasive plants that should be avoided are included in Table 6-2 of the MSHCP, *Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area*. To the maximum extent practicable, the use of native plants in the landscape plans is recommended for the common areas of the Project and homeowners should be educated against planting invasive plant species.

**Barriers:** Clinton Keith Road is considered as an existing barrier between the nearest cell 5558 to the north of the road, from the Project to the south of the road. This existing road is anticipated to minimize indirect effects to wildlife and other resources being protected in an MSHCP Conservation Area from unauthorized public access, domestic animal predation, and illegal trespass or dumping. As such, additional physical barriers are not considered necessary, including native landscaping, rocks/boulders, fencing, and signage. However, the residential and commercial development occupants will be notified of the protected MSHCP Conservation Area north of Clinton Keith Road.

**Grading/Land Development:** The Project footprint is limited to the south side of Clinton Keith Road. As a result, manufactured slopes associated with the Project will not extend into the nearest cell 5558 on the north side of Clinton Keith Road.

## 7.0 MITIGATION MEASURES AND CONDITIONS OF APPROVAL

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### 7.1 APPROACH

Mitigation measures are recommended for those impacts determined to be significant to sensitive biological resources. Mitigation measures for impacts considered to be “significant” were developed in an effort to reduce such impacts to a level of “insignificance,” while at the same time allowing an opportunity to realize development goals for the Project. As stated in CEQA Guidelines Section 15370 mitigation includes:

1. Avoiding the impact altogether by not taking a certain action or parts of an action.
1. Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
2. Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
3. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
4. Compensating for the impact by replacing or providing substitute resources or environments.

Where compliance with existing regulations and the issuance of permits by regulatory agencies would reduce impacts to a less than significant level, those measures are proposed as Conditions of Approval.

### 7.2 MITIGATION MEASURES AND CONDITIONS OF APPROVAL FOR SIGNIFICANT IMPACTS

The following mitigation measures (MM) and conditions of approval (COA) address potentially significant impacts from the proposed Project.

#### 7.2.1 Measures to Mitigate Potentially Significant Impacts to Jurisdictional Features

**COA BIO-1** Prior to the issuance of any grading permit for permanent impacts in jurisdictional features, the project applicant shall obtain a Clean Water Act Section 404 permit and/or an Approved Jurisdictional Determination from the USACE, a Clean Water Act Section 401 permit from the RWQCB, and a Streambed Alteration Agreement permit under Section 1602 of the California Fish and Game Code from the CDFW. The following shall be incorporated into the permitting, subject to approval by the regulatory agencies:

1. Off-site replacement and/or restoration of USACE/RWQCB jurisdictional “waters of the U.S.”/“waters of the State” within the Santa Margarita Watershed at a ratio no less than 1:1 or within an adjacent watershed at a ratio no less than 2:1 for permanent impacts, and for any temporary impacts to restore the impact area to pre-project conditions (i.e., pre-project contours and revegetate where applicable). Off-site mitigation may occur on land acquired for the purpose of in-perpetuity

preservation, or through the purchase of mitigation credits at an agency-approved off-site mitigation bank.

2. Off-site replacement and/or restoration of CDFW jurisdictional streambed and associated riparian habitat within the Santa Margarita Watershed at a ratio no less than 1:1 or within an adjacent watershed at a ratio no less than 2:1 for permanent impacts, and for any temporary impacts to restore the impact area to pre-project conditions (i.e., pre-project contours and revegetate where applicable). Off-site mitigation may occur on land acquired for the purpose of in-perpetuity preservation, or through the purchase of mitigation credits at an agency-approved off-site mitigation bank.

Purchase of mitigation credits through an agency-approved mitigation bank or in-lieu fee program should occur prior to any impacts to jurisdictional drainages. Mitigation proposed on land acquired for the purpose of in-perpetuity mitigation that is not part of an agency-approved mitigation bank or in-lieu fee program shall include the preservation, creation, restoration, and/or enhancement of similar habitat pursuant to a Habitat Mitigation and Monitoring Plan (HMMP). The HMMP shall be prepared prior to any impacts to jurisdictional features, and shall provide details as to the implementation of the mitigation, maintenance, and future monitoring. The goal of the mitigation shall be to preserve, create, restore, and/or enhance similar habitat with equal or greater function and value than the impacted habitat.

### 7.2.2 Measures to Mitigate Potentially Significant Impacts to Migratory or Nesting Birds

**MM BIO-1** *Prior to the issuance of any grading permit that would result in removal of all suitable raptor and songbird nesting habitat, the Project applicant shall demonstrate to the satisfaction of the City of Wildomar that either of the following has been or will be accomplished.*

1. *Vegetation removal activities shall be scheduled outside the nesting season (September 1 to February 14 for songbirds; September 1 to January 14 for raptors) to avoid potential impacts to nesting birds.*
2. *Any construction activities that occur during the nesting season (February 15 to August 31 for songbirds; January 15 to August 31 for raptors) will require that all suitable habitat be thoroughly surveyed for the presence of nesting birds by a qualified biologist before commencement of clearing. If any active nests are detected, a buffer of approximately 300 feet (500 feet for raptors) will be delineated, flagged, and avoided until the nesting cycle is complete, as determined by the biological monitor to minimize impacts. The biological monitor may determine alternative appropriate buffers and/or measures to protect the nesting birds.*

### 7.2.3 Measures to Mitigate Potentially Significant Impacts to the MSHCP

**COA BIO-2** Prior to the issuance of any grading permit, the Project applicant shall comply with all of the provisions of the Western Riverside County MSHCP, including payment of the MSHCP Local Development Mitigation Fee, Best Management Practices (specifically

Appendix C, Standard Best Management Practices, of the Western Riverside County MSHCP), and Section 6.1.4, *Guidelines Pertaining to the Urban/Wildlands Interface*.

**COA BIO-3** Due to the presence of suitable habitat and in compliance with the Western Riverside County MSHCP, a pre-construction survey for burrowing owl shall be conducted within 30 days prior to ground disturbance to avoid potential direct take of burrowing owls that may occupy the site in the future.

**MM BIO-2** *If burrowing owls are determined present following the pre-construction survey, occupied burrows shall be avoided to the greatest extent feasible, following the guidelines in the "Staff Report on Burrowing Owl Mitigation" published by Department of Fish and Wildlife (March 7, 2012) including, but not limited to, avoiding occupied burrows during the nesting and non-breeding seasons, implementing a worker awareness program, biological monitoring, establishing avoidance buffers, and flagging burrows for avoidance with visible markers. If occupied burrows cannot be avoided, acceptable methods may be used to exclude burrowing owl either temporarily or permanently, pursuant to a Burrowing Owl Exclusion Plan that shall be prepared and approved by CDFW. The Burrowing Owl Exclusion Plan shall be prepared in accordance with the guidelines in the Staff Report on Burrowing Owl Mitigation.*

**COA BIO-4** Prior to the issuance of any grading permit, the Project applicant shall prepare a DBESP outlining the impacts and proposed compensatory mitigation for Riparian/Riverine Areas for submittal and approval by the Regional Conservation Authority and the wildlife agencies (CDFW and USFWS).

## 7.3 GENERAL RECOMMENDATIONS

### 7.3.1 Best Management Practices for Wildlife

- Construction activities should not commence until 0700 hours and should be completed before dusk each day to the greatest extent feasible.
- If night-time construction is required, lighting should be directed away from any adjacent native vegetation and should be limited to the minimum amount necessary to complete the construction activities.
- Any open trenches should be covered at the end of each work day in a manner to prevent the entrapment of wildlife, or adequately ramped to provide an animal escape.
- If any wildlife is encountered during construction activities, the wildlife should be allowed to leave the work area unharmed and shall be flushed or herded in a safe direction away from the work area(s).
- All vehicles and equipment should be maintained in proper working condition to minimize fugitive emissions and accidental spills from motor oil, hydraulic fluid, grease, or other fluids or hazardous materials entering downstream drainages. All fuel or hazardous waste leaks, spills, or releases shall be stopped or repaired immediately and cleaned up at the time of occurrence. All spill material removed should be disposed of at an appropriate offsite landfill. Maintenance vehicles should carry

appropriate equipment and materials to isolate and remediate leaks or spills, such as a spill containment kit.

- All litter and pollutions laws should be followed. If trash receptacles are provided within or near the work areas they should be wildlife-proof.
- All exposed/disturbed areas should be stabilized to the greatest extent possible using appropriate, industry standard erosion control measures to prevent soil run-off into downstream drainages
- No construction activities should occur during active precipitation. If any precipitation is forecasted, the work area should be secured at least one day prior so no materials enter or wash into downstream drainages.

## 8.0 IMPACTS AFTER MITIGATION

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### 8.1 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed Project, inclusive of mitigation measures and conditions of approval, would have less than significant impacts to sensitive wildlife species, sensitive natural communities, jurisdictional features, migratory and/or nesting birds, and the Western Riverside County MSHCP.

### 8.2 CUMULATIVE IMPACTS

Cumulative impacts are defined as the direct and indirect effects of a proposed project which, when considered alone, would not be deemed a substantial impact, but when considered in addition to the impacts of related projects in the area, would be considered significant. “Related projects” refers to past, present, and reasonably foreseeable probable future projects, which would have similar impacts to the proposed Project. CEQA deems a cumulative impact analysis to be adequate if a list of “related projects” is included in the EIR or the proposed project is consistent with an adopted general, specific, master, or comparable programmatic plan [Section 15130(b)(1)(B)]. CEQA also states that no further cumulative impact analysis is necessary for impacts of a proposed project consistent with an adopted general, specific, master, or comparable programmatic plan [Section 15130(d)].

The MSHCP identifies areas for long-term conservation and management. As such, cumulative impacts of proposed projects within authorized take lands are minimized through the conservation of land. Cumulative impacts to the biological resources listed below for the Project site are considered to be less than significant based on compliance with the Western Riverside County MSHCP and regulations for jurisdictional waters, in addition to mitigation for sensitive natural communities. This includes implementation of the mitigation measures and conditions of approval outlined above in section *6.0 Project Related Impacts* and *7.0 Mitigation Measures and Conditions of Approval*. Since the Project site was determined not to function as a regional wildlife movement corridor, this biological resource is not included below.

- Burrowing owl;
- Migratory and/or nesting birds;
- USACE and/or RWQCB and CDFW Jurisdictional drainages (of which one, specifically Drainage A, is also considered to meet the definition of a MSHCP Riverine Area).

The proposed mitigation would result in a no-net-loss of the biological function and value of these biological resources, and the conditions of approval would ensure compliance with existing regulations (such as the Western Riverside County MSHCP and regulations for jurisdictional drainages). Therefore, with the proposed mitigation and conditions of approval, impacts would not be considered cumulatively significant. A summary is provided below.

Sensitive Wildlife Species: If any burrowing owls are observed on-site in the future, additional mitigation is proposed that would avoid direct impacts in compliance with the Western Riverside County MSHCP. Mitigation is also proposed to avoid direct impacts to raptors and migratory bird species through compliance with the MBTA. With these mitigation measures, any impacts would not be considered cumulatively significant.

Jurisdictional Drainages: Impacts to jurisdictional features would be subject to permitting with the regulatory agencies, including USACE, RWQCB and/or CDFW, including compensatory mitigation. With the proposed mitigation and compliance with existing regulations through the permitting process, impacts would not be considered cumulatively significant.

Riparian/Riverine Areas: Impacts to Riparian/Riverine Areas would be subject to approval of a DBESP by the Regional Conservation Authority and wildlife agencies, as required in Section 6.1.2 of the Western Riverside County MSHCP. With the approval and implementation of the DBESP, impacts would not be considered cumulatively significant.

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**APPENDIX A**

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**FLORAL AND FAUNAL COMPENDIUM**



# Appendix A: Floral and Faunal Compendium

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## ANGIOSPERMS (DICOTYLEDONS)

### SCIENTIFIC NAME

### COMMON NAME

#### Adoxaceae

*Sambucus nigra*

#### Elderberry Family

blue elderberry

#### Anacardiaceae

\* *Schinus molle*

#### Sumac Family

Peruvian peppertree

#### Apiaceae

*Apiastrum angustifolium*

*Daucus pusillus*

#### Carrot Family

mock celery

American wild carrot

#### Asteraceae

*Acourtia microcephala*

*Agoseris* sp.

*Artemisia californica*

*Baccharis salicifolia*

\* *Centaurea melitensis*

*Chaenactis glabruiscula*

*Deinandra paniculata*

*Ericameria pinifolia*

*Erigeron canadensis*

*Eriophyllum confertiflorum*

\* *Filago gallica*

*Helianthus annuus*

*Heterotheca grandiflora*

*Layia platyglossa*

*Microseris lindleyi*

*Pseudognaphalium californicum*

*Stephanomeria virgata*

#### Aster Family

sacapellote

agoseris

coastal sagebrush

mule fat

tocalote

yellow pincushion

paniculate tarweed

pinebush

horseweed

golden-yarrow

narrow-leaved filago

common sunflower

telegraphweed

coastal tidytips

Lindley's silverpuffs

ladies' tobacco

rod wirelettuce

#### Boraginaceae

*Amsinckia menziesii*

*Cryptantha intermedia*

*Eucrypta chrysanthemifolia*

*Heliotropium curassavicum*

*Phacelia cicutaria*

*Plagiobothrys canescens*

#### Borage Family

Menzies' fiddleneck

common cryptantha

common eucrypta

salt heliotrope

caterpillar phacelia

valley popcornflower

#### Brassicaceae

\* *Brassica tournefortii*

\* *Brassica rapa*

\* *Hirschfeldia incana*

\* *Sisymbrium irio*

#### Mustard Family

Sahara mustard

field mustard

shortpod mustard

London rocket

\*=Non-native species

## ANGIOSPERMS (DICOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME
<b>Cactaceae</b>	<b>Cactus Family</b>
<i>Cylindropuntia californica</i>	California Cholla
<i>Opuntia littoralis</i>	prickly pear
<b>Chenopodiaceae</b>	<b>Goosefoot Family</b>
<i>Chenopodium californicum</i>	California goosefoot
* <i>Chenopodium murale</i>	nettle-leaved goosefoot
* <i>Salsola tragus</i>	prickly Russian thistle
<b>Convolvulaceae</b>	<b>Morning-Glory Family</b>
<i>Cuscuta</i> sp.	dodder
<b>Cucurbitaceae</b>	<b>Gourd Family</b>
<i>Marah macrocarpus</i>	Cucamonga manroot
<b>Euphorbiaceae</b>	<b>Spurge Family</b>
<i>Chamaesyce albomarginata</i>	rattlesnake weed
<i>Croton setigerus</i>	dove weed
<b>Fabaceae</b>	<b>Legume Family</b>
<i>Acmispon glaber</i> var. <i>glaber</i>	deerweed
* <i>Melilotus indicus</i>	sourclover
* <i>Vicia villosa</i>	hairy vetch
<b>Fagaceae</b>	<b>Oak Family</b>
<i>Quercus agrifolia</i>	coast live oak
<b>Geraniaceae</b>	<b>Geranium Family</b>
* <i>Erodium cicutarium</i>	redstem stork's bill
<b>Lamiaceae</b>	<b>Mint Family</b>
* <i>Marrubium vulgare</i>	horehound
<i>Salvia apiana</i>	white sage
<i>Trichostema lanceolatum</i>	vinegar weed
<b>Olagraceae</b>	<b>Evening Primrose Family</b>
<i>Clarkia purpurea</i>	winecup clarkia
<i>Epilobium canum</i>	California fuchsia
<b>Nyctaginaceae</b>	<b>Four O'Clock Family</b>
<i>Mirabilis laevis</i>	wishbone bush
<b>Papaveraceae</b>	<b>Poppy Family</b>
<i>Eschscholzia californica</i>	California poppy
<b>Polygonaceae</b>	<b>Buckwheat Family</b>
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Rumex salicifolius</i>	willow dock

\*=Non-native species

## ANGIOSPERMS (DICOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME
<b>Rhamnaceae</b>	<b>Buckthorn Family</b>
<i>Rhamnus crocea</i>	spiny redberry
<i>Rhamnus ilicifolia</i>	holly-leaf redberry
<b>Rosaceae</b>	<b>Rose Family</b>
<i>Adenostoma fasciculatum</i>	chamise
<b>Salicaceae</b>	<b>Willow Family</b>
<i>Salix gooddingii</i>	black willow
<i>Salix laevigata</i>	red willow
<i>Salix lasiolepis</i>	arroyo willow
<b>Scrophulariaceae</b>	<b>Figwort Family</b>
<i>Keckiella antirrhinoides</i>	chaparral beard-tongue
<b>Simaroubaceae</b>	<b>Quassia Family</b>
<b>Solanaceae</b>	<b>Nightshade Family</b>
* <i>Nicotiana glauca</i>	tree tobacco
<i>Solanum xanti</i>	chaparral nightshade

## ANGIOSPERMS (MONOCOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME
<b>Poaceae</b>	<b>Grass Family</b>
<i>Avena sp.</i>	oat
* <i>Bromus diandrus</i>	ripgut grass
* <i>Bromus madritensis ssp. rubens</i>	foxtail chess
<i>Elymus condensatus</i>	giant wild rye
* <i>Hordeum vulgare</i>	barley
<i>Muhlenbergia rigens</i>	deergass
* <i>Schismus barbatus</i>	Mediterranean schismus

## REPTILES

SCIENTIFIC NAME	COMMON NAME
<b>Phrynosomatidae</b>	<b>Zebra-tailed Lizards and Relatives</b>
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Uta sp.</i>	side-bloched lizard

\*=Non-native species

## BIRDS

SCIENTIFIC NAME	COMMON NAME
<b>Odontophoridae</b>	<b>Quails</b>
<i>Callipepla californica</i>	California quail
<b>Ardeidae</b>	<b>Hérons</b>
<i>Ardea alba</i>	great egret
<b>Accipitridae</b>	<b>Hawks, Kites, Harriers, and Eagles</b>
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Buteo jamaicensis</i>	red-tailed hawk
<b>Charadriidae</b>	<b>Plovers</b>
<i>Charadrius vociferus</i>	killdeer
<b>Columbidae</b>	<b>Pigeons and Doves</b>
<i>Zenaida macroura</i>	mourning dove
<b>Trochilidae</b>	<b>Hummingbirds</b>
<i>Calypte anna</i>	Anna's hummingbird
<i>Selasphorus sasin</i>	Allen's hummingbird
<b>Tyrannidae</b>	<b>Tyrant Flycatchers</b>
<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Tyrannus verticalis</i>	western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
<b>Corvidae</b>	<b>Jays and Crows</b>
<i>Corvus brachyrhynchos</i>	American crow
<b>Hirundinidae</b>	<b>Swallows</b>
<i>Petrochelidon pyrrhonota</i>	cliff swallow
<b>Aegithalidae</b>	<b>Bushtits</b>
<i>Psaltriparus minimus</i>	bushtit
<b>Troglodytidae</b>	<b>Wrens</b>
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Troglodytes aedon</i>	house wren
<b>Poliopitidae</b>	<b>Gnatcatchers</b>
<i>Poliopitila californica californica</i>	coastal California gnatcatcher
<b>Mimidae</b>	<b>Thrashers</b>
<i>Mimus polyglottos</i>	northern mockingbird
<b>Emberizidae</b>	<b>Emberizids</b>
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Pipilo maculatus</i>	spotted towhee
<i>Sturnella neglecta</i>	western meadowlark

\*=Non-native species

## BIRDS

SCIENTIFIC NAME	COMMON NAME
<b>Fringillidae</b>	<b>Finches</b>
<i>Carpodacus mexicanus</i>	house finch
<i>Spinus psaltria</i>	lesser goldfinch

## MAMMALS

SCIENTIFIC NAME	COMMON NAME
<b>Canidae</b>	<b>Foxes, Wolves, and Coyotes</b>
<i>Canis latrans</i>	coyote
<b>Leporidae</b>	<b>Hares and Rabbits</b>
<i>Lepus californicus</i>	black-tailed jackrabbit
<i>Sylvilagus audubonii</i>	desert cottontail
<b>Sciuridae</b>	<b>Squirrels</b>
<i>Spermophilus beecheyi</i>	California ground squirrel

\*=Non-native species



**APPENDIX B**

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**SPECIAL-STATUS PLANT SPECIES**



## APPENDIX B: SPECIAL-STATUS PLANT SPECIES

SCIENTIFIC NAME	COMMON NAME	FLOWERING PERIOD	FEDERAL	STATE	CNPS	OTHER (MSHCP)	PREFERRED HABITAT	POTENTIAL FOR OCCURRENCE
<b>BRYOPHYTES</b>								
<b>Bryaceae</b>	<b>Mosses Family</b>							
<i>Schizymerium shevockii</i>	Shevock's copper moss	N/A	NONE	NONE	1B.2	NONE	Cismontane woodland (metamorphic, rock, mesic); between 2,461 and 4,593 feet.	<b>None</b>
<i>Tortula californica</i>	California screw moss	N/A	NONE	NONE	1B.2	NONE	Chenopod scrub, valley and foothill grassland; sandy, soil; between 33 and 328 feet.	<b>None</b>
<b>Sphaerocarpaceae</b>	<b>Liverwort Family</b>							
<i>Geothallus tuberosus</i>	Campbell's liverwort	N/A	NONE	NONE	1B.1	NONE	Coastal scrub (mesic), vernal pools; soil; between 33 and 1,969 feet.	<b>None</b>
<i>Sphaerocarpos drewei</i>	bottle liverwort	N/A	NONE	NONE	1B.1	NONE	Chaparral, coastal scrub; openings, soil; between 295 and 1,969 feet.	<b>None</b>
<b>GYMNOSPERMS</b>								
<b>Cupressaceae</b>	<b>Cypress Family</b>							
<i>Hesperocyparis forbesii</i>	Tecate cypress	N/A	NONE	NONE	1B.1	NONE	Closed-cone coniferous forest, chaparral; clay, gabbroic or metavolcanic; between 837 and 4,921 feet.	<b>None</b>
<b>ANGIOSPERMS (DICOTYLEDONS)</b>								
<b>Apiaceae</b>	<b>Carrot Family</b>							
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	Apr.-Jun.	FE	SE	1B.1	MSHCP	Valley grassland, coastal sage scrub, freshwater wetlands, wetland-riparian; vernal pools.	<b>None</b>

None = Species not expected to occur on-site due to the lack of suitable habitat or the site's location outside of the species' range; Very Low = There is a very low possibility for this species to occur on-site due to the small amount of habitat and/or poor quality of habitat and/or known range minimizes possibility for species' presence within the site, in addition to site disturbance; Low = There is a low possibility for this species to occur on-site due to the small amount of habitat and/or poor quality of habitat and/or known range minimizes possibility for species' presence within the site; Moderate = There is a moderate possibility for this species to occur on-site; High = There is a high probability for this species to occur on-site; Observed = the species was observed on-site; Absent = the species was not observed following focused surveys.

SCIENTIFIC NAME	COMMON NAME	FLOWERING PERIOD	FEDERAL	STATE	CNPS	OTHER (MSHCP)	PREFERRED HABITAT	POTENTIAL FOR OCCURRENCE
<b>Asteraceae</b>	<b>Sunflower Family</b>							
<i>Ambrosia pumila</i>	San Diego ambrosia	Apr.-Oct.	FE	NONE	1B.1	MSHCP	Chaparral, coastal scrub, desert dunes/sandy; Dry, sunny grasslands on disturbed sites.	<b>Absent</b>
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	Apr.-Sep.	NONE	NONE	1B.1	MSHCP	Valley and foothill grasslands with poorly drained alkaline soil conditions at low elevations.	<b>Absent</b>
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	Jan.-Aug.	NONE	NONE	1B.1	NONE	Coastal bluff scrub, coastal dunes; between 0 and 328 feet.	<b>None</b>
<i>Deinandra paniculata</i>	paniculate tarplant	Apr.-Nov.	NONE	NONE	4.2	NONE	Coastal scrub, valley and foothill grassland, vernal pools; usually vernal mesic, sometimes sandy; between 80 to 3090 feet.	<b>Observed</b>
<i>Holocarpa virgata</i> ssp. <i>elongata</i>	graceful tarplant	May-Nov.	NONE	NONE	4.2	MSHCP	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; between 190 to 3610 feet.	<b>Absent</b>
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	Feb.-Jun.	NONE	NONE	1B.1	MSHCP	Salt-marsh, playas, vernal-pools, coastal; usually occurs in wetlands but occasionally in non-wetlands.	<b>None</b>
<i>Packera gander</i>	Gander's ragwort	Apr.-Jun.	NONE	SR	1B.2		Chaparral.	<b>None</b>
<i>Pseudognaphalium leucocephalum</i>	white rabbit-tobacco	Aug.-Nov.	NONE	NONE	2.2	NONE	Chaparral, cismontane woodland, coastal scrub, riparian woodland; sandy, gravelly.	<b>Absent</b>
<i>Symphyotrichum defoliatum</i>	San Bernardino aster	Jul.-Nov.	NONE	NONE	1B.2	NONE	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernal mesic); near ditches, streams, springs; between 7 and 6,693 feet.	<b>Absent</b>
<i>Viguiera laciniata</i>	San Diego County viguiera	Feb.-Aug.	NONE	NONE	4.2	NONE	Chaparral, coastal scrub; between 190 to 2460 feet.	<b>Absent</b>

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SCIENTIFIC NAME	COMMON NAME	FLOWERING PERIOD	FEDERAL	STATE	CNPS	OTHER (MSHCP)	PREFERRED HABITAT	POTENTIAL FOR OCCURRENCE
<b>Berberidaceae</b>	<b>Barberry Family</b>							
<i>Berberis nevinii</i>	Nevin's barberry	Mar.-Jun.	FE	SE	1B.1	MSHCP	Sandy soils in low-gradient washes, alluvial terraces, and canyon bottoms, along gravelly wash margins, or on coarse soils on steep, generally north-facing slopes in alluvial scrub, cismontane (e.g., chamise) chaparral, coastal sage scrub, oak woodland, and/or riparian scrub or woodland.	<b>Absent</b>
<b>Boraginaceae</b>	<b>Borage Family</b>							
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	Mar.-Apr.	NONE	NONE	4.2	MSHCP	Variety of southern California plant communities including chaparral; sage scrub; clay soils; below 2,500 feet.	<b>Absent</b>
<b>Brassicaceae</b>	<b>Cabbage Family</b>							
<i>Caulanthus simulans</i>	Payton's jewel-flower	Mar.-Jun.	NONE	NONE	4.2	MSHCP	Burned areas, streambeds, rocky, steep slopes and other disturbed sites, below 6,500 feet.	<b>Absent</b>
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	Jan.-July	NONE	NONE	1B.2	NONE	Chaparral and coastal scrub.	<b>Absent</b>
<i>Sibaropsis hammittii</i>	Hammitt's clay-cress	Mar.-Apr.	NONE	NONE	1B.2	MSHCP	Chaparral (openings), valley and foothill grassland; between 2,395 and 3,494 feet.	<b>None</b>
<b>Chenopodiaceae</b>	<b>Goosefoot Family</b>							
<i>Atriplex coronata</i> var. <i>notatior</i>	San Jacinto Valley crownscale	Apr.-Aug.	FE	NONE	1B.1	MSHCP	Alkaline flats, playas, valley and foothill grassland, vernal pools; between 1216 to 1600 feet.	<b>Absent</b>
<i>Atriplex pacifica</i>	South Coast saltscale	Mar.-Oct.	NONE	NONE	1B.2	NONE	Alkali sink, coastal sage scrub, wetland-riparian; playas, coastal; equally as likely to be in wetland areas as non-wetland areas.	<b>Absent</b>

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SCIENTIFIC NAME	COMMON NAME	FLOWERING PERIOD	FEDERAL	STATE	CNPS	OTHER (MSHCP)	PREFERRED HABITAT	POTENTIAL FOR OCCURRENCE
<i>Atriplex parishii</i>	Parish's brittle-scale	Jun.-Oct.	NONE	NONE	1B.1	MSHCP	Shadscale scrub, alkali sinks, freshwater wetlands, wetland-riparian; playas, vernal pools; between 0 and 1,000 feet.	None
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's salt-scale	Apr.-Oct.	NONE	NONE	1B.2	MSHCP	Coastal sage scrub, wetland-riparian; coastal.	None
<b>Convolvulaceae</b>	<b>Morning Glory Family</b>							
<i>Convolvulus simulans</i>	small-flowered morning-glory	Mar.-Jul.	NONE	NONE	4.2	NONE	Chaparral (openings), coastal scrub, and valley and foothill grassland; clay or serpentinite seeps; between 90 to 2300 feet.	None
<b>Crassulaceae</b>	<b>Stonecrop Family</b>							
<i>Dudleya multicaulis</i>	many-stemmed dudleya	Apr.-Jul.	NONE	NONE	1B.2	MSHCP	Chaparral, coastal scrub, valley and foothill grassland often on clay soils.	Absent
<i>Dudleya viscida</i>	sticky dudleya	May-Jun.	NONE	NONE	1B.2	MSHCP	Chaparral, coastal sage scrub; coastal.	None
<b>Ericaceae</b>	<b>Heather Family</b>							
<i>Arctostaphylos rainbowensis</i>	Rainbow manzanita	Dec.-Mar.	NONE	NONE	1B.1	MSHCP	Chaparral.	None
<b>Fabaceae</b>	<b>Legume Family</b>							
<i>Astragalus pachypus</i> var. <i>jaegeri</i>	Jaeger's milk-vetch	Dec.-Jun.	NONE	NONE	1B.1	MSHCP	Chaparral, valley grassland, foothill woodland.	Absent
<i>Pickeringia montana</i> var. <i>tomentosa</i>	woolly chaparral-pea	May-Aug.	NONE	NONE	4.3	NONE	Chaparral; gabbroic, granitic, clay; between 0 to 5580 feet.	None
<b>Fagaceae</b>	<b>Beech Family</b>							
<i>Quercus engelmannii</i>	Engelmann oak	Mar.-Jun.	NONE	NONE	4.2	MSHCP	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland; between 160 to 4270 feet.	Absent

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<b>Geraniaceae</b>	<b>Geranium Family</b>							
<i>California macrophylla</i>	round-leaved filaree	Mar.-May	NINE	NONE	1B.1	MSHCP	Cismontane woodland, valley and foothill grassland, clay soils.	<b>Absent</b>
<b>Juglandaceae</b>	<b>Walnut Family</b>							
<i>Juglans californica</i>	Southern California black walnut	Mar.-Aug.	NONE	NONE	4.2	MSHCP	Chaparral, cismontane woodland, southern oak woodland, coastal scrub; alluvial; between 160 to 3000 feet.	<b>Absent</b>
<b>Lamiaceae</b>	<b>Mint Family</b>							
<i>Clinopodium chandleri</i>	San Miguel savory	Mar.-Jul.	NONE	NONE	1B.2	MSHCP	Chaparral, foothill woodland, coastal sage scrub, valley grassland; riparian.	<b>Absent</b>
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella	Jun.-Aug.	NONE	NONE	1B.2	NONE	Chaparral, foothill wetland.	<b>None</b>
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	southern mountains skullcap	Jun.-Aug.	NONE	NONE	1B.2	NONE	Typically grows on moist embankments of montane creeks.	<b>None</b>
<b>Malvaceae</b>	<b>Mallow Family</b>							
<i>Ayenia compacta</i>	California ayenia	Mar.-Apr.	NONE	NONE	2.3	NONE	Creosote bush scrub, washes.	<b>None</b>
<b>Nyctaginaceae</b>	<b>Four O'clock Family</b>							
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand-verbena	Jan.-Sep.	NONE	NONE	1B.1	NONE	Chaparral, coastal scrub, and desert dunes/sandy areas.	<b>Absent</b>
<b>Papaveraceae</b>	<b>Poppy Family</b>							
<i>Romneya coulteri</i>	Coulter's matilija poppy	Mar.-Jul.	NONE	NONE	4.2	MSHCP	Chaparral, coastal scrub; often in burns; between 60 to 3940 feet.	<b>Absent</b>
<b>Picrodendraceae</b>	<b>Bitter Tree Family</b>							
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	Apr.-May	NONE	NONE	1B.2	NONE	Low growing chamise chaparral, coastal sage scrub; prefers Las Posas soils.	<b>Absent</b>

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SCIENTIFIC NAME	COMMON NAME	FLOWERING PERIOD	FEDERAL	STATE	CNPS	OTHER (MSHCP)	PREFERRED HABITAT	POTENTIAL FOR OCCURRENCE
<b>Polemonaceae</b>	<b>Phlox Family</b>							
<i>Navarretia fossalis</i>	spreading navarretia	Apr.-Jun.	FT	NONE	1B.1	MSHCP	Vernal pools.	<b>None</b>
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	Apr.-Jul.	NONE	NONE	1B.1	MSHCP	Coastal sage scrub, wetland-riparian; occurs almost always under natural conditions in wetlands.	<b>None</b>
<b>Polygalaceae</b>	<b>Milkwort Family</b>							
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish's milkwort	May-Aug.	NONE	NONE	4.3	MSHCP	Chaparral, cismontane woodland, riparian woodland; between 320 to 3280 feet.	<b>Absent</b>
<b>Polygonaceae</b>	<b>Buckwheat Family</b>							
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	Apr.-Jun.	NONE	NONE	1B.1	MSHCP	Openings/clearings in coastal or desert sage scrub, chaparral or interface; dry slopes or flat ground; sandy soils.	<b>Absent</b>
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	Apr.-Jun.	NONE	NONE	1B.2	MSHCP	Primarily associated with clay soils but also found on sandy or gravelly soils within open areas of chaparral, sage scrub, or needlegrass grassland.	<b>Absent</b>
<i>Dodecahema leptoceras</i>	slender-horned spineflower	Apr.-Jun.	FE	SE	1B.1	MSHCP	Scrub and chaparral in sandy soils and alluvial fans.	<b>Absent</b>
<b>Ranunculales</b>	<b>Buttercup Family</b>							
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	Mar.-Jun.	NONE	NONE	3.1	MSHCP	Associated with vernal pools and inundated grassland habitats.	<b>None</b>
<b>Rosaceae</b>	<b>Rose Family</b>							
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	Feb.-July (uncommonly Sept.)	NONE	NONE	1B.1	NONE	Chaparral, cismontane woodland, coastal scrub/sandy or gravelly.	<b>Absent</b>

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SCIENTIFIC NAME	COMMON NAME	FLOWERING PERIOD	FEDERAL	STATE	CNPS	OTHER (MSHCP)	PREFERRED HABITAT	POTENTIAL FOR OCCURRENCE
<i>Horkelia truncata</i>	Ramona horkelia	May-Jun.	NONE	NONE	1B.3	NONE	Chaparral, cismontane woodland; clay and gabbroic; between 1310 and 4270 feet.	None
<b>Rhamnaceae</b>	<b>Buckthorn Family</b>							
<i>Ceanothus cyaneus</i>	Lakeside ceanothus	Apr.-Jun,	NONE	None	1B.2	NONE	Chaparral, closed-cone pine forest.	None
<i>Ceanothus ophiochilus</i>	Vail Lake ceanothus	Feb.-Mar.	FT	SE	1B.1	MSHCP	Chaparral.	None
<b>ANGIOSPERMS (MONOCOTYLEDONS)</b>								
<b>Alliaceae</b>	<b>Onion Family</b>							
<i>Allium munzii</i>	Munz's onion	Mar.-May	FE	ST	1B.1	MSHCP	Bare or grassy clearings in a variety of southern California plant communities; clay soils; between 1,000-3,000 feet	Absent
<b>Juncaceae</b>	<b>Juncus</b>							
<i>Juncus luciensis</i>	Santa Lucia dwarf rush	Apr.-Jul.	NONE	NONE	1B.2	NONE	Wetland-riparian.	None
<b>Liliaceae</b>	<b>Lily Family</b>							
<i>Calochortus plummerae</i>	Plummer's mariposa lily	May-Jul.	NONE	NONE	1B.2	MSHCP	Chaparral (openings), cismontane woodland, coastal scrub, valley and foothill grassland, granitic/rocky.	Absent
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily	May-Jul.	NONE	NONE	1B.2	MSHCP	Coastal scrub, chaparral, valley and foothill grassland on rocky soil.	Absent
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	ocellated Humboldt lily	Mar.-Aug.	NONE	NONE	4.2	MSHCP	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland; openings; between 90 to 5910 feet.	None

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<i>Lilium parryi</i>	lemon lily	Jul.-Aug.	NONE	NONE	1B.2	MSHCP	Red fir forest, yellow pine forest, wetland-riparian; riparian meadows; usually occurs in wetlands, but occasionally found in non-wetlands; between 4000 to 9010 feet.	None
<b>Limnanthaceae (Liliaceae)</b>	<b>Meadowfoam Family</b>							
<i>Limnanthes alba</i> ssp. <i>parishii</i>	Parish's meadowfoam	Apr.-Jun.	NONE	SE	1B.2	MSHCP	Yellow pine forests, freshwater wetlands, wetland-riparian; meadows, vernal pools.	None
<b>Poaceae</b>	<b>True Grass Family</b>							
<i>Hordeum intercedens</i>	vernal barley	Mar.-Jun.	NONE	NONE	3.2	MSHCP	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), vernal pools; between 10 to 3280 feet.	Absent
<i>Orcuttia californica</i>	California Orcutt grass	Apr.-Aug.	FE	SE	1B.1	MSHCP	Vernal pools.	None
<b>Ruscaceae</b>	<b>Ruscus Family</b>							
<i>Nolina cismontana</i>	chaparral nolina	Mar.-Jul.	NONE	NONE	1B.2	NONE	Xeric Diegan sage scrub, open chaparral; sandstone or gabbro; between 450 to 4190 feet.	Absent
<b>Themidaceae</b>	<b>Brodiaea Family</b>							
<i>Brodiaea flifolia</i>	thread-leaved brodiaea	Mar.-Jun.	FT	SE	1B.1	MSHCP	Sage scrub, valley and foothill grassland, cismontane woodland, vernal pools (clay soils).	Absent
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	May-Jul.	NONE	NONE	1B.1	MSHCP	Chaparral, valley and foothill grassland, cismontane woodland; wet meadows/seeps, vernal pools (clay soils); sometimes associated with serpentine substrate.	Absent

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SCIENTIFIC NAME	COMMON NAME	FLOWERING PERIOD	FEDERAL	STATE	CNPS	OTHER (MSHCP)	PREFERRED HABITAT	POTENTIAL FOR OCCURRENCE
<i>Brodiaea santarosae</i>	Santa Rosa Basalt brodiaea	May-Jun.	NONE	NONE	3	NONE	Valley and foothill grassland; basaltic; between 1900 to 3430 feet.	None

**Key to Species Listing Status Codes**

FE	Federally Endangered	SE	State Listed as Endangered
FT	Federally Threatened	ST	State Listed as Threatened
FPE	Federally Endangered	SCE	State Candidate for Endangered
FPT	Federally Proposed as Threatened	SCT	State Candidate for Threatened
FPD	Federally Proposed for Delisting	SFP	State Fully Protected
		SR	State Rare
		SSC	California Species of Special Concern

**California Native Plant Society (CNPS)**

- List 1A: Presumed extinct in California.
- List 1B: Rare, threatened, or endangered throughout their range.
- List 2: Rare, threatened, or endangered in California, but more common in other states.
- List 3: Plant species for which additional information is needed before rarity can be determined.
- List 4: Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.

Source: PCR Services Corporation 2013.

New Threat Code extensions and their meanings:

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

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**APPENDIX C**

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**SPECIAL-STATUS WILDLIFE SPECIES**



## APPENDIX C: SPECIAL-STATUS WILDLIFE SPECIES

Scientific Name	Common Name	Federal	State	Other (MSHCP)	Preferred Habitat	Potential for Occurrence On the Project Site
<b>INVERTEBRATES</b>						
<b>ARTHROPODS</b>						
<b>Branchinectidae</b>	<b>Fairy Shrimp Family</b>					
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	None	MSHCP	Vernal pools in areas of shallow depressions that have a clay hardpan soil layer that inhibits percolation.	
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE	None		Small shallow vernal pools ranging in depth from 2-12 inches and 50-68 degrees F.	<b>None</b>
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE	None	MSHCP	Vernal pools/swales; apparently prefers deeper pools through the warm weather of late Apr. and May.	<b>None</b>
<b>INSECTA</b>						
<b>Nymphalidae</b>	<b>Brush-foot Butterfly Family</b>					
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	FE	NONE	MSHCP	Grassland and open areas in sage scrub, chaparral, sparse native woodlands. Low levels of invasive, nonnative vegetation and soil with a cryptogamic crust. Associated with host plant species dwarf plantain ( <i>Plantago erecta</i> ) and purple owl's clover ( <i>Castilleja exserta</i> ).	

Scientific Name	Common Name	Federal	State	Other (MSHCP)	Preferred Habitat	Potential for Occurrence On the Project Site
<b>VERTEBRATES</b>						
<b>FISHES</b>						
<b>Cyprinidae</b>	<b>Cyprinids</b>					
<i>Gila orcuttii</i>	arroyo chub	NONE	SSC	MSHCP	Warm, coastal southern California streams.	<b>None</b>

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Scientific Name	Common Name	Federal	State	Other (MSHCP)	Preferred Habitat	Potential for Occurrence On the Project Site
<b>VERTEBRATES</b>						
<b>Salmonidae</b>	<b>Salmons</b>					
<b>AMPHIBIANS</b>						
<b>Ambystomatidae</b>	<b>Mole Salamanders</b>					
<i>Ambystoma californiense</i>	California tiger salamander	FT	ST/SSC		Frequents cismontane woodland, meadow and seep, riparian woodland, valley and foothill grassland, vernal pool, wetland, oak savanna, and edges of mixed woodland and lower elevation coniferous forest.	
<b>Bufoidea</b>	<b>True Toads</b>					
<i>Anaxyrus californicus</i>	arroyo toad	FE	SSC	MSHCP	Shallow, exposed streambanks, quiet water stretches, or overflow pools with silt-free sandy or gravelly bottoms. Nearby sandy terraces, dampened in places by capillary action, with some scattered vegetation. Requires clear, standing water for reproduction.	
<b>Pelobatidae</b>	<b>Spadefoot Toads</b>					
<i>Spea hammondi</i>	western spadefoot	NONE	SSC	MSHCP	Prefers burrow sites within relatively open areas in lowland grasslands, chaparral, and pine-oak woodlands, areas of sandy or gravelly soil in alluvial fans, washes, and floodplains. Requires temporary pools for reproduction.	<b>None</b>
<b>Ranidae</b>	<b>True Frogs</b>					
<i>Rana draytonii</i>	California red-legged frog	FT	SSC	MSHCP	Found mainly near ponds in humid forests, woodlands, grasslands, coastal scrub, and streambanks with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams.	<b>None</b>
<b>Salamandridae</b>	<b>Newts</b>					
<i>Taricha torosa</i>	Coast Range newt	NONE	SSC	MSHCP	Terrestrial habitats and will migrate over 1 kilometer to breed in ponds, reservoirs and slow-moving streams.	

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Scientific Name	Common Name	Federal	State	Other (MSHCP)	Preferred Habitat	Potential for Occurrence On the Project Site
<b>REPTILES</b>						
<b>Colubridae</b>	<b>Colubrid Snakes</b>					
<i>Salvadora hexalepis virgulata</i>	coast patch-nosed snake	NONE	SSC		Desert and rocky areas in chaparral covered hillsides and canyons.	<b>None</b>
<i>Thamnophis hammondi</i>	two-striped garter snake	NONE	SSC		Coastal California along watercourses with permanent fresh water, and near streams with rocky beds and riparian growth.	<b>None</b>
<b>Emyridae</b>	<b>Pond Turtles</b>					
<i>Emys marmorata</i>	western pond turtle	NONE	SSC	MSHCP	Ponds, marshes, rivers, streams, irrigation ditches.	
<b>Phrynosomatidae</b>	<b>Iguanid Lizard Family</b>					
<i>Phrynosoma blainvillii</i>	coast horned lizard	NONE	SSC	MSHCP	Prefers sandy riparian and sage scrub habitats but also occurs in valley-foothill hardwood, conifer, , pine-cypress, juniper and annual grassland habitats below 6,000 feet, open country, especially sandy areas, washes, flood plains, and windblown deposits.	<b>Moderate</b>  Not observed during site surveys conducted in 2012 and 2013.
<b>Scincidae</b>	<b>Skinks</b>					
<i>Plestiodon skiltonianus interparietalis</i>	Coronado Island skink	NONE	SSC		Grassland, woodlands, pine forests, chaparral, especially in open sunny areas such as clearings and the edges of creeks and rivers. Prefers rocky areas near streams with lots of vegetation. Also found in areas away from water.	

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<b>Teiidae</b>	<b>Whiptail Lizards</b>					
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	NONE	SSC	MSHCP (ssp. <i>beldingi</i> )	Coarse soils in open coastal sage scrub vegetation; it also inhabits many other vegetation types and disturbed areas: open chaparral, along edges of open, dry, riparian areas, along trails, along dirt roads, and in areas of light off-road vehicle use; often in areas with 50% cover and 50% bare soil, and flat to sloping topography; it seldom uses rodent burrows. Washes and other sandy areas where there are rocks and patches of brush and rocky hillsides: coastal chaparral, thornscrub, and streamside growth. Prefers loose, fine-grained soils, such as rocky hillsides bordering arroyos or the lower slopes of foothills. Eggs are laid probably in a nest dug in soil/underground.	<b>Moderate</b>  Not observed during site surveys conducted in 2012 and 2013.
<b>Viperidae</b>	<b>Vipers</b>					
<i>Crotalus ruber</i>	red-diamond rattlesnake	NONE	SSC	MSHCP	Chaparral, woodland, grassland, and desert. In rocky areas and dense vegetation.	<b>Moderate</b>  Not observed during site surveys conducted in 2012 and 2013.
<b>BIRDS</b>						
<b>Accipitridae</b>	<b>Hawks, Kites, Harriers and Eagle Family</b>					
<i>Aquila chrysaetos</i>	golden eagle	NONE	SFP	MSHCP	A variety of plant communities including grasslands, shrublands with tree saplings, and open-canopy blue oak ( <i>Quercus douglasii</i> ) woodlands. Uses rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rock outcrops.	

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<i>Circus cyaneus</i>	northern harrier	NONE	SSC	MSHCP	Coastal salt marshes, freshwater marshes, grasslands, and agricultural fields; occasionally forages over open desert and brushlands.	
<i>Elanus leucurus</i>	white-tailed kite	NONE	SFP	MSHCP	Agricultural areas, grasslands, marshes, savannas, and other open land or sparsely wooded areas.	
<i>Haliaeetus leucocephalus</i>	bald eagle	FD	SE/SFP	MSHCP	Mountains, deserts, and open country. Prefer to forage over grasslands, deserts, savannas and early successional stages of forest and shrub habitats. Nesting sites are usually located in secluded cliffs with over hanging ledges or in large trees.	
<b>Charadriidae</b>	<b>Plovers</b>					
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT	SSC		Coastal sandy, gravelly beaches, estuarine salt ponds, alkali lakes, dry salt flats in lagoons, deposited dredge spoils, levees and flats at salt-evaporation ponds, river bars, dunes.	<b>None</b>
<b>Cuculidae</b>	<b>Cuckoos</b>					
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	FC	SE	MSHCP	Southwestern cottonwood-willow riparian, mixed broadleaf riparian forest.	<b>None</b>
<b>Laniidae</b>	<b>Shrike Family</b>					
<i>Lanius ludovicianus</i>	loggerhead shrike	NONE	SSC	MSHCP	Open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.	<b>Low (N); Moderate (F)</b>  Not observed during site surveys conducted in 2012 and 2013.

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<b>Strigidae</b>	<b>Owls</b>					
<i>Athene cunicularia</i>	burrowing owl	NONE	SSC	MSHCP	Dry grasslands, desert habitats, open-pinyon-juniper and ponderosa pine woodlands below 5,300 feet elevation. Prefers berms, ditches, and grasslands adjacent to rivers, agricultural, and scrub areas.	
<b>Sylviidae</b>	<b>Old World Warblers, Gnatcatchers</b>					
<i>Polioptila californica californica</i>	coastal California gnatcatcher	FT	SSC	MSHCP	Coastal sage scrub vegetation below 2,500 feet elevation in Riverside County and generally below 1,000 feet elevation along the coastal slope; generally avoids steep slopes and dense vegetation for nesting.	
<b>Troglodytidae</b>	<b>Wren Family</b>					
<i>Campylorhynchus brunneicapillus sandiegensis</i>	coastal cactus wren	NONE	SSC	MSHCP	Coastal sage scrub, vegetation with thickets of prickly pear or cholla cactus.	
<b>Vireonidae</b>	<b>Vireo Family</b>					
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE	SE	MSHCP	Perennial and intermittent streams with low, sense riparian scrub and riparian woodland habitats below 2,000 feet elevation; nests primarily in willows and forages in the riparian and occasionally in adjoining upland habitats. Associated with willow, cottonwood, and mule fat. Found especially in willow and mesquite thickets near water.	<b>None</b> Riparian habitat on-site is limited to two small areas supporting six willow trees totaling only 0.06 acre. The isolation, size and structure of the habitat is not considered suitable for this species.

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<b>MAMMALS</b>						
<b>Heteromyidae</b>	<b>Pocket Mice and Kangaroo Rat Family</b>					
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	NONE	SSC		Chaparral, occasionally desert grasslands; between 0 and 4633 feet.	<b>None</b>
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	NONE	SSC	MSHCP	Chaparral, coastal sage scrub (Riversidean and Diegan), desert scrub, grassland, juniper woodland and scrub, and Riversidean alluvial fan sage scrub.	<b>Very Low</b>  Potential habitat on- and off-site is highly disturbed and scattered.
<i>Dipodomys stephensi</i>	Stephen's kangaroo rat	FE	ST	MSHCP	Coastal scrub, valley and foothill grassland; annual and perennial grasslands and coastal sage scrub with sparse canopy cover.	
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	NONE	SSC	MSHCP	Coastal sage scrub, and grasslands, desert cactus, creosote bush and sagebrush habitats.	
<i>Perognathus longimembris internationalis</i>	Jacumba pocket mouse	NONE	SSC		Arid coastal sage brush and chaparral; nocturnal, burrows during the day.	<b>Low</b>  Potential habitat on-site habitat is highly disturbed and scattered and there are no recorded occurrences of the species within 10 miles. However, unidentified burrows of either <i>Perognathus</i> sp. or <i>Peromyscus</i> sp. were observed within 1 mile by Principe and

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						Associates in 2012.
<b>Leporidae</b>	<b>Hares and Rabbit Family</b>					
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	NONE	SSC	MSHCP	Open brushlands and scrub habitats between sea level and 4,000 feet elevation.	<b>Observed</b>
<b>Molossidae</b>	<b>Free-tailed Bats</b>					
<i>Eumops perotis californicus</i>	western mastiff bat	NONE	SSC		Many open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	NONE	SSC		More arid habitat such as pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Roosts in rock crevices, caverns, or buildings.	
<b>Muridae</b>	<b>Mice, Rats, and Vole Family</b>					
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	NONE	SSC		Variety of habitats, often in the vicinity of rocky outcrops; prefer moderate to dense canopies.	
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	NONE	SSC		Grasslands, desert areas, especially scrub with friable soils.	
<b>Vespertilionidae</b>	<b>Evening Bats</b>					
<i>Antrozous pallidus</i>	pallid bat	NONE	SSC		Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Uses open, dry habitats with rocky areas for roosting.	
<i>Lasiurus xanthinus</i>	western yellow bat	NONE	SSC		Desert wash	<b>None</b>

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<p>Key to Federal and State Listings</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><i>FE</i> Federally Listed as Endangered  <i>FT</i> Federally Listed as Threatened  <i>FPE</i> Federally Proposed as Endangered  <i>FPT</i> Federally Proposed as Threatened  <i>FPD</i> Federally Proposed for Delisting</p> </td> <td style="width: 50%; vertical-align: top;"> <p><i>SE</i> State Listed as Endangered  <i>ST</i> State Listed as Threatened  <i>SCE</i> State Candidate for Endangered  <i>SCT</i> State Candidate for Threatened  <i>SFP</i> State Fully Protected  <i>SSC</i> California Species of Special Concern</p> </td> </tr> </table> <p>Source: PCR Services Corporation 2013.</p>							<p><i>FE</i> Federally Listed as Endangered  <i>FT</i> Federally Listed as Threatened  <i>FPE</i> Federally Proposed as Endangered  <i>FPT</i> Federally Proposed as Threatened  <i>FPD</i> Federally Proposed for Delisting</p>	<p><i>SE</i> State Listed as Endangered  <i>ST</i> State Listed as Threatened  <i>SCE</i> State Candidate for Endangered  <i>SCT</i> State Candidate for Threatened  <i>SFP</i> State Fully Protected  <i>SSC</i> California Species of Special Concern</p>
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