

BUNDY CANYON RESORT APARTMENTS

Biological Resources Assessment

Prepared for
Darling Development Group

August 2016



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Darling Development Group

August 2016



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1.0

Introduction

1.1 Background

This report presents the findings of a Biological Resources Assessment (BRA) conducted by **ESA PCR** for the approximately 28.64-acre proposed Bundy Canyon Resort Apartment (project) with Assessor's Parcel Number (APN) 367-250-008 and 0.84-acre off-site area (collectively, the project "study area") in the City of Wildomar, Riverside County, California. The purpose of this study is to satisfy the requirements of the California Environmental Quality Act (CEQA) and in support of approvals that the Project Applicant is requesting from the City and federal and State Resource Agencies.

1.2 Sources

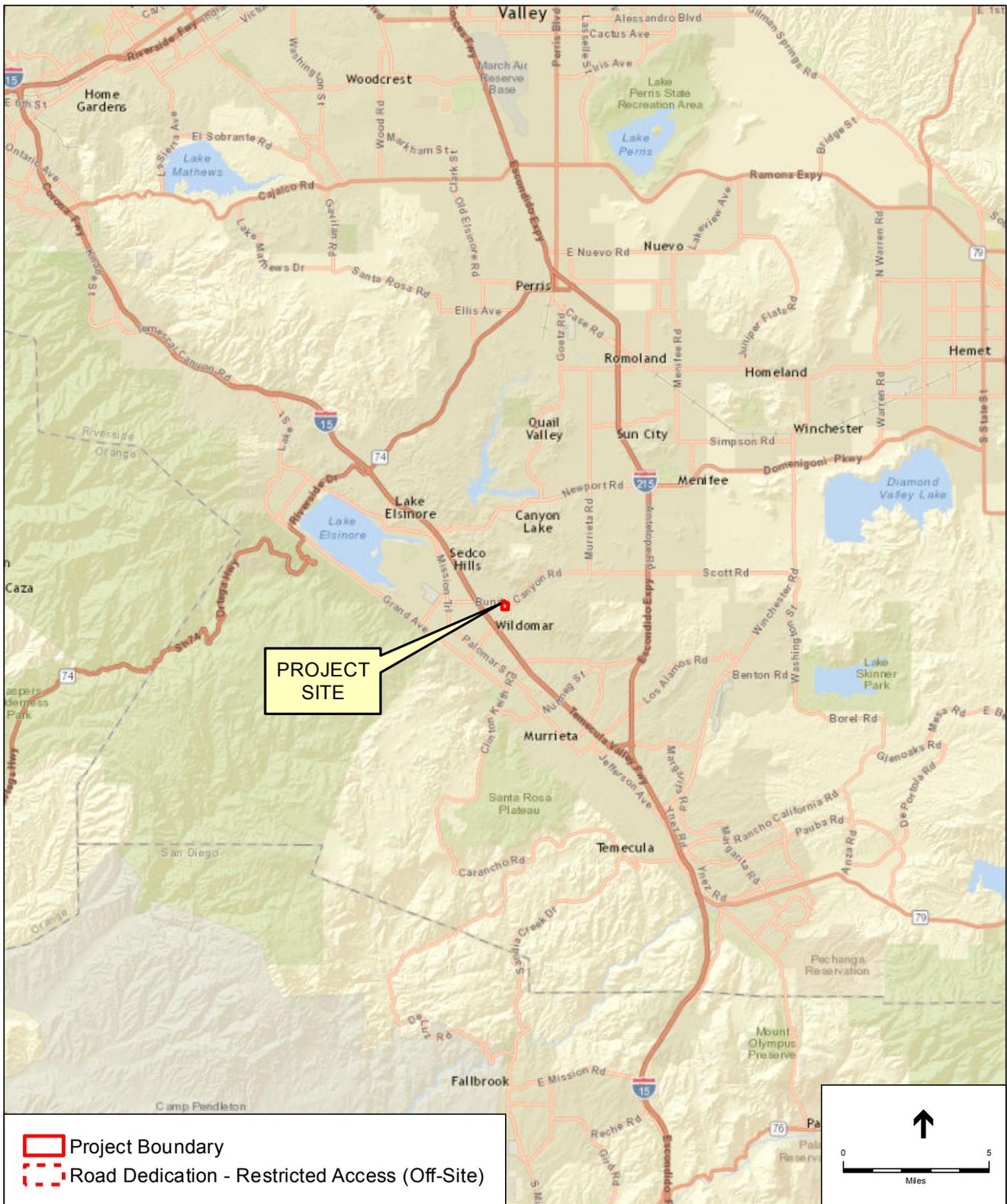
This BRA is based on information compiled through field reconnaissance and appropriate reference materials. A general biological survey, vegetation mapping, and a jurisdictional waters and wetlands delineation were conducted by ESA PCR. Focused plant, burrowing owl (*Athene cunicularia*), and least Bell's vireo (*Vireo belli pusillus*) surveys were conducted on the study area. The information sources used in preparation of this BRA are provided in section 9.0, *References*.

1.3 Study Area Location

The approximately 28.64-acre project site is located directly south of Bundy Canyon Road and east of Windwood Lane, approximately 0.85 mile to the east of the intersection of Interstate 15 (I-15) and Bundy Canyon Road in the City of Wildomar, Riverside County, California as shown on **Figure 1, Regional Map**. There is one off-site area totaling 0.84 acre associated with road improvements to Bundy Canyon Road as required by the City of Wildomar. The off-site area is located directly south of Bundy Canyon Road and north of the project site. The study area can be found on the U.S. Geological Survey (USGS) 7.5' Lake Elsinore (USGS, 1953a) and Wildomar (USGS, 1953b) topographic quadrangle maps, as shown in **Figure 2, Vicinity Map**.

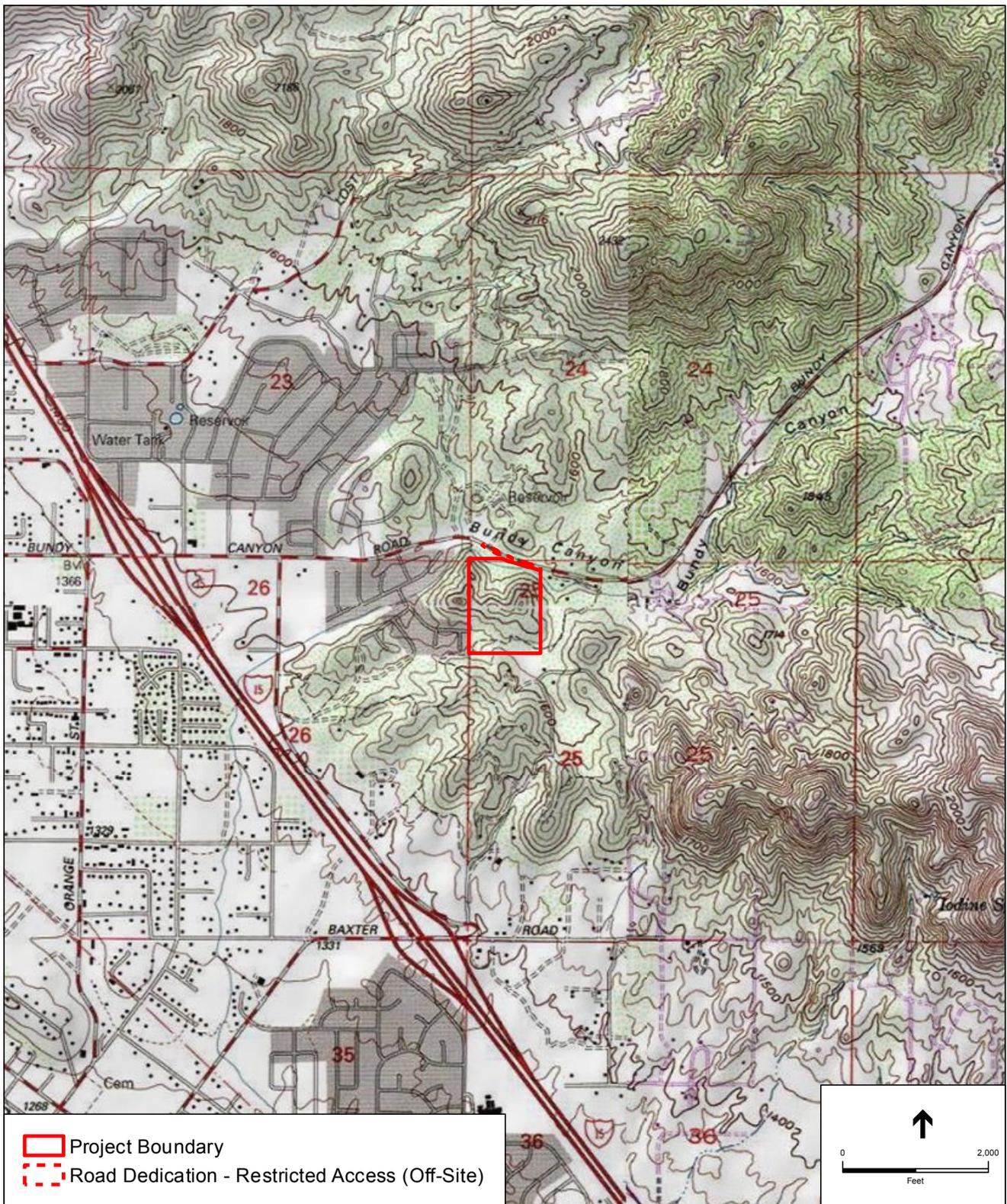
1.4 Scope of Study

The scope of this BRA encompasses descriptions of the project, methods of study, and existing site conditions including vegetation communities and the potential for special-status biological resources, followed by an evaluation of impacts to special-status biological resources pursuant to CEQA thresholds and regulatory requirements including the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Avoidance, minimization, and/or mitigation measures are proposed to reduce any significant impacts.



SOURCE: ESRI Street Map, 2009.

Bundy Canyon Resort Apartments Project
Figure 1
 Regional Map



SOURCE: USGS Topographic Series (Lake Elsinore, Romoland, Wildomar, Murrieta, CA).

Bundy Canyon Resort Apartments Project
Figure 2
 Vicinity Map

2.0

Project Description

2.1 Project Description

The study area is a proposed multi-family residential development consisting of townhomes and apartments occupying approximately 15.64 acres of the site. Primary access to the development will occur from the northern portion of the study area at Bundy Canyon Road, which will require the construction of a bridge crossing designed to span over an existing USGS blueline stream in order to access the development. A secondary emergency access will be provided at the southwestern corner of the study area from Windwood Lane (**Figure 3, Site Plan**). The project also includes an off-site area totaling 0.84 acre associated with road improvements adjacent to Bundy Canyon Road as required by the City.

2.2 Project Avoidance

The project proposes full avoidance of all streambeds located on the study area. Therefore, the project will not result in permanent or temporary impacts to U.S Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW) (collectively, the “resource agencies”) jurisdictional areas or MSHCP Riparian/Riverine Areas. A permanent bridge crossing is required in order to provide primary access to the development from Bundy Canyon Road. The bridge crossing will span a USGS blueline drainage (Drainage A), thereby avoiding permanent impacts to the native riparian communities, including coast live oak woodland and red willow thicket. The riparian vegetation associated with Drainage A was determined to provide marginal habitat for the federal and state-listed least Bell’s vireo; focused surveys conducted in 2016 were negative.

Construction of the project requires the use of an existing access road that traverses beneath the canopy of existing oak woodlands and placement of a 50’ railroad car intended to span and protect an existing Arizona crossing within Drainage A, which is necessary for construction vehicles to access the study area from Bundy Canyon Road. Neither the railroad car bridge nor the access road will result in impacts to riparian vegetation, as the railroad car structure is intended to protect the bed and banks of the construction crossing area which does not support riparian vegetation, and use of the existing access road will not require trimming of any trees.

2.2.1 Project Design Feature

In the design of the proposed project, the project applicant has established a specific project design feature (PDF) to avoid and/or minimize any potential indirect impacts to least Bell’s vireo

associated with construction of the permanent bridge crossing and abutments, which is outlined below.

PDF BIO-1: Although least Bell's vireo focused surveys were negative, the study area supports marginally suitable habitat within the avoided Drainage A. As such, the following avoidance and minimization measures shall be adopted to avoid potential indirect impacts to the species during construction of the permanent bridge and abutments:

Prior to and During Construction of the Permanent Bridge Crossing

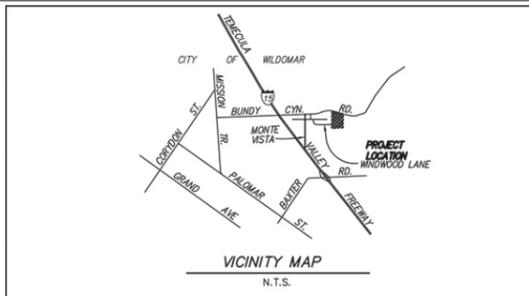
1. Permanent bridge and abutments shall be scheduled to commence outside of the least Bell's vireo nesting season (approximately April 10 until July 31, depending on when the birds arrive from and depart to wintering areas).
2. Any bridge construction activities that commence during the least Bell's vireo nesting season (April 10 until July 31) will require that all suitable habitat be thoroughly surveyed for the presence of least Bell's vireo by a qualified biologist three (3) days prior to construction. The survey area shall consist of the bridge impact area (bridge footprint and abutments) and a 500-foot buffer around the bridge impact area. If any active nests are detected within the survey area, a buffer of 500 feet around the nest will be delineated, flagged, and avoided until the nesting cycle is complete and written documentation shall be prepared and submitted to CDFW and/or USFWS on completion of construction to outline any monitoring activities. The avoidance buffer may be modified and/or other recommendations proposed as determined appropriate by the biological monitor to minimize impacts.
3. If least Bell's vireo is observed within the survey area during the 3-day pre-construction survey, the following measures shall be taken to minimize potential indirect impacts to least Bell's vireo:
 - a. Prior to construction, a training program shall be developed and implemented by the qualified biologist to inform all workers on the project about the listed species, its habitat, and the importance of complying with avoidance and minimization measures.
 - b. All construction work shall occur during daylight hours. The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours determined by the City of Wildomar.
 - c. During any excavation and grading within or immediately adjacent to the 500-foot avoidance buffer, the construction contractors shall install properly operating and maintained mufflers on all construction equipment, fixed or mobile, to reduce construction equipment noise to the maximum extent possible. The mufflers shall be installed consistent with manufacturers' standards. The construction contractor shall also

place all stationary construction equipment so that emitted noise is directed away from the occupied least Bell's vireo habitat.

- d. The construction contractor shall stage equipment in areas that will create the greatest distance between construction-related noise sources and occupied habitat during all project construction occurring during the breeding season.
- e. If the monitoring biologist determines that noise from the construction activities may be affecting the normal expected breeding behavior of the birds, the construction supervisor shall be informed and work within no less than 500 feet of construction areas shall be ceased until appropriate measures are implemented. This may include monitoring by a qualified acoustician to verify noise levels are below 60 dBA within the occupied least Bell's vireo habitat. If the 60 dBA requirement is exceeded the acoustician shall make operational changes, utilize technology to reduce construction noise such as mufflers, and/or install a barrier to alleviate noise levels during the breeding season. Installation of noise barriers and any other corrective actions taken to mitigate noise during the construction period shall be communicated to the USFWS and CDFW.
- f. If after all corrective actions are implemented the monitoring biologists determines that the normal expected breeding behavior of the birds is being affected, work within no less than 300 feet shall be ceased and the USFWS and CDFW shall be contacted to discuss the appropriate course of action.

PLOT PLAN NO. 16-0006

CITY OF WILDOMAR



OWNER: BOB TAGHORI ET AL.
3112 BOSTONIAN DRIVE
LOS ALAMITOS, CALIFORNIA
(310) 596-9125

APPLICANT: DICK DARLING - HUFSDAR INVESTORS, LLC.
P.O. BOX 6579
WEST LAKE VILLAGE, CA 91359
(805) 241-5007

ENGINEER AND EXHIBIT PREPARER: GRANT BECKLUND CIVIL ENGINEERING
30811 GARBAN ROAD
WINCHESTER, CA 92596
PHONE: (951) 288-0601

ASSESSOR'S PARCEL NUMBER:
367-250-008 - 28.28 ACRES TOTAL PROJECT AREA

UTILITIES	SERVING THE AREA	FACILITIES PRESENT	LOCATION
ELECTRIC:	SOUTHERN CALIFORNIA EDISON	YES	BUNDY CANYON & WINDWOOD
GAS:	SOUTHERN CALIFORNIA GAS CO.	YES	BUNDY CANYON & WINDWOOD
TELEPHONE:	VERIZON	YES	BUNDY CANYON & WINDWOOD
CABLE TV:	TIME WARNER	YES	BUNDY CANYON & WINDWOOD
WATER:	ELSINORE VALLEY MUNICIPAL WATER DISTRICT	YES	BUNDY CANYON & WINDWOOD
SEWER:	ELSINORE VALLEY MUNICIPAL WATER DISTRICT	YES	BUNDY CANYON & WINDWOOD
SCHOOL:	DIST. LAKE ELSINORE UNIFIED SCHOOL DISTRICT		

LEGAL DESCRIPTION:
BEING A PORTION OF SECTION 25, TOWNSHIP 6 SOUTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN.

EARTHWORK:
THIS PROJECT WILL BE A "BALANCED EARTHWORK" DESIGN OF 320,000 CY ± WITH NO EXPORT OR IMPORT OF GRADING MATERIAL.

ZONING:
EXISTING LAND USE: VACANT WITH NO EXISTING STRUCTURES
PROPOSED LAND USE: RESIDENTIAL
EXISTING ZONING: R-R
PROPOSED ZONING: R-3
GENERAL PLAN DESIGNATION: MEDIUM DENSITY RESIDENTIAL 2 TO 5 D.U. / ACRE.

GENERAL NOTES:
DEVELOPMENT WILL CONSIST OF 140 RENTAL DWELLING UNITS - 50 TOWNHOUSES AND 90 APARTMENTS. THESE UNITS WILL BE PROCESSED AS A PLOT PLAN.
DRAINAGE: DEVELOPMENT OF SITE WILL PERPETUATE EXISTING DRAINAGE PATTERNS. DEVELOPMENT WILL DRAIN TO WATER QUALITY BASINS AND BUNDY CANYON WASH WILL BE BRIDGED AND NOT BE DISTURBED.
GRADING: GRADING WILL CONFORM TO THAT SHOWN ON THIS PLOT PLAN.
STREETS: ALL STREETS WITHIN THIS TRACT WILL BE CONSTRUCTED PER THE CITY OF WILDOMAR STANDARDS.
LIGHTING: ALL LIGHTING WILL CONFORM TO CHAPTER 8.64 LIGHT POLLUTION CODE.
PREPARED: AUGUST 2016
PROJECT IS NOT LOCATED IN SPECIFIC PLAN, NOT IN SPECIAL STUDIES ZONE OR SUBJECT TO LIQUEFACTION OR OTHER GEOLOGICAL HAZARDS. NO WELLS EXIST ON PROPERTY.

OPEN SPACE MAINTENANCE:
OPEN SPACE LOTS WILL BE MAINTAINED BY PROPERTY MANAGEMENT.

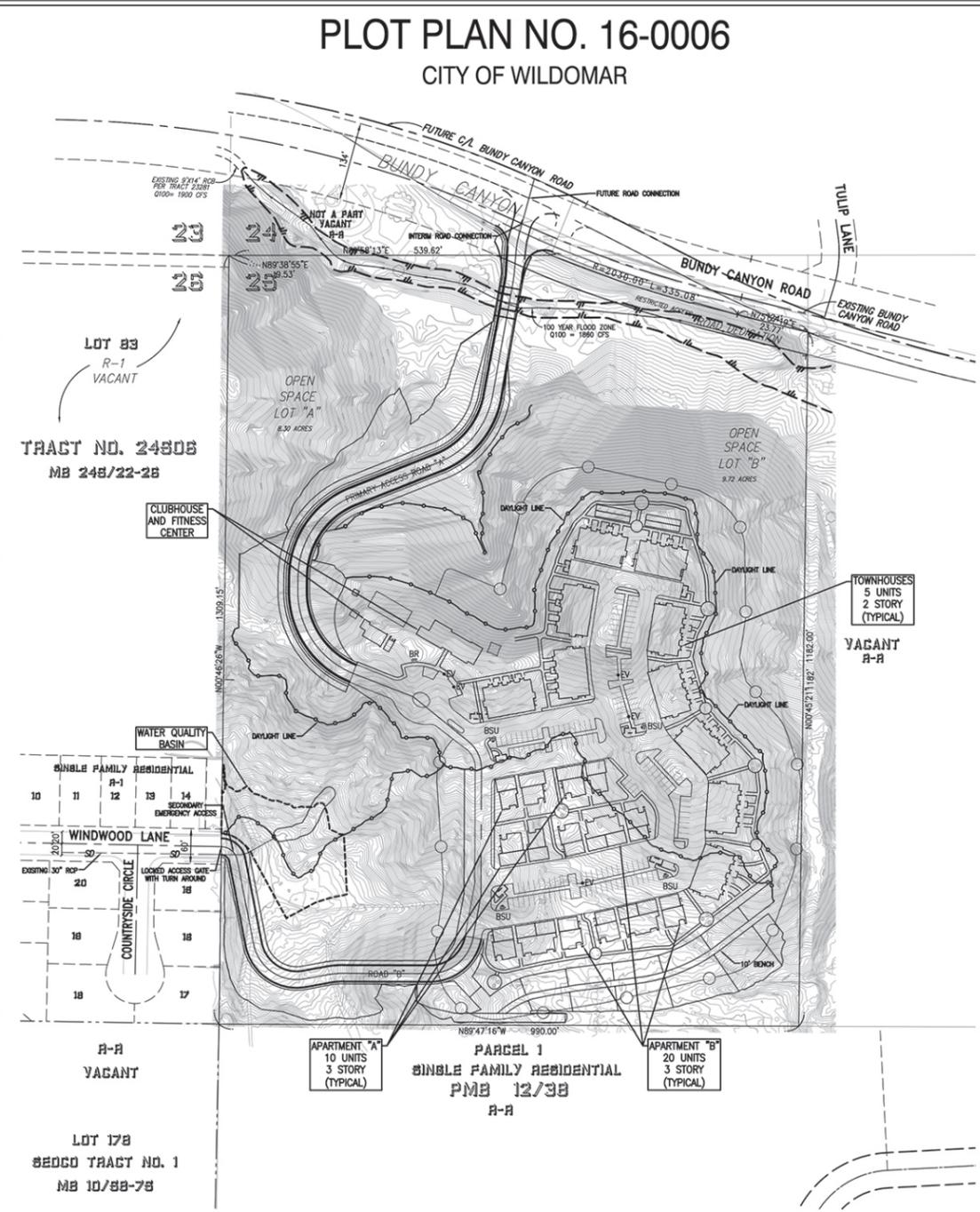
AERIAL TOPOGRAPHY:
THE TOPOGRAPHY IS BASED ON FLOWN TOPOGRAPHIC MAPPING 2003 AND FIELD VERIFIED IN 2015.

FLOOD PLAIN DESIGNATION:
THIS SITE IS IN FLOOD ZONE "X" - FEMA PANEL 06063C 2044G
THIS PROJECT IS IN THE SANTA MARGARITA WATERSHED DRAINAGE AREA.
THIS LAND IS NOT SUBJECT TO OVERFLOW AND INUNDATION OR FLOOD HAZARD.

EXHIBIT "A"
LEGAL DESCRIPTION
The land referred to herein is situated in the State of California, County of Riverside, and described as follows:
All that portion of the Northwest Quarter of the Northwest quarter of section 25, Township 6 South, Range 4 West, San Bernardino Base and Meridian, and particularly described as follows:
Beginning at the Northwest corner of the Northwest quarter of the Northwest quarter of section 25; thence Southernly along the Western line of the Northwest quarter of section 25, 1320 feet to the Southwest quarter thereof; thence East along the Southern line thereof, 990 feet; thence Northernly and parallel to the Western line of section 25, to the centerline of Bundy Road; thence Northwesterly along the centerline of said road to its intersection with the Northernly line of said section 25; thence Westernly along the Northernly line of said section to the point of beginning; Excepting therefrom that portion thereof included in roads. APN: 367-250-008



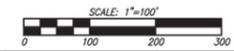
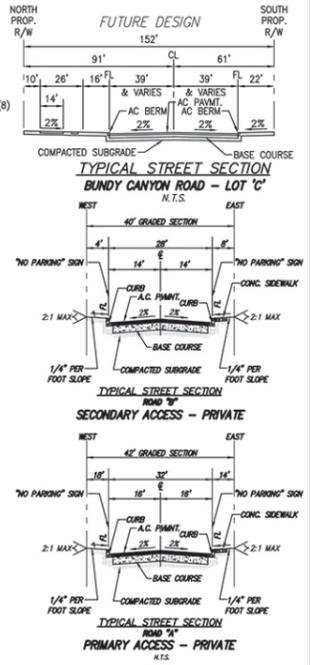
NOTE:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.
The private engineer signing these plans is responsible for assuring the accuracy and acceptability of the design hereon. In the event of discrepancies arising after city acceptance or during construction, the private engineer shall be responsible for determining an acceptable solution and revising the plans for acceptance by the city.



PROJECT INFORMATION

OCCUPANCY	R3 (DWELLINGS)			
	U (GARAGES)			
TYPE OF CONSTRUCTION	VA			
INDIVIDUAL UNITS	57 ONE BEDROOM / 1 BATH (APARTMENTS)			
	33 TWO BEDROOM / 2 BATH (APARTMENTS)			
	35 TWO BEDROOM / 3 BATH (TOWNHOUSES)			
	15 THREE BEDROOM / 3 BATH (TOWNHOUSES)			
	140 TOTAL RENTABLE APARTMENTS			
BUILDING	LEVEL	UNITS	FOOTPRINT AREA (S.F.)	BUILDING AREA TOTAL (S.F.)
TEN TOWNHOUSES	1 & 2	5	4,500	90,000
THREE APARTMENTS "A"	1, 2 & 3	10	3,530	31,770
THREE APARTMENTS "B"	1, 2 & 3	20	7,060	63,540
SUBTOTAL		140	76,770	185,310
TOTAL RESIDENTIAL				185,310
CLUBHOUSE AND FITNESS CENTER		2	5,140	5,140
TUCK UNDER GARAGES		127		INCLUDED
GRAND TOTAL				190,450
BUILDING FOOTPRINT (ALL STRUCTURES TOWNHOUSES, APARTMENTS AND CLUBHOUSE/FITNESS)				81,910
SITE TOTAL = 140 UNITS/28.3 ACRES = 5.0 D.U./ACRE				
REQUIRED PARKING	1BR-1.25 SPACES/UNIT	2BR-2.25 SPACES/UNIT	3BR-2.75 SPACES/UNIT	TOTAL
PARKING SPACE REQUIRED	71.25	153	41.25	266
PARKING SPACES PROVIDED				288
ASSIGNED 140 UNITS @				231
1: 1BR, 2: 2BR & 3: 2.5BR	57	136	37.5	
OPEN UNASSIGNED SPACES GUEST				22
ENCLOSED PARKING GARAGES				127
COVERED CARPORT PARKING STALLS				139
DEVELOPMENT STANDARD R-3 ZONE				
	REQUIRED	PROPOSED		
BUILDING HEIGHT 50 FT. MAX.		37 FT. MAX.		
FRONT SETBACK	14'	360'		
SIDE SETBACK WEST	9'	236'		
SIDE SETBACK EAST	9'	107'		
REAR SETBACK	14'	108'		
SEPARATION BETWEEN BUILDINGS	10'	15'		
EV CHARGING STATIONS	8	8		
BICYCLE RACK	4	5		
BICYCLE STORAGE	12	12		

- LEGEND:**
- = 100 YEAR FLOOD PLAIN LIMITS
 - = BIKE STORAGE UNITS - (4) 3 SPACES EACH
 - = BIKE RACK - (4)
 - = ELECTRIC VEHICLE CHARGING STATION - (8)
 - = 100' FIRE ZONE LIMITS



MARK BY	DATE	REVISIONS	APPR. DATE
ENGINEER	8/17/16	REVISED SITE PLAN AND UNITS	CITY

CITY OF WILDOMAR
ACCEPTED BY: _____
Date: _____
Daniel A. York, Director of Public Works
City Engineer, PE 43212
ACCEPTANCE AS TO CONFORMANCE WITH APPLICABLE CITY STANDARDS AND PRACTICES



GRANT BECKLUND CIVIL ENGINEERING
30811 GARBAN ROAD
WINCHESTER, CA 92596
(951) 288-0601
PREPARED BY: GRANT W. BECKLUND
R.C.E. No. 22727 EXP. 12/31/2017

BENCHMARK: _____
Elevation = _____
BENCHMARK # _____
THIS SURVEY WAS PERFORMED ON (date) BY (surveyor) L.S. (number), EXP. (date)
SCALE: H. As Noted v. As Noted

PLOT PLAN NO. 16-0006
CITY OF WILDOMAR
BUNDY CANYON RESORT APARTMENTS
DATE PREPARED AUGUST 2016

SHEET No. **1**
OF 1 SHTS



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3.0

Methods of Study

3.1 Approach

This BRA is based on information compiled through field reconnaissance and appropriate reference materials. Surveys included a general biological survey and vegetation mapping; a jurisdictional waters and wetlands delineation; and focused surveys for special-status plants, burrowing owl, and least Bell's vireo.

3.2 Literature Review

Assessment of the project began with a review of relevant literature on the biological resources of the study area, and surrounding vicinity. The California Natural Diversity Database (CNDDDB), a California Department of Fish and Wildlife (CDFW) species account database, was reviewed for all pertinent information regarding the localities of known observations of special-status species and habitats in the vicinity of the study area (CNDDDB, 2015). The vicinity of the study area included the following USGS topographic quadrangles: Alberhill, Murrieta, Perris, Romoland, Sitton Peak, Steele Peak, and Lake Mathews. Federal register listings, protocols, and species data provided by the United States Fish and Wildlife Service (USFWS) (USFWS, 2015a), CDFW and the California Native Plant Society (CNPS, 2015) were reviewed in conjunction with anticipated federal and State listed species potentially occurring within the vicinity. Other data sources reviewed include USFWS critical habitat maps (USFWS, 2015b) and United States Department of Agriculture Natural Resources Conservation Service (NRCS) soils mapping (NRCS, 2015). In addition, regional flora and fauna field guides were utilized to assist in the identification of species and suitable habitats, in addition to relevant local policies such as the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (Dudek & Associates, 2003). A list of all relevant references reviewed is included in section 9.0, *References*.

3.3 Field Investigations

A general biological survey and vegetation mapping was conducted by ESA PCR Senior Biologist Ezekiel Cooley and a delineation of jurisdictional waters and wetlands was conducted by Principal Regulatory Scientist Amir Morales on January 5, 2016 to identify the presence of drainages and/or wetland features. The observed vegetation communities, jurisdictional features, and other biological features or species observations of interest were mapped on aerial photographs. Survey coverage of the entire study area was ensured using the aerial photographs, with special attention to special-status habitats or those areas potentially supporting special-status

flora or fauna, or jurisdictional features. Focused plant surveys were conducted on May 17 and July 1, 2016 by ESA PCR Senior Biologist Ezekiel Cooley and Biologist Lauren Singleton. A habitat assessment and focused surveys were conducted for burrowing owls (*Athene cunicularia*) from March through April 2016 by Ezekiel Cooley. In addition, focused surveys for least Bell's vireo (*Vireo bellii pusillus*) were conducted by Ezekiel Cooley between April and June 2016. The methodology used during the field investigations are described in detail below.

3.3.1 Plant Community Mapping

Plant communities were mapped directly in the field utilizing a 125-scale (1"=125') aerial photograph focusing on dominant plant species. Plant community names, codes, and descriptions follow *A Manual of California Vegetation, Second Edition* (Sawyer, Keeler-Wolf, and Evens, 2009). After completing the fieldwork, the plant community polygons were digitized using Geographic Information System (GIS) technology to calculate acreages.

3.3.2 Special-status Habitats

Special-status habitats are listed by CDFW on their *List of Vegetation Alliances and Associations* (CDFW, 2010).¹ Communities on this list are given a Global (G) and State (S) rarity ranking on a scale of 1 to 5, where communities with a ranking of 5 are the most common and communities with a ranking of 1 are the rarest and of the highest priority to preserve. These high priority communities are denoted on the CDFW list with asterisks. For the purpose of this report, special-status habitats are those communities that have a state ranking of S3 or rarer. Any special-status habitats for the study area were identified based on the natural communities mapped (see section 3.3.1, *Plant Community Mapping*).

3.3.3 General Plant Inventory

All plant species observed during the general and focused surveys were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy follows Baldwin (2012). Common plant names, when not available from Baldwin, were taken from Munz (1974) and/or Clarke (2007). Since common names vary significantly between references, scientific names are included upon initial mention of each species; common names only are employed thereafter and are kept consistent throughout the report. All plant species observed were recorded in field notes. Special-status plant species are discussed below in section 3.3.4, *Special-status Plant Species*.

3.3.4 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 CDFW, USFWS and CNPS databases (see section 3.2, *Literature Review*), and the presence or absence of suitable habitat within the study area based on plant community mapping (see section 3.3.1, *Plant Community Mapping*). Suitable habitat was

¹ Available online at: http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp

defined as areas with appropriate vegetation communities, soils and/or topography (elevation at MSL) to support the species based on known occurrences in those habitats and/or CDFW and CNPS documented habitat descriptions for the species. The definitions of suitable habitat were then compared against the vegetation mapping conducted for the study area as well as local knowledge. A table of special-status plant species for which potentially suitable habitat occurs within the study area was prepared, and the potential for occurrence for each species was determined following completion of the vegetation mapping conducted during the field survey.

Due to the presence of potentially suitable habitat on-site, focused plant surveys were conducted by ESA PCR biologists Ezekiel Cooley and Lauren Singleton on May 17 and July 1, 2016 in accordance with published agency guidelines (CDFW, 2009; CDFW, 2000; and USFWS, 2000) and during the appropriate blooming periods of potential plant species to ensure detection of the special-status plants.

3.3.5 General Wildlife Inventory

All wildlife species observed within the study area, 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) and California Herps (2015) for amphibians and reptiles, the American Ornithologists' Union (1998) for birds, and Jameson and Peeters (1988) for mammals. Since common names vary significantly between references, scientific names are included upon initial mention of each species; common names only are employed thereafter and are kept consistent throughout the report. All wildlife species detected were recorded in field notes. Special-status wildlife species are discussed below in section 3.3.6, *Special-status Wildlife Species*.

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 CDFW and USFWS databases (see section 3.2, *Literature Review*), and the presence or absence of suitable habitat within the study area based on plant community mapping (see section 3.3.1, *Plant 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 CDFW and USFWS documented habitat descriptions for the species. The definitions of suitable habitat were then compared against the vegetation mapping conducted for the study area as well as local knowledge. A table of special-status wildlife species for which potentially suitable habitat occurs within the study area was prepared, and the potential for occurrence for each species was determined following completion of the vegetation mapping conducted during the field survey.

Due to the presence of potentially suitable habitat and MSHCP requirements, focused surveys were conducted for burrowing owl within suitable habitat on the study area. Although the project avoids direct impacts to least Bell's vireo suitable habitat and the project was therefore not required to conduct focused surveys for this species, focused surveys were conducted due to the fact that the project will require a bridge span in close proximity to marginal habitat for the

special-status riparian bird. A summary of the survey methods is provided below; separate survey reports were also prepared following completion of the focused surveys. No other focused surveys were conducted for special-status wildlife species.

Burrowing Owl

The study area is within the MSHCP Burrowing Owl Survey Area and supports potentially suitable habitat for burrowing owl. As such, focused surveys for burrowing owl were conducted by ESA PCR Senior Biologist Ezekiel Cooley on March 1 and 23; and April 4 and 21, 2016. Step I and Step II surveys for burrowing owls were conducted on the study area 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). Step I is a Habitat Assessment and Step II consists of Locating Burrows and Burrowing Owls.

Suitable habitat was identified on the study area during the Step I Habitat Assessment, which was conducted by Ezekiel Cooley on January 5, 2015 during the general biological survey. Suitable habitat included disturbed, low-growing vegetation; bare ground; and a few small fossorial mammal burrows. Due to the presence of suitable habitat identified during the Step I survey, Step II surveys were conducted within the study area and a 150-meter (approximately 500 feet) buffer zone around the perimeter of the study area (collectively, the "survey area") on March 1, 23; and April 4 and 21, 2016. Step II surveys focused on the detection of BUOW individuals, small fossorial mammal burrows potentially suitable for BUOW, and BUOW diagnostic sign (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 focused 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.²

Least Bell's Vireo

The study area supports riparian habitat that is considered a special-status community pursuant to CDFW (see section 3.3.2, *Special-status Habitats*). In addition, the MSHCP provides for the protection of Riparian/Riverine areas within the MSHCP Plan Area and the species associated with those habitats (Section 6.1.2 of the MSHCP). Specifically, the MSHCP requires focused surveys for six species if suitable Riparian/Riverine habitat is present and the project does not avoid the habitat, including three species of birds and three species of fairy shrimp.

Riparian/Riverine areas are defined in the MSHCP as "lands which contain habitat dominated by trees, shrubs, persistent emergents, or mosses and lichens, which occur close to or which depend upon soil moisture from a nearby freshwater source; or areas with fresh water flow during all or a portion of the year." The study area contains riparian habitat that meets the MSHCP definition and supports potentially suitable habitat for one of the six species that require focused surveys pursuant to the MSHCP, specifically least Bell's vireo. No suitable habitat exists on the study

² For projects within the Western Riverside County MSHCP plan area, it has been ESA PCR's experience that the County of Riverside has preferred that Step II surveys be conducted approximately one week apart.

area for southwestern willow flycatcher (*Empidonax traillii extimus*) or western yellow-billed cuckoo (*Coccyzus americanus*). In accordance with the MSHCP, “if riparian scrub and/or woodland is identified on the wetland maps and the habitat will not be avoided as part of the project, a focused survey for least Bell’s vireo shall be conducted by a qualified biologist in accordance with accepted protocol.” Although direct impacts to least Bell’s vireo habitat are not proposed by the project, focused surveys for the least Bell’s vireo were conducted by ESA PCR Senior Biologist Ezekiel Cooley on April 11, 21; May 2, 12, 23; June 2, 15, and 28, 2016 to determine the presence/absence of the least Bell’s vireo within suitable habitat on the study area. The surveys were conducted pursuant to USFWS protocol (USFWS, 2001).

3.3.7 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 was to determine if the change of the existing land use within the study area would have significant impacts on the regional wildlife movement associated with the study area and the immediate vicinity.

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

3.3.8 Jurisdictional Delineation

A jurisdictional assessment was conducted by ESA PCR Principal Regulatory Scientist Amir Morales on January 5, 2016. The purpose of the delineation was to assess the location, extent and acreage of “waters of the U.S.” and/or wetlands under the jurisdiction of the USACE and the RWQCB³, and/or streambed and associated riparian habitat under the jurisdiction of CDFW.

No indications of jurisdictional wetlands or other special aquatic sites were observed on the study area. Therefore, the potential for USACE jurisdictional “waters of the U.S.” associated with the project was based primarily on the presence or absence of jurisdictional field indicators consistent with the USACE guidelines (USACE, 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

³ No “non-federal waters” were observed on the study area; therefore, the limits of USACE and RWQCB jurisdiction are both presumed to be consistent with the limits of jurisdictional “waters of the U.S.” for the purpose of this report. Non-federal waters is a term that is often used to define “isolated” streambeds that do not support a downstream connection to USACE jurisdictional waters and thus may not be regulated by the USACE, subject to approval of an Approved Jurisdictional Determination by the USACE and Environmental Protection Agency.

completion of the field work, documentation of all jurisdictional wetlands, waters, and streambed 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. The results of the ESA PCR jurisdictional assessment are subject to review and approval by the resource agencies as part of future regulatory permits for the project, if required.

The potential for USACE jurisdictional “waters of the U.S.” was based on the presence or absence of jurisdictional field indicators consistent with the USACE guidelines (USACE, 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 a 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, and streambed 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. The results of the ESA PCR jurisdictional assessment are subject to review and approval by the resource agencies as part of future regulatory permits for the project, if required.

4.0

Existing Conditions

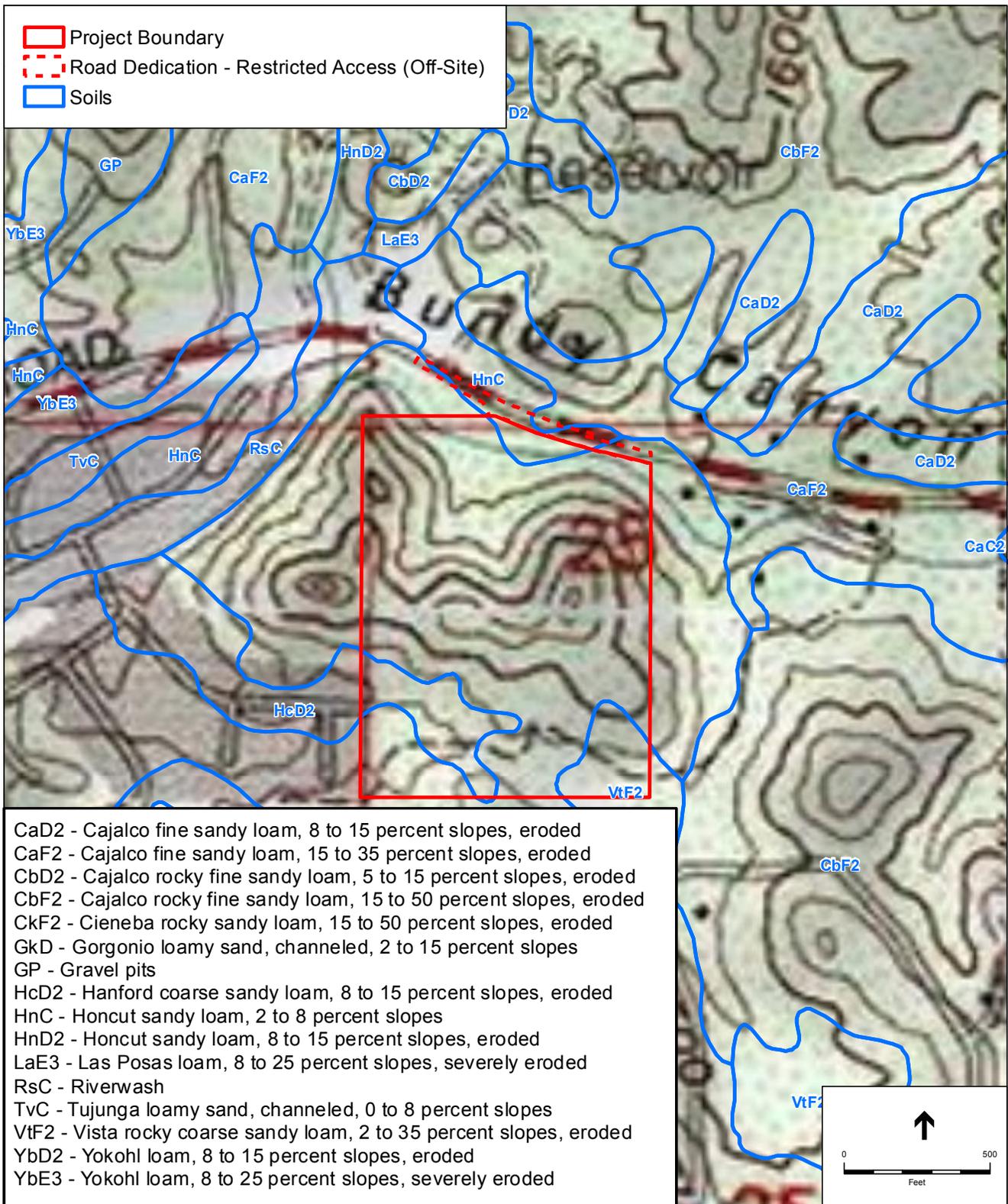
4.1 Characteristics of the Study Area and Surrounding Area

4.1.1 Study Area Characteristics

The study area encompasses the approximately 28.64-acre project site and an approximately 0.84-acre off-site area located in the City of Wildomar in Riverside County. The project site consists primarily of native upland vegetation characterized by California buckwheat scrub, California sagebrush scrub, chamise chaparral, and white sage scrub, with smaller patches of riparian vegetation, including coast live oak woodland and red willow thicket. There are also some areas that are dominated by non-native vegetation, which are generally associated with the disturbed areas and ruderal vegetation on the project site. The off-site area is dominated by ruderal vegetation interspersed with California sagebrush scrub. The off-site area also supports some riparian vegetation, including coast live oak woodland and red willow thicket.

The study area contains three (3) drainages observed to support field indicators associated with USACE/RWQCB and CDFW jurisdictional waters, referred to in this report as Drainages A, A1.1, and B. Drainage A is mapped as a USGS blue line intermittent stream while the other two drainages are minor erosional features that support little to no vegetation. Drainage A is located adjacent to the northern boundary of the project site, extending slightly into the off-site area, and supports patches of riparian vegetation separated by segments of unvegetated channel encompassed by oak woodlands established outside the banks of a deeply incised streambed. Drainages A1.1 and B are unvegetated erosional headwater features located near the southerly corners of the project site. The study area is dominated by a steep hill that occurs in the center of the site with relatively flat areas along the northern and southern boundaries. On-site elevations range from the lowest of approximately 1,465 feet above average mean sea level (MSL) along the northern boundary to a high of approximately 1,690 feet above average MSL along the main ridgeline in the center of the study area. Mapped soils on the study area include five soil types as follows (NRCS, 2015), as shown in **Figure 4, Soils Map**:

- Cajalco fine sandy loam, 15 to 35 percent slopes, eroded;
- Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded;
- Hanford coarse sandy loam, 8 to 15 percent slopes, eroded;



SOURCE: USGS Topographic Series (Sunnymead, CA), USDA NRCS SSURGO.

Bundy Canyon Resort Apartments Project

Figure 4
Soils Map

- Honcut sandy loam, 2 to 8 percent slopes; and
- Vista rocky coarse sandy loam, 2 to 35 percent slopes eroded.

Immediate surrounding land uses include residential development to the west, rural residential to the east and southeast, and open area to the north and southwest. Bundy Canyon Road abuts the northern project boundary and separates the study area from the open area to the north. The entire study area is within the Elsinore Area Plan of the MSHCP (**Figure 5, Relationship to the MSHCP**).

4.2 Plant Communities

Descriptions of each of the plant communities found on the study area are provided below and their corresponding California Natural Community Code (CaCodes) assigned by CDFW are in parentheses (CDFW, 2010). The locations of each of the plant communities are shown in **Figure 6, Plant Communities**. **Table 1, Plant Communities**, lists each of the plant communities observed, as well as the acreage within the study area. Representative photographs of plant communities found within the study area are included in **Figure 7a, Site Photographs** and **Figure 7b, Site Photographs**.

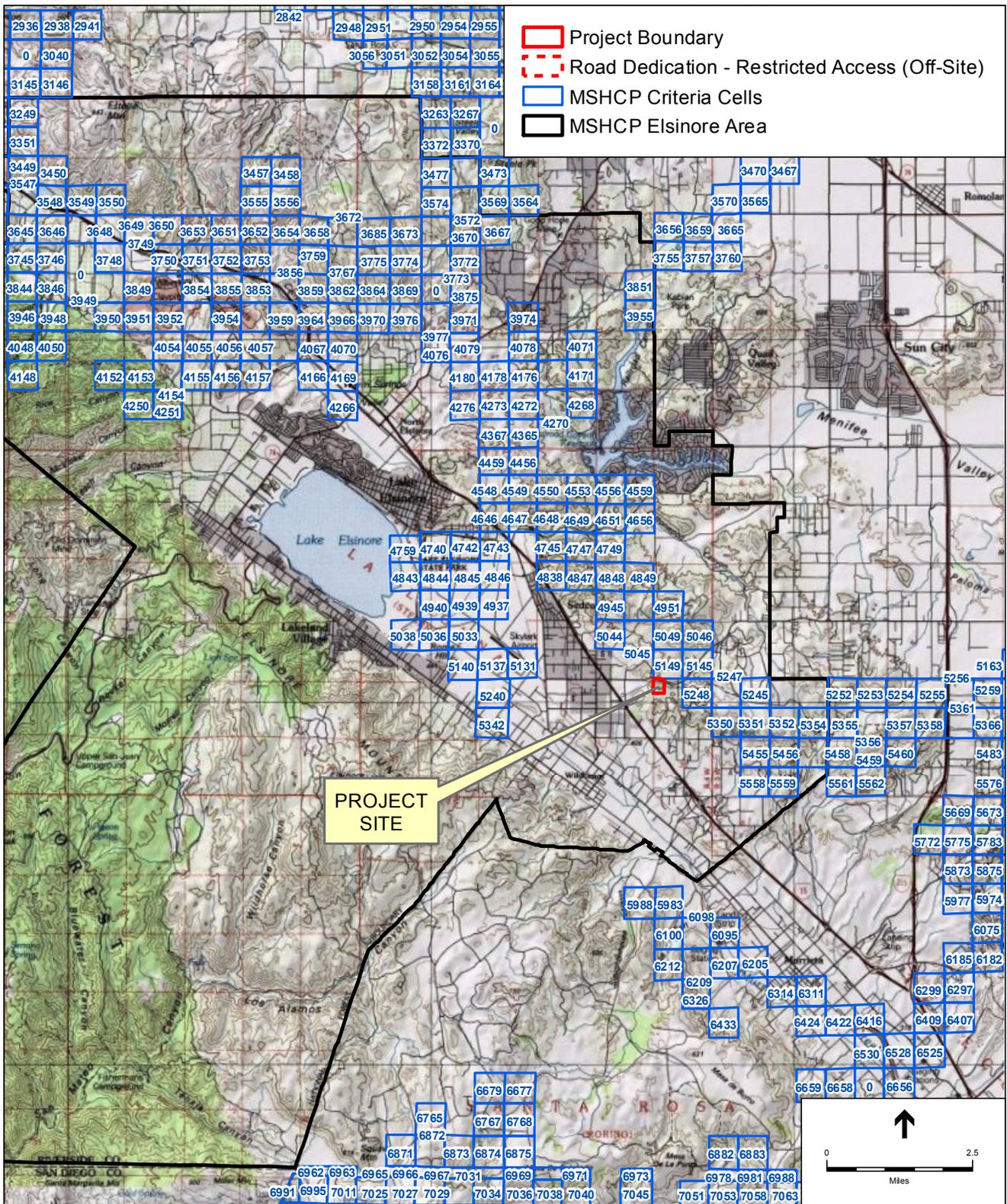
**TABLE 1
PLANT COMMUNITIES**

Plant Communities	On-site (acres)	Off-site (acres)
California Buckwheat Scrub	3.08	-
California Sagebrush Scrub	5.83	-
California Buckwheat Scrub/California Sagebrush Scrub	3.89	-
Chamise Chaparral	8.86	-
Coast Live Oak Woodland	1.46	0.18
Giant Wild Rye Grassland ^a /Non-native Grassland	0.03	-
Red Willow Thicket ^a	0.47	0.04
White Sage Scrub ^a	2.55	-
Non-native Grassland	0.11	-
Ruderal	0.39	-
Ruderal/California Buckwheat Scrub	0.16	-
Ruderal/California Sagebrush Scrub	0.06	0.20
Disturbed	0.51	0.21
Disturbed-California Buckwheat Scrub	1.24	0.21
Total	28.64	0.84

NOTES:

^a These communities are high priority [for conservation] vegetation communities denoted on the CDFW "List of California Terrestrial Natural Communities".

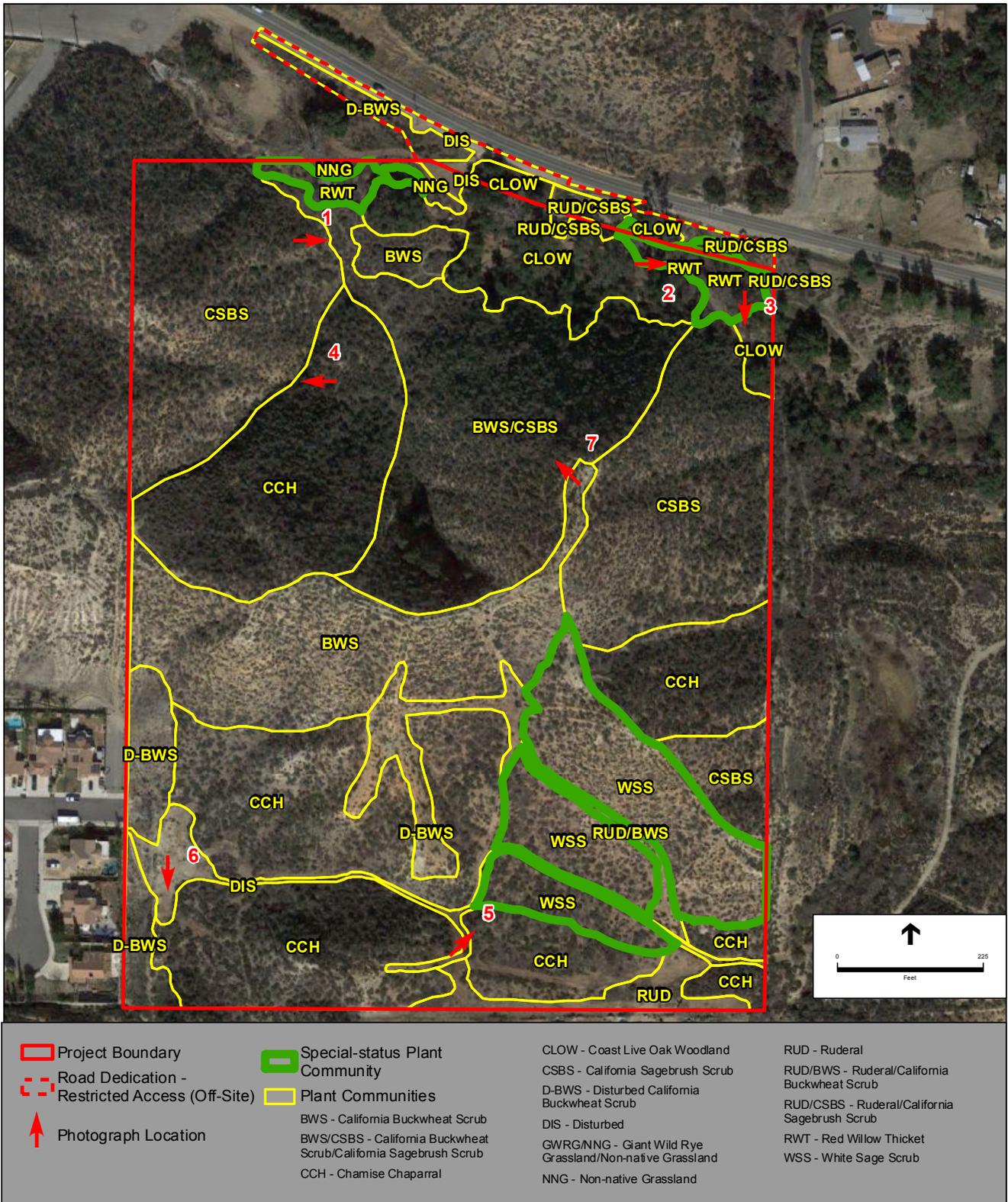
SOURCE: ESA PCR, 2016



SOURCE: USGS Topographic Series; MSHCP.

Bundy Canyon Resort Apartments Project
Figure 5
 Relationship to the MSHCP





SOURCE: Google Maps, 2015 (Aerial).

Bundy Canyon Resort Apartments Project
Figure 6
 Plant Communities



PHOTOGRAPH 1. View of the California buckwheat scrub community in the foreground and the coast live oak woodland community in the background, facing east.



PHOTOGRAPH 2. View of the red willow thicket community, facing east.



PHOTOGRAPH 3. View of the California sagebrush scrub community, facing south.



PHOTOGRAPH 4. View of the chamise chaparral community, facing west.

Note: Refer to Figure 6 for photograph locations

SOURCE: ESA PCR, 2016

MDMG Bundy Canyon
Figure 7a
Site Photographs



PHOTOGRAPH 5. View of the chamise chaparral community in the foreground and the white sage scrub community in the background, facing northeast.



PHOTOGRAPH 6. View of one of the disturbed areas in the foreground and the California buckwheat scrub community in the background, facing south.



PHOTOGRAPH 7. Panoramic view of the northern portion of the project site, facing northwest.

Note: Refer to Figure 6 for photograph locations

SOURCE: ESA PCR, 2016

MDMG Bundy Canyon
Figure 7b
Site Photographs

4.2.1 California Buckwheat Scrub (32.040.02)

California buckwheat scrub is dominated by California buckwheat (*Eriogonum fasciculatum*) and is commonly found in coarse, well-drained soils along upland slopes. Other associated species observed within this community include brittlebush (*Encelia farinosa*), Menzies' fiddleneck (*Amsinckia menziesii*), black sage (*Salvia mellifera*), and California broomsage (*Lepidospartum squamatum*). California buckwheat scrub dominates the south-facing slope in the center of the study area and occurs in a small patch in the northern portion of the study area. This community comprises approximately 3.08 acres on-site only.

4.2.2 California Sagebrush Scrub (32.010.00)

California sagebrush scrub is dominated by California sagebrush (*Artemisia californica*) and is characterized by low-growing aromatic and drought-deciduous shrubs adapted to the semi-arid Mediterranean climate. On the study area, associated species observed within this community include chamise (*Adenostoma fasciculatum*), white sage (*Salvia apiana*), California buckwheat, blue elderberry (*Sambucus nigra* ssp. *caerulea*), chaparral yucca (*Hesperoyucca whipplei*), wishbone bush (*Mirabilis laevis*), and wild oat (*Avena fatua*). California sagebrush scrub occupies the east-facing slopes near the eastern boundary and near the northwestern corner of the study area. This community occupies approximately 5.83 acres on-site only.

4.2.3 California Buckwheat Scrub/California Sagebrush Scrub (32.040.02/32.010.00)

California buckwheat scrub/California sagebrush scrub community is dominated by California buckwheat scrub with California sagebrush scrub occurring as a subdominant community. In these transitional areas, or ecotones, the plant species include members of both communities described in sections 4.2.1, *California buckwheat scrub* and 4.2.2, *California sagebrush scrub* above. California buckwheat scrub/California sagebrush scrub dominates the north-facing slope in the center of the study area and comprises approximately 3.89 acres on-site only.

4.2.4 Chamise Chaparral (37.101.00)

The canopy of this community is dominated by chamise and consists of a sparse to intermittent herbaceous layer. California buckwheat was observed as a subdominant species within this community in addition to associated species such as black sage, Menzies' fiddleneck, brittlebush, chaparral yucca, and spiny redberry (*Rhamnus crocea*). This community was found throughout the study area, primarily on a portion of the north-facing slope that dominates the study area and the lower elevation areas in the southern portion of the study area. Chamise chaparral comprises approximately 8.86 acres on-site only.

4.2.5 Coast Live Oak Woodland (71.060.00)

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*) trees and is the most prevalent community associated with Drainage A. Although some areas support contiguous

canopy cover, there are portions with openings in the canopy, which allows for some emergent shrubs and herbaceous species such as mule fat (*Baccharis salicifolia*), red willow (*Salix laevigata*), western ragweed (*Ambrosia psilostachya*), giant wild rye (*Elymus condensatus*), California sagebrush, and tree tobacco (*Nicotiana glauca*). A few western sycamores (*Platanus racemosa*) were also observed in the canopy layer of this community. Portions of the understory are disturbed and support little to no vegetation due to human disturbances, including a makeshift bike course (comprised of dirt jumps) and large debris (abandoned furniture). Coast live oak woodland comprises approximately 1.46 acres on-site and 0.18 acre off-site.

4.2.6 Giant Wild Rye Grassland/Non-native Grassland (*41.265.00/Not Applicable)

Giant wild rye grassland/non-native grassland is dominated by giant wild rye interspersed with non-native grassland species such as foxtail chess (*Bromus madritensis* ssp. *rubens*), redstem stork's bill (*Erodium cicutarium*), and prickly Russian thistle (*Salsola tragus*) (see section 4.2.9 below). Giant wild rye grassland is considered a special-status community pursuant to CDFW and typically occurs on north-facing slopes at low elevations within loamy soil. Other associated species observed in this community include blue elderberry and California buckwheat. Giant wild rye grassland/non-native grassland occurs in one small patch adjacent to Bundy Canyon Road in the northern portion of the study area and comprises approximately 0.03 acre on-site only.

4.2.7 Red Willow Thicket (*61.205.00)

Red willow thicket is dominated by red willow and is considered a special-status community pursuant to CDFW. This community typically occurs in ditches, floodplains, lake edges, and low-gradient depositions along streams. On the study area, red willow thicket occurs in two small, noncontiguous patches associated with Drainage A. The canopy of this community is fairly open and lacks a stratified understory. Coast live oak, Fremont's cottonwood (*Populus fremontii* ssp. *fremontii*), gum tree (*Eucalyptus* sp.) also contribute to the canopy layer while the understory is comprised primarily of mule fat, western ragweed, curly dock (*Rumex crispus*), and black sage. Red willow thicket occupies approximately 0.47 acre on-site and 0.04 acre off-site.

4.2.8 White Sage Scrub (*32.030.00)

White sage scrub is dominated by white sage and is considered a special-status community pursuant to CDFW. This community typically occurs on dry, well-drained mountain slopes and benches in shallow, coarse loam soil. On the study area, chamise is a subdominant species in this community and other associated species observed include brittlebush, California buckwheat, chaparral yucca, and scrub oak (*Quercus berberidifolia*). White sage scrub occurs on the south-facing slopes in the southern portion of the study area and comprises approximately 2.55 acres on-site only.

4.2.9 Non-native Grassland (Not Applicable)

Non-native grassland is a semi-natural community of dense to sparse cover of exotic annual grasses, often with native annual forbs (“wildflowers”). On the study area, this community is dominated by wild oat. Other species observed within this community included foxtail chess, soft chess (*Bromus hordeaceus*), cheat grass (*Bromus tectorum*), ripgut (*Bromus diandrus*), redstem stork’s bill, short podded mustard (*Hirschfeldia incana*), and western ragweed. Non-native grassland occurs in two small patches adjacent to Bundy Canyon Road near the northern study area boundary and comprises approximately 0.11 acre on-site only.

4.2.10 Ruderal (Not Applicable)

Ruderal vegetation is found in areas heavily disturbed by human activities, such as roadsides, graded fields, and manufactured slopes and is dominated by non-native species. Within the study area, species observed within this community include short podded mustard, prickly Russian thistle, Italian thistle (*Carduus pycnocephalus*), foxtail chess, and London rocket (*Sisymbrium irio*). Ruderal vegetation occurs along the southern boundary of the study area and occupies approximately 0.39 acre on-site only.

4.2.11 Ruderal/California Buckwheat Scrub (Not Applicable/32.040.02)

Ruderal/California buckwheat scrub is dominated by ruderal, weedy species (see section 4.2.10 above) but exhibits sparse, remnant species associated with the California buckwheat scrub community (see section 4.2.1 above), including California buckwheat, brittlebush, and black sage. The ruderal/California buckwheat scrub community occurs in a single linear patch in the southeastern portion of the study area and comprises approximately 0.16 acre on-site only.

4.2.12 Ruderal/California Sagebrush Scrub (Not Applicable/32.010.00)

Ruderal/California sagebrush scrub is dominated by ruderal, weedy species (see section 4.2.10 above) but exhibits sparse, remnant species associated with the California sagebrush community (see section 4.2.2 above), including California sagebrush, California buckwheat, and western ragweed, interspersed throughout the community. The ruderal/California sagebrush scrub community occurs in two small patches adjacent to Bundy Canyon Road near the northern boundary of the study area and comprises approximately 0.06 acre on-site and 0.20 acre off-site.

4.2.13 Disturbed (Not Applicable)

Disturbed areas are areas that support little to no vegetation due to excessive human disturbance. Scattered vegetation included species such as brittlebush, chamise, prickly Russian thistle, short podded mustard, and Mediterranean schismus (*Schismus barbatus*). Disturbed areas were observed adjacent to Bundy Canyon Road in the northern portion of the study area. A disturbed area was also observed adjacent to the residential development at Windwood Lane in the southeastern portion of the study area, and includes a trail that extends from the disturbed patch

through the southern portion of the study area. Disturbed areas comprise approximately 0.51 acre on-site and 0.21 acre off-site.

4.2.14 Disturbed-California Buckwheat Scrub (Not Applicable–32.040.02)

The disturbed-California buckwheat scrub community is equally represented by non-native, exotic species introduced by human activities and disturbances (see section 4.2.13 above) as well as native species associated with the California buckwheat scrub community (see section 4.2.1 above). The disturbed-California buckwheat scrub was observed in the southern portion of the study area in the flatter areas adjacent to the California buckwheat scrub community and adjacent to Bundy Canyon Road in the northern portion of the study area. Disturbed-California buckwheat scrub comprises approximately 1.24 acres on-site and 0.21 acre off-site.

4.3 General Plant Inventory

The plant communities discussed above are composed of numerous plant species. Observations regarding the plant species present were made during the field visits to the study area, 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 within the study area are discussed below in section 4.7.5, *Special-status Plant Species*.

4.4 General Wildlife Inventory

The plant communities discussed above provide habitat for common wildlife species. Observations regarding the wildlife species present were made during the field visits to the study area, and a list of all species observed is provided in Appendix A. Special-status wildlife species occurring or potentially occurring within the study area are discussed below in section 4.7.6, *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; Bennett, 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). 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. 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 Study Area

As previously described, wildlife movement activities occur at a variety of scales from a “local” level to a “regional” level. The study area is bordered by a residential community to the west, rural residential to the east and southeast, and open area to the north and southwest (**Figure 8, Regional Aerial Photograph**). Although open area exists to the north of the study area, Bundy Canyon Road abuts the northern project boundary and separates the study area from the open space to the north. The primary opportunity for wildlife movement is via the open areas to the north and southwest of the study area, which connect to larger open areas consisting of mountainous terrain. The study area is not within any MSHCP-designated Core Areas Linkages; however, proposed Linkage 8 (Sedco/Wildomar) is directly to the northeast of the study area, which consists of upland habitat that would connect Core Areas in the western portion of the MSHCP Plan Area to Core Areas in the eastern portion of the MSHCP Plan Area. The proposed linkage provides live-in habitat for special-status species such as coastal California gnatcatcher (*Polioptila californica californica*), Quino checkerspot butterfly (*Euphydryas editha*), and Stephens’ kangaroo (*Dipodomys stephensi*). The nearest existing Core Area is Core B, which is approximately 3.2 miles to the southwest of the study area. Core B includes land within the Cleveland National Forest, but is separated from the study area by the I-15 freeway and development associated with City of Wildomar. Because of the study area’s proximity to an identified wildlife movement corridor, there is potential that some wildlife may occasionally use to the open space on the study area for regional movement through the area.

Although the study area is adjacent to proposed Linkage 8, the study area likely facilitates only limited regional wildlife movement due to topographic constraints on the site and the presence of surrounding development. The study area is dominated by a steep hill that occurs in the center of the study area. Although wildlife may travel through the steep terrain of the study area to access the open areas to the north and the south, wildlife are more likely to travel via the flat terrain directly to the east of the study area. Despite the open areas surrounding the study area, regional wildlife movement to and from the study area is likely restricted from urban development associated with the City of Wildomar to the west of the study area. Additionally, freeways and major roads in the vicinity of the study area likely limit wildlife movement. Specifically, the I-15 freeway is approximately 0.7 mile to the west of the study area. Furthermore, Bundy Canyon Road abuts the northern boundary of the study area and there is a residential development and rural residential to the west and east of the study area, respectively.

The study area is not within any linkages identified by the South Coast Missing Linkages report; the nearest linkage design identified is for the Santa Ana – Palomar Connection located approximately 10 miles to the south (South Coast Wildlands, 2008). Since the study area is not identified as a linkage by the South Coast Wildlands or the MSHCP, and it does not support



SOURCE: Google Maps, 2015 (Aerial).

Bundy Canyon Resort Apartments Project
Figure 8
Regional Aerial Photograph

habitat that connects two or more habitat patches that would otherwise be fragmented or isolated from one another, the study area is not considered a wildlife corridor. The study area supports three drainage features, including Drainage A, Drainage A1.1, and Drainage B. Drainages A1.1 and B are ephemeral headwater drainages that initiate on-site and are erosional features. Drainage A1.1 and Drainage B support limited upland vegetation and are otherwise unvegetated, and therefore would not facilitate wildlife movement on the study area. However, Drainage A in the northern portion of the study area is a mapped USGS blue line stream and is dominated by riparian vegetation, including coast live oak woodland and red willow thicket. Drainage A exits the study area at the northwestern corner via an underground culvert and flows under Bundy Canyon Road. On the northern side of Bundy Canyon Road, Drainage A does not support riparian vegetation that would be suitable for wildlife cover and/or foraging. The upstream portion of Drainage A supports riparian vegetation that may facilitate some wildlife movement, although the riparian corridor only extends approximately 1.7 miles upstream from the northeastern corner of the study area. Additionally, the canopy of the riparian vegetation associated with the on-site and off-site Drainage A is not contiguous and segments are directly adjacent to residential communities. Wildlife movement within Drainage A is anticipated to be restricted based on the limited length of the riparian corridor, the intermittent canopy cover that provides protection for wildlife during their movement, and disturbance from adjacent development.

Although the study area is not considered a wildlife corridor, the open space on the study area likely supports opportunities for local wildlife movement and may occasionally facilitate some regional movement. Movement on a smaller or “local” scale likely occur within the study area 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 study area supports open space dominated by native vegetation communities and as such, likely supports wildlife movement within the study area and/or nearby areas for foraging and shelter. Data gathered from the biological survey indicates that the study area contains habitat that supports common species of invertebrates, reptiles, birds, and mammals. The home range and average dispersal distance of many of these species may be entirely contained within the study area and immediate vicinity, while bird species in the vicinity may utilize the study area for foraging. 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 study area at all. Occasionally, individuals expanding their home range or dispersing from their parental range will attempt to move outside of the study area, if feasible based on the surrounding restrictions to movement from development (see above). Bird species may fly over the development and freeways to utilize the study area for foraging.

In summary, the study area likely supports live-in and movement habitat for species on a local scale (i.e., some live-in and at least marginal movement habitat for invertebrates, reptiles, birds, and small mammal species) and occasionally facilitate regional movement. However, regional movement through the study area is likely limited due to topographical constraints, surrounding development, and limited riparian corridor associated with Drainage A. Additionally, the study area is not within an MSHCP Core Area or Linkage and is not identified as a regionally important

dispersal or seasonal migration corridor by South Coast Wildlands. Therefore, study area is not considered a wildlife corridor.

4.6 Jurisdictional Waters

Based on the jurisdictional assessment conducted by ESA PCR on January 5, 2016, the approximately 28.64-acre study area supports three (3) natural drainage features identified as Drainages A, A1.1 and B, while the approximately 0.84-acre off-site area supports a small portion of Drainage A. In total, the study area supports approximately 0.282 acre of Corps/RWQCB “waters of the U.S.” and 1.877 acre of CDFW jurisdictional streambed and riparian vegetation, of which approximately 0.244 acre and 1.674 acre are located within the study area, and 0.038 acre and 0.203 acre are located within the off-site area, respectively (**Figure 9, Jurisdictional Features and MSHCP Riparian/Riverine Areas**). No wetlands or other special aquatic sites were observed on the study area.

Drainage A enters the site from the northeast corner of the site boundary and runs through the northern portion of the site, exiting at the northwest corner. Drainages A1.1 and B originate onsite where sheet flows combine and form jurisdictional indicators such as ordinary high water mark (OHWM) including 1) impressions on the bank, 2) sediment deposits/sorting, and 3) the presence of wracking, a defined bank and associated riparian vegetation. Drainages A1.1 and B are less prominent drainage features that convey flows only during moderate to significant storm events. Weather conditions at the beginning of the jurisdictional assessment were dry but a heavy downpour of rain fell shortly thereafter and continued for the remainder of the site visit allowing for some observations of flow.⁴ Photographs of the drainage features are provided in **Figures 10a & 10b, Drainage Photographs**. **Table 2, Jurisdictional Features**, provides a summary of all the jurisdictional features assessed, and a description of each feature is provided below.

**TABLE 2
JURISDICTIONAL FEATURES**

Drainage	Length (ft)	USACE/ RWQCB (acres)	CDFW (acres)	Flow
A	1,030	0.242	1.666	Intermittent
A1.1	47	0.001 ^a	0.003	Ephemeral
B	118	0.001 ^b	0.005	Ephemeral
<i>On-Site Subtotal</i>	1,195	0.244	1.674	
A (off-site)	156	0.038	0.203	Intermittent
Total	1,351	0.282	1.877	

Source: ESA PCR, 2016.

⁴ Based on available precipitation records the City of Wildomar experienced 1.5” of rain on January 5, 2016 (accessed at <http://weathercurrents.com/wildomar/ArchiveJan2016.do> on August 25, 2016).



SOURCE: Google Maps, 2015.

Bundy Canyon Resort Apartments Project

Figure 9
Jurisdictional Features and MSHCP Riparian/Riverine Areas

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PHOTOGRAPH 1. Photograph of Drainage A, facing west (downstream).



PHOTOGRAPH 2. Photograph of Drainage A, facing east (upstream).



Note: Refer to Figure 9 for photograph locations

SOURCE: ESA PCR, 2016

MDMG Bundy Canyon
Figure 10a
Drainage Photographs

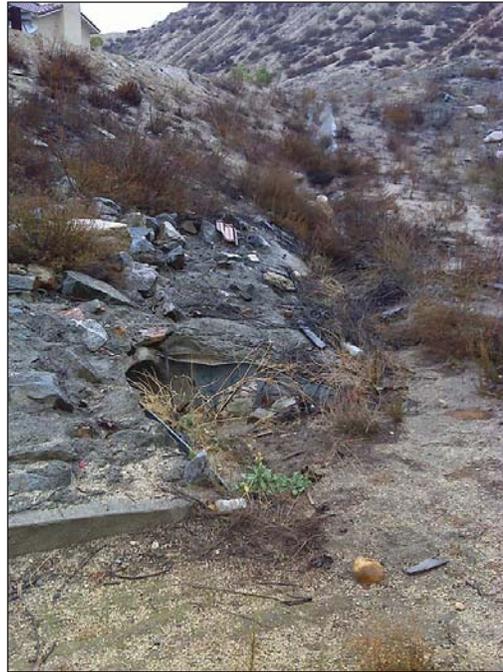




PHOTOGRAPH 4. Photograph of Drainage A1.1, facing west (upstream).



PHOTOGRAPH 5. Photograph of Drainage B, facing northeast (upstream).



PHOTOGRAPH 6. Photograph of where Drainage B exits the project site via a pipe inlet, facing west (downstream).

Note: Refer to Figure 9 for photograph locations

SOURCE: ESA PCR, 2016

MDMG Bundy Canyon
Figure 10b
Drainage Photographs

Drainage A

Drainage A is an unnamed blue-line intermittent stream as defined by the USGS 7.5-minute Romoland Quadrangle, with headwaters that originate approximately two miles east of the study area. The streambed was observed to exhibit a hydrologic regime more consistent with the classification of an ephemeral streambed than an intermittent streambed, given that the invert and banks of the channel are dominated by unvegetated conditions, and even during several hours of heavy rain flow within the channel was very light. It should be noted that the Drainage A streambed was dry upon commencing the jurisdictional assessment and that no observations within the days following the significant storm events of January 5-7, 2016 were conducted to determine the duration of flow following the events, in order to make a more definitive determination of the flow regime within the channel.⁵ Therefore, the classification of flow within Drainage A is presumed to be intermittent in nature for the purpose of this report. Based on field examination and review of USGS topographic mapping and available historic aerial imagery,⁶ Drainage A is associated with a watershed that initiates within upland areas located on both sides of Bundy Canyon Road including the Sedco and Iodine Spring foothills, the headwaters of which are located approximately 1.5 miles to the northeast within an existing residential development called “The Farm.” Drainage A then meanders through open space areas until entering the study area and eventually joins Murrieta Creek at a confluence located approximately 2.2 miles southwest of the site, which ultimately flows to the Pacific Ocean located approximately 25 miles southwest of the property.

Drainage A enters the northeast corner of the site and extends for approximately 1,030 linear feet toward the west prior to exiting along the northern portion of the western site boundary.

Drainage A supports mostly a coast live oak woodland canopy with trunks located outside of the streambed banks, and supports a few distinct patches of red willow thicket located within the streambed banks. The channel invert and streambed banks are mostly unvegetated and fairly incised throughout, but become severely incised and exhibit significant amounts of woody debris and trash accumulations that appear to clog sections of the entire channel profile along reaches located in the northwest portion of the site. Soils within Drainage A are comprised of sandy loam soils with some areas of significant sand deposition within unvegetated portions of the streambed and were generally observed to be consistent with the two (2) soil series mapped by the Natural Resources Conservation Service (NRCS) as Cieneba rocky sandy loam and Honcut sandy loam (see Figure 4)⁷. No wetlands or other special aquatic sites were observed in Drainage A.

⁵ The classification of an “ephemeral streambed” is generally defined by the USACE as a channel that is limited to flow “during, and immediately after, a storm event” where and “intermittent streambed” is associated with groundwater dominated flow that persists for some time after a storm event. Based on available precipitation records, the City of Wildomar experienced 1.5”, 1.06”, and 0.22” of rain on January 5th, 6th, and 7th, respectively, as accessed on weathercurrents.com on August 25, 2016.

⁶ Accessed by internet via Google Maps and historicaerials.com on August 25, 2016.

⁷ NRCS-SSURGO soils mapping generally focuses on mapping of surface soils over large upland-dominated areas and does not map at the scale required to determine specific soil types within drainage features of this size. However, understanding soil classifications of uplands, and/or the presence of buried inclusions at depth within a soil profile, can often help substantiate the composition and type of soils observed within smaller adjacent streambeds such as those on the study area.

Drainage A within the approximately 28.64-acre study area supports a total of approximately 0.242 acre of USACE/RWQCB “waters of the U.S.” and 1.666 acres of CDFW jurisdictional streambed and associated riparian vegetation.

Drainage A1.1

Drainage A1.1 is an erosional feature that appears to have formed in conjunction with an unpaved road and initiates in the southeastern portion of the site extending toward the east for approximately 50 linear feet before exiting the property and joining a historic tributary of Drainage A located within the adjacent to the east. The erosional feature supports ephemeral flow and is entirely unvegetated. No wetlands or other special aquatic sites were observed in Drainage A1.1.

Drainage A1.1 supports a total of approximately 0.001 acre of ephemeral USACE/RWQCB “waters of the U.S.” and 0.003 acre of CDFW jurisdictional streambed.

Drainage B

Drainage B initiates in the southwestern portion of the site and extends toward the southwest for approximately 118 linear feet at which point jurisdictional indicators such as an OHWM or bed/bank become indiscernible within extremely loose and sandy soils. For the purposes of this report, a connection was presumed even though jurisdictional streambed indicators were not visible. However, it should be noted that ESA PCR examined the presumed connection area following several hours of heavy rain, and no evidence of drainage reestablishment was observed. The presumed connection continues for the remaining 50 feet at which point it flows into a corrugated metal pipe that connects to the storm drain system of the development immediately adjacent to the west, which drains to a tributary of Murrieta Creek. The drainage supports ephemeral flow and contains sandy loam soils within an upland buffer area dominated by native upland vegetation. No wetlands or other special aquatic sites were observed in Drainage B.

Drainage B supports a total of approximately 0.001 acre of ephemeral USACE/RWQCB “waters of the U.S.” and 0.005 acre of CDFW jurisdictional streambed.

4.7 Special-status Biological Resources

The following discussion describes 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. Protected special-status 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).

4.7.1 Federal Special-status Resource Protection and Classifications

FESA

The FESA of 1973 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, unless properly permitted, it is unlawful to “take” any listed species. “Take” is defined in Section 3(18) of FESA: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the USFWS, through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification 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.

All references to Federally-protected species in this BRA include the most current published status or candidate category to which each species has been assigned by USFWS. For purposes of this assessment the following acronyms are used for Federal status species, as applicable:

- FE Federally-listed as Endangered
- FT Federally-listed as Threatened
- FPE Federally proposed for listing as Endangered
- FPT Federally proposed for listing as Threatened
- FPD Federally proposed for delisting
- FC Federal candidate species (former C1 species)

Some of the USFWS offices maintain a database of listed species within their jurisdiction, for example the Sacramento⁸ and Carlsbad⁹ 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

⁸ http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-overview.htm

⁹ http://www.fws.gov/carlsbad/SpeciesStatusList/CFWO_Species_Status_List.htm

impact migratory birds typically have conditions that require pre-disturbance surveys for nesting birds. In the event nesting is 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.

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) as “waters of the State” 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.¹⁰ 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 (also known as “non-federal 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 for impacts to isolated, non-federal “waters of the State.”. The RWQCB may regulate isolated waters that are not under jurisdiction of the USACE through issuance of WDR’s. However, projects with impacts to non-federal waters that obtain a Section 401 WQC may be required to 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

¹⁰ 33 USC 1341 (a) (1).

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.

4.7.2 State of California Special-status Resource Protection and Classifications

CESA

California's Endangered Species Act (CESA) defines an endangered species as:

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

The State defines a threatened species as:

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

Candidate species are defined as:

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

Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Wildlife 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 special-status mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the California Fish and Wildlife 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 CNDDDB 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:

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

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 special-status 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 Ranks 1A, 1B, and 2 are particularly considered special-status:

- Rank 1A Presumed extinct in California.
- Rank 1B Plants Rare, Threatened, or Endangered in California and elsewhere.
- Rank 2 Plants Rare, Threatened, or Endangered in California, but more common elsewhere.
 - Rank 3 Plants about which we need more information – a review list.
 - Rank 4 Plants of limited distribution – a watch list.

The CNPS recently added “threat ranks” which parallel the ranks used by the CNDDDB. These ranks are added as a decimal code after the CNPS Rank (e.g., Rank 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).

Special-status 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.

Special-status Plant Communities

Special-status plant communities include those habitat types considered sensitive by resource agencies, namely the CDFW, due to their scarcity and/or their ability to support State and Federally-listed Endangered, Threatened, and Rare vascular plants, as well as several special-status bird and reptile species. CDFW maintains a natural plant community list, the List of

California Terrestrial Natural Communities.¹¹ Special-status natural communities (also referred to by CDFW as ‘rare’ or ‘special concern’) are identified on the list by an asterisk and are considered high priority vegetation types (CDFW, 2010; CDFW, 2000).

4.7.3 Local Special-status Resource Protection and Classifications

Western Riverside County MSHCP

The study area is within the Western Riverside County MSHCP which was adopted by the Riverside County Board of Supervisors (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 special-status plant and wildlife species (Covered Species) within the MSHCP Plan Area in exchange for the assembly and management of a coordinated MSHCP Conservation Area.

Stephens’ Kangaroo Rat Habitat Conservation Plan

The Stephens’ kangaroo rat (SKR) HCP provides Take Authorization for SKR within its boundaries as implemented by legal agreements executed among the Riverside County Habitat Conservation Agency (RCHCA), its member agencies, USFWS, CDFW, BLM , U.S. Department of Interior, State of California Resources Agency, and other agencies as appropriate.¹² The MSHCP provides Take Authorization for SKR outside the boundaries of the SKR HCP, but within the MSHCP Plan Area boundaries. The seven core reserves established by the SKR HCP will be managed as part of the MSHCP Conservation Area consistent with the SKR HCP.

The study area is within the boundaries of the SKR HCP but is not within any of the core reserves. As such, the project would be required to pay a SKR mitigation fee for coverage under the SKR HCP.

4.7.4 Special-status Plant Communities

The study area supports eight (8) plant communities dominated by native vegetation totaling 26.39 acres (26.17 acres on-site and 0.22 acre off-site), including California buckwheat scrub, California sagebrush scrub, California buckwheat scrub/California sagebrush scrub, chamise chaparral, coast live oak woodland, giant wild rye grassland/non-native grassland, red willow thicket, and white sage scrub. Three (3) of these communities, namely giant wild rye grassland/non-native grassland, red willow thicket, and white sage scrub, are considered special-status habitats by CDFW and total 3.09 acres (3.05 acres on-site and 0.04 acre off-site). The remaining five (5) native communities are not considered special-status habitats. In addition, the study area supports five (5) communities dominated by non-native vegetation that are also not

¹¹ Available online at: http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp.

¹² Available online at: <http://www.skrplan.org/index.html>

considered special-status habitats, specifically non-native grassland, ruderal, ruderal/California buckwheat scrub, ruderal/California sagebrush scrub, and disturbed-California buckwheat scrub. The disturbed areas are primarily unvegetated.

4.7.5 Special-status Plant Species

Special-status plants include those listed, or candidates for listing, by the USFWS and CDFW; and species considered special-status by the CNPS (Lists 1A, 1B, and 2). Several special-status and CNPS-ranked species were reported in the vicinity based on CNDDDB and CNPS, totaling 73 species within the 9-quadrangle search (as indicated in **Appendix B**, *Special-status Plant Species*). Of the 73 species reported in the vicinity of the site, 23 species were identified as having a potential to occur within the study area based on the literature review and existing habitat, as listed in Appendix B. Focused plant surveys were conducted on May 17 and July 1, 2016 during the appropriate blooming periods; no special-status or CNPS-ranked species were observed on the study area.

4.7.6 Special-status Wildlife Species

Special-status wildlife species 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 38 species within the 9-quadrangle search. A total of 20 species were identified as having a potential to occur within the study area or use the study area based on the literature review and habitat on the study area, as listed in **Appendix C**, *Special-status Wildlife Species*. Of the 20 species, two (2) special-status species were observed on the study area, including coastal California gnatcatcher (*Polioptila californica californica*) and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*).

In addition, focused surveys were conducted for burrowing owl and least Bell's vireo in accordance with recommended protocols, and the potential for foraging and nesting migratory bird and raptor species were also analyzed due to known presence within the study area or within the vicinity (see Appendix C). The species with a potential to occur on the study area are discussed below, including the results of the burrowing owl and least Bell's vireo surveys, in addition to the migratory birds and raptors assessment.

Species With Potential to Occur On-site

Coast Range Newt (*Taricha torosa*): This reptile species is a state species of special concern and is a Covered Species pursuant to the Western Riverside County MSHCP. This species breeds in slow-moving streams, ponds, and reservoirs and lives in chaparral, oak woodland, and grasslands within 1 km of breeding habitat.

Coast Range newt was determined to have a potential to occur on the study area based on the presence of marginally suitable habitat, including coast live oak woodland forest and chaparral habitats (e.g. California buckwheat scrub, chamise chaparral). However, the potential was considered very low since the study area and surrounding vicinity do not support suitable

breeding habitat. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Coast patch-nosed snake (*Salvadora hexalepis virgulata*): This reptile species is a state species of special concern. This species prefers shrub habitat and coastal scrub habitat within canyons and rocky hillsides. Coast patch-nosed snake requires mammal burrows for overwintering and is an opportunistic feeder, preying on lizards, small mammals, and reptile eggs.

Coast patch-nosed snake was determined to have a potential to occur on the study area based on the presence of potentially suitable shrub habitat, including California buckwheat scrub, California sagebrush scrub, chamise chaparral, and white sage scrub. However, the potential was considered low since the study area supports only a limited number of suitable burrows required by this species for overwintering. The nearest CNDDDB occurrence record of this species was recorded in 2004, approximately 9.5 miles to the northwest of the study area near Alberhill. No incidental sightings of this species occurred during any site surveys conducted in 2016.

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. This species 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 on the study area based on the presence of potentially suitable habitat, including sandy areas within Drainage A and California sagebrush scrub habitat. No incidental sightings of this species occurred during any site surveys conducted in 2016.

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. This species 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 moderate potential to occur on the study area based on the presence of potentially suitable habitat, including California buckwheat scrub, California sagebrush scrub, chamise chaparral, and white sage scrub. No incidental sightings of this species occurred during any site surveys conducted in 2016.

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. This species prefers chaparral, woodland, grassland, and desert scrub, such as Mojavean and Sonoran desert scrub. It is often associated with rocky areas and dense vegetation and requires rodent burrows or rock crevices for cover.

Red diamond rattlesnake was determined to have a potential to occur on the study area based on the presence of potentially suitable shrub habitat, including California buckwheat scrub, chamise chaparral, white sage scrub, and oak woodland. However, the potential was considered low since

the study area supports a limited number of suitable burrows and rocky crevices that this species may use for cover. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Golden Eagle (*Aquila chrysaetos*): This raptor is a state fully protected species and is protected by the Bald and Golden Eagle Protection Act; it is also a Covered Species pursuant to the Western Riverside County MSHCP. This species nests on cliff faces and tall trees. Foraging habitat includes open country, including grasslands and early successional stages of forest and shrub habitats.

Golden eagle was determined to have a potential to occur only to forage on the study area based on the presence of a few fossorial mammal burrows, suggesting the presence of small mammals that could provide a possible food source. The potential for foraging was considered very low since there are few wide open areas on the study area, which is typically required by this species for foraging. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Swainson's hawk (*Buteo swainsoni*): This bird species is listed as threatened by the state and is a Covered Species pursuant to the Western Riverside County MSHCP. It prefers Great Basin grasslands, riparian forests, riparian woodlands, and valley and foothill grasslands.

Swainson's hawk was determined to have a potential to occur only to forage on the study area based on the presence of a few fossorial mammal burrows, suggesting the presence of small mammals that could provide a possible food source. The potential for foraging was considered very low since there are very few wide open areas on the study area, which is typically required by this species for foraging. Additionally, this species has not been recorded on CNNDDB within the vicinity of the study area 1933. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Burrowing owl: This bird species is a state species of special concern and a Covered Species pursuant to the Western Riverside County MSHCP. This species prefers coastal prairie, coastal scrub, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, valley and foothill grassland and disturbed habitats. It is known to occur in the project vicinity based on CNDDDB and the MSHCP. The study area is within the MSHCP Burrowing Owl Survey Area, an overlay in the MSHCP that requires additional surveys.

Burrowing owl was determined to have potential to occur on the study area based on the presence of suitable habitat that was identified during the Step I survey, including disturbed, low-growing vegetation, bare ground, and a few small fossorial mammal burrows. The subsequent Step II surveys did not identify individual burrowing owls, active burrowing owl burrows, or signs of burrowing owls within the survey area. Therefore, the study area and adjacent buffer area do not currently support burrowing owls. The results are also outlined in a separate survey report attached as **Appendix D, Burrowing Owl Focused Survey Report**.

Long-eared owl (*Asio otus*): This bird species is listed as a state species of special concern. This species prefers riparian habitats with tall willows and cottonwoods and live oak riparian woodlands adjacent open land supporting a prey source of mice.

Long-eared owl was determined to have a potential to forage only on the study area based on the presence of a few fossorial mammal burrows, suggesting the presence of small mammals that could provide a possible food source. The potential for foraging was considered very low since there are few wide open areas on the study area that would support a large prey source. Although the study area supports some riparian habitat within Drainage A, the habitat was not considered suitable nesting habitat for this species since the riparian canopy is not contiguous and supports only a limited number of cottonwoods and willows. Additionally, there are only two CNDDDB occurrence records of this species in Riverside County, both of which were recorded in 1983 approximately 12.75 miles to the northwest of the study area near Harford Springs County Park in the City of Perris. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Loggerhead shrike (*Lanius ludovicianus*): This bird species is listed as a state species of special concern and a Covered Species pursuant to the Western Riverside County MSHCP. This species prefers broken woodlands, broadleaved upland forest, desert wash, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodlands, riparian woodland, and Sonoran desert scrub habitats.

Loggerhead shrike was determined to have a potential to nest and forage on the study area based on the presence of potentially suitable habitat. The potential for nesting was considered moderate since the majority of the study area supports shrub habitat suitable for nesting. However, the foraging potential was considered low since the study area supports limited open areas suitable for this species to hunt and impale its prey. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Least Bell's vireo: This bird species is listed as Federally Endangered, State Endangered, and a Covered Species pursuant to the Western Riverside County MSHCP. This species preferred habitats include riparian forests, riparian scrub, and riparian woodland, usually dominated by willow species. The least Bell's vireo is known to occur in the project vicinity based on CNDDDB and MSHCP.

The study area supports suitable riparian habitat for least Bell's vireo. Least Bell's vireo was determined to have a potential to occur in the riparian habitat associated with Drainages A, including coast live oak woodland and red willow thicket. Least Bell's vireos are known to require a dense, stratified canopy for foraging with a typical territory size of between 0.5 and 7.5 acres.¹³ The nearest CNDDDB occurrence record of least Bell's vireo is approximately 2.75 miles to the northwest of the study area, which was observed in 2010. In consideration of these factors, this species was determined to have a low potential to occur on the study area since the riparian

¹³ USFWS. 1998. *Draft Recovery Plan for the Least Bell's Vireo*. U.S. Fish and Wildlife Service, Portland, OR. 139 pp.

area appears to be supported by flows more consistent with ephemeral streambeds (see description of Drainage A in Section 4.6), which are typically associated with extended periods of dry conditions. As such, Drainage A currently lacks the appropriate vegetation structure, density, and continuous canopy coverage preferred by this species. Although the habitat is considered marginal, there is some potential for the habitat to support foraging for this species and potential territories for young or displaced males that may be forced to utilize less optimal habitats. Although direct impacts to suitable habitat are avoided by the proposed crossing and therefore surveys are not required pursuant to MSHCP guidelines, focused surveys for least Bell's vireos were conducted within suitable habitat in Drainage A to better determine the potential for indirect effects to the species given the presence of marginally suitable habitat within proximity to a proposed bridge span within Drainage A. No least Bell's vireos were observed or detected within the study area during the focused surveys. Therefore, the study area does not currently support least Bell's vireos. The results are also outlined in a separate survey report attached as **Appendix E, Least Bell's Vireo Focused Survey Report**.

Coastal California gnatcatcher: This bird species is listed as Federally Threatened, state species of special concern, and a Covered Species pursuant to the Western Riverside County MSHCP. This species is an obligate inhabitant of coastal sage scrub habitat.

Coastal California gnatcatcher was observed on the study area during the focused plant survey performed on May 17, 2016. Only one individual was heard during the survey.

Dulzura pocket mouse (*Chaetodipus californicus femoralis*): This mammal species is a state species of special concern. It prefers chaparral habitat and occasionally desert grasslands, between 0 and 4,633 feet.

Dulzura pocket mouse was determined to have a potential to occur on the study area based on the presence of suitable chaparral (e.g. chamise chaparral) and sagebrush (e.g. California sagebrush scrub) habitat and a few fossorial mammal burrows. However, the potential was considered low since only a limited number of small fossorial mammal burrows were observed on the study area and this species' preferred habitat is not present on the study area (grass-chaparral ecotone). The nearest CNDDDB occurrence record of this species was recorded in 2005 approximately 6.75 miles to the southeast of the study area near Murrieta. No incidental sightings of this species occurred during any site surveys conducted in 2016.

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, in addition to grassland and Riversidean alluvial fan sage scrub habitats.

Northwestern San Diego pocket mouse was determined to have a potential to occur on the study area based on the presence of potentially suitable chaparral (e.g. chamise chaparral) coastal scrub (e.g. California sagebrush scrub) habitat. However, the potential was considered low since the majority of the study area supports compact soils and the few sandy areas present support limited herbaceous cover. The nearest CNDDDB occurrence record of this species is 4.5 miles to the

southwest of the study area in the City of Murrieta. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Stephens' kangaroo rat: This mammal species is listed as federally endangered and state threatened. Take Authorization for Stephens' kangaroo rat is provided by the SKR HCP within its plan boundaries, and by the Western Riverside County MSHCP for areas outside of the SKR HCP but within the MSHCP area plan boundaries (this species is a MSHCP Covered Species). This species prefers annual and perennial grasslands, but can occasionally be found in sparse coastal scrub or sagebrush.

Stephens' kangaroo rat was determined to have a potential to occur on the study area based on the presence of suitable grassland and California sagebrush scrub and a few small fossorial mammal burrows. However, the potential was considered low since the preferred grassland habitat is limited to two small pockets in the northern portion of the study area. The study area does support some areas of sparse California sagebrush scrub, although this community primarily occurs as dense patches on the study area. The nearest CNDDDB occurrence record of this species was recorded in 1998 approximately 1.5 miles the southeast of the study area in the City of Wildomar. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Los Angeles pocket mouse (*Perognathus longimembris brevinasus*): This mammal species is listed as a state species of special concern and a conditionally Covered Species pursuant to the Western Riverside County MSHCP (surveys are required for areas within the survey overlay, with potential conservation). It prefers sparsely vegetated habitat areas in patches of fine sandy soils associated with washes within grasslands, alluvial sage scrub, and coastal sage communities.

Los Angeles pocket mouse was determined to have a potential to occur on the study area based on the presence of potentially suitable grassland and coastal sagebrush scrub habitat. However, the potential was considered very low since there are only two small pockets of fragmented grassland habitat in the northern portion of the study area, which is adjacent to Drainage A. Drainage A supports some patches of open, sandy areas. Although the study area supports California sagebrush scrub, it does not occur adjacent to the sandy areas within Drainage A. Additionally, the majority of the CNDDDB occurrence records of this species are east of the I-215 freeway. The nearest CNDDDB occurrence record of this species is approximately 8.5 miles to the southeast of the study area. No incidental sightings of this species occurred during any site surveys conducted in 2016.

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

San Diego black-tailed jackrabbit was observed on the study area during the final focused burrowing owl survey performed on April 21, 2016. Only one individual was observed.

San Diego desert woodrat (*Neotoma lepida intermedia*): This mammal species is a California Species of Special Concern and a Covered Species pursuant to the Western Riverside County

MSHCP. This species prefers coastal scrub and chaparral habitats with moderate to dense canopy covers within areas containing rock outcrops and cliffs.

San Diego desert woodrat was determined to have a potential to occur within the suitable coastal scrub (e.g. California sagebrush scrub habitat) and chaparral (e.g. chamise chaparral), primarily within the northern portion of the study area, which supports shrubs with moderate to dense canopy cover. However, the potential for this species was considered low since there are only a few exposed boulders and no cliffs on the study area. Additionally there is only one CNDDDB occurrence record of this species within the vicinity of the study area, which was recorded approximately 16.25 miles to northeast of the study area near Lake Mathews. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Southern Grasshopper Mouse (*Onychomys torridus ramona*): This mammal species is a state species of special concern. This species prefers alkali desert scrub and desert scrub habitats, although it can also be found in succulent shrub, wash, riparian, coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats.

Southern grasshopper mouse was determined to have a potential to occur on the study area based on the presence of suitable scrub habitat (e.g. California sagebrush scrub, California buckwheat scrub) and a limited number of small fossorial mammal burrows. However, the potential was considered very low since this the preferred habitat of this species is not present on the study area and it has not been recorded on CNDDDB within the vicinity of study area since 1932. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Western Mastiff Bat (*Eumops perotis californicus*): This mammal species is a state species of special concern. This species prefers chaparral, cismontane woodlands, coastal scrub, and valley and foothill grassland habitats.

Western mastiff bat was determined to have a moderate potential to occur for foraging only on the study are based on the presence of potentially suitable chaparral (e.g. chamise chaparral) and coastal scrub (e.g. California sagebrush scrub) habitat. There is no suitable roosting habitat present on the study area. The nearest CNDDDB occurrence record of this species was recorded in 2001 approximately 3.1 miles to northeast of the study area. No incidental sightings of this species occurred during any site surveys conducted in 2016.

Migratory Birds and Raptors

The study area supports potential nesting and foraging habitat for nesting songbirds and raptors (primarily shrubs and trees located in the northern portion) and potential foraging habitat for birds, including raptors (primarily in the open ruderal and disturbed areas in the southern portion). Several common species of birds were observed on the study area, including raptor species (American kestrel [*Falco sparverius*] and red-tailed hawk [*Buteo jamaicensis*]) and songbird species (e.g. Bewick's wren [*Thryomanes bewickii*], California thrasher [*Toxostoma redivivum*], and song sparrow [*Melospiza melodia*]). A complete list of bird species observed within the study area is listed in Appendix A. In addition, 12 special-status bird species were recorded within the

9-quadrangle CNDDDB search area; four (4) of these species have the potential to occur and one (1) species was observed (see Appendix C).

4.7.7 Study Area Relationship to the Western Riverside County MSHCP

This section provides a discussion of the study areas' 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.

4.7.7.1 Location of the Study Area within the MSHCP Area Plan and Criteria Cells

The entire study area is within the Elsinore Area Plan (see Figure 5) of the MSHCP. A portion of the off-site area (approximately 0.40 acre) extends into the southwestern corner of Criteria Cell 5149. A criteria cell is defined as a "unit within the Criteria Area" for which descriptions are provided "to guide assembly of the Additional Reserve Lands" (Dudek and Associates, 2003). Table 3-4, *Criteria for Elsinore Area Plan*, in the MSHCP states the following conservation goal for Criteria Cell 5149:

"Conservation within this Cell will contribute to assembly of Proposed Linkage 8. Conservation within this Cell will focus on chaparral, woodland and forest habitat. Areas conserved within this Cell will be connected to chaparral habitat proposed for conservation in Cell Groups I' to the north and J' to the east. Conservation within this Cell will range from 70%-80% of the Cell focusing in the northern and eastern portions of the Cell."

Bundy Canyon Road separates the off-site area from the majority of Criteria Cell 5149, with the off-site area occurring to the south of Bundy Canyon Road and approximately 98 percent of the Cell occurring to the north of Bundy Canyon Road. The MSHCP calls for 70 to 80 percent conservation focused in the northern and eastern portions of the Cell, which the off-site area is located in the southwestern portion of the Cell. Although the study area supports some remnant chaparral habitat (disturbed-California buckwheat scrub), the habitat is disturbed and fragmented due to its proximity to Bundy Canyon Road and does not connect to any other chaparral habitat within the Cell. Therefore, it is ESA PCR's opinion that conservation of this off-site area would not aid in meeting the MSHCP's conservation goals for this Cell and the project should not be subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process, although this determination is subject to approval by the Regional Conservation Authority (RCA) and the Wildlife Agencies (CDFW and USFWS).

4.7.7.2 Location of the Study Area within MSHCP Cores and Linkages

As mentioned previously in section 4.6.2, *Wildlife Movement*, the study area is not within any cores or linkages (i.e., Special Linkage Areas) as identified in the Elsinore Area Plan.

4.7.7.3 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.”

As shown in Figure 9 and summarized in **Table 3**, *MSHCP Riparian/Riverine Areas*, the study area supports approximately 1.877 acres of MSHCP Riparian/Riverine Areas, including 1.869 acres of Riparian Areas in Drainage A (1.666 acres on-site and 0.203 acre off-site), and 0.003 acre of Riverine Areas in Drainage A1.1, as well as 0.005 acre of Riverine Areas in Drainage B. This acreage is equivalent to the CDFW jurisdiction for these drainages. Drainages A1.1 and B meet the definition of Riverine Areas since they are solely supported by ephemeral flows and do not support any vegetation that is dependent on hydrology from the drainages. Drainage A meets the definition of a Riparian Area due to the presence of riparian vegetation, including coast live oak woodland and red willow thicket communities. Due to the full avoidance of MSHCP Riparian/Riverine Areas on the study area, the project does not require a Determination of Biologically Equivalent or Superior Preservation (DBESP).

TABLE 3
MSHCP RIPARIAN/RIVERINE AREAS^a

Drainage	Length (ft)	Area (acres)	Riparian/Riverine Area
A	1,030	1.666	Riparian
A1.1	47	0.003	Riverine
B	118	0.005	Riverine
Subtotal	1,195	1.674	
A (off-site)	156	0.203	Riparian
Total	1,351	1.877	

NOTES:

^a MSHCP Riparian/Riverine Areas are equivalent to CDFW jurisdiction.

Source: ESA PCR, 2016.

The biological function and value of the Riparian Area within Drainages A include the transport of water and the associated native and non-native riparian plant species that provide potential resources for wildlife species including potential cover and foraging habitat for the least Bell’s vireo; all focused surveys were negative. Although Drainage A supports riparian habitat, the drainage is considered of somewhat reduced function and value since the habitat areas show signs

of human disturbance, including a makeshift bike course (comprised of dirt jumps) and large debris (abandoned furniture). Additionally, Drainage A is supported by short-term flows typically associated with extended periods of dry conditions and is therefore limited in its ability to support healthy and contiguous riparian vegetation communities within the active channel; as such, Drainage A currently lacks the appropriate vegetation structure, density, and continuous canopy coverage preferred by many species. Drainages A1.1 and B are also considered of minimal function and value due to their erosional nature and extremely dry ephemeral flow regimes resulting in channel conditions that are nearly indiscernible from adjacent upland habitats, in addition to the presence of only limited upland vegetation, and the extremely limited watersheds that contribute a relatively small amount of overland flow to these erosional features (both drainages originate on-site and extend for only 47 LF and 118 LF, respectively). Other kinds of aquatic features that could provide suitable habitat for Riparian/Riverine species, such as fairy shrimp, are not present within the project study area (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 4**, *MSHCP Riparian/Riverine Plant Species*. One (1) MSHCP Riparian/Riverine plant species was determined to have a potential to occur on the study area, namely smooth tarplant (*Centromadia pungens* ssp. *laevis*). This species was considered to have a potential to occur due to the presence of suitable habitat on the study area; however, smooth tarplant was not observed during the focused plant surveys and therefore was concluded to be absent from the study area. The remaining MSHCP Riparian/Riverine plant species are not expected to occur within the study area due to the lack of suitable habitat.

**TABLE 4
MSHCP RIPARIAN/RIVERINE PLANT SPECIES**

Species	Potential to Occur within the Study Area
Brand's phacelia <i>Phacelia stellaris</i>	Not expected to occur. This species has not been recorded in the Wildomar area. There is only one occurrence record in CNDDDB within Riverside County, which was observed in 2000 in the City of Riverside near the Santa Ana River.
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>	Not expected to occur. This perennial plant has conspicuous flowers that would have been detected during the special-status plant surveys if present.
Engelmann oak <i>Quercus engelmannii</i>	Not expected to occur. This is a conspicuous tree species that would have been detected during the special-status plant surveys if present.
Fish's milkwort <i>Polygala cornuta</i> var. <i>fishiae</i>	Not expected to occur. The majority of occurrence records of this species on CNDDDB are confined to the Santa Ana Mountains.
graceful tarplant <i>Holocarpha virgata</i> ssp. <i>Elongate</i>	Not expected to occur due to disturbance. The study area is outside of the species' range; there are no known records of this species within the flatter agricultural areas east of the Santa Ana Mountains.
lemon lily	Not expected to occur due to the lack of suitable habitat. Also, the study area

Species	Potential to Occur within the Study Area
<i>Lilium parryi</i>	is outside the species' range; this species is restricted to the San Jacinto Mountains. The study area is outside of species' elevation range.
Mojave tarplant <i>Deinandra mohavensis</i>	Not expected to occur. The study area is outside the species range; this species is restricted to the San Jacinto Mountains. The study area is outside of species' elevation range.
mud nama <i>Nama stenocarpum</i>	Not expected to occur due to the lack of wetlands. None were incidentally observed during any 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 disturbance within the drainages and lack of shade; this species is typically found at higher elevations.
Orcutt's brodiaea <i>Brodiaea orcuttii</i>	Not expected to occur due to the lack of vernal pools.
Parish's meadowfoam <i>Limnanthes alba</i> ssp. <i>Parishii</i>	Not expected to occur due to the lack of suitable habitat. Also, the study area is outside the species' range; this species is restricted to the Santa Rosa Plateau within the MSHCP Plan Area. The study area is outside of this species' elevation range.
prostrate navarretia <i>Navarretia prostrata</i>	Not expected to occur due to the lack of suitable habitat. Also, the study area is outside the species' range; this species is restricted to the Santa Rosa Plateau within the MSHCP Plan Area. The study area does not support suitable vernal pool habitat.
San Diego button-celery <i>Eryngium aristulatum</i> var. <i>parishii</i>	Not expected to occur. The study area is outside the species' range; this species is restricted to the Santa Rosa Plateau within the MSHCP Plan Area. The study area does not support suitable vernal pool habitat.
San Jacinto Valley crownscale <i>Atriplex coronata</i> var. <i>notatior</i>	Not expected to occur due to the lack of suitable alkaline habitat.
San Miguel savory <i>Clinopodium chandleri</i>	Not expected to occur due to the lack of suitable metavolcanic substrate.
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>Sanctorum</i>	Not expected to occur due to lack of suitable habitat. The study area is outside the species' range; this species is restricted to the Santa Ana River and alluvial fan sage scrub habitat.
slender-horned spineflower <i>Dodecahema leptoceras</i>	Not expected to occur due to the lack of alluvial fan habitat.
smooth tarplant <i>Centromadia pungens</i> ssp. <i>Laevis</i>	Potential, but not observed. This species was not observed during the 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.
thread-leaved brodiaea <i>Brodiaea filifolia</i>	Not expected to occur due to the lack of vernal pools.
vernal barley <i>Hordeum intercedens</i>	Not expected to occur due to the lack of vernal pools.

Source: ESA PCR, 2016.

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 (1) species has the potential to occur within the study area, namely the least Bell's vireo, as indicated in **Table 5, MSHCP Riparian/Riverine Wildlife Species**. Least Bell's vireo was determined to have a low potential to occur in the marginally suitable riparian habitat associated with Drainage A and no potential to occur within A1.1 and B due to the absence of suitable habitat. Based on the presence of marginally suitable habitat within close proximity to a proposed bridge span over Drainage A, focused surveys for the least Bell's vireo were conducted. However, no least Bell's vireos were observed or detected within the study area during the focused surveys. No other MSHCP Riparian/Riverine wildlife species are expected to occur due to the lack of suitable habitat on the study area.

**TABLE 5
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 (perennial streams).
mountain yellow-legged frog <i>Rana muscosa</i>	Not expected to occur due to the lack of suitable habitat (perennial streams).
California red-legged frog <i>Rana aurora draytonii</i>	Not expected to occur due to the lack of suitable habitat (perennial streams).
bald eagle <i>Haliaeetus leucocephalus</i>	Not expected to occur due to the lack of suitable habitat for foraging and nesting.
least Bell's vireo <i>Vireo bellii pusillus</i>	Potentially suitable habitat present in Drainages A and A1. All focused surveys conducted in 2016 were negative.
American peregrine falcon <i>Falco peregrinus anatum</i>	Not expected to occur due to the lack of suitable habitat for foraging and nesting (cliffs overlooking open areas or large bodies of water).
southwestern willow flycatcher <i>Empidonax traillii extimus</i>	Not expected to occur due to the lack of suitable habitat for foraging and nesting.
western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	Not expected to occur due to the lack of suitable habitat for foraging and nesting; outside of the species range.
Santa Ana sucker <i>Catostomus santaanae</i>	Not expected to occur due to the lack of suitable habitat (perennial streams).
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	Not expected to occur due to the lack of suitable habitat (vernal pools).
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	Not expected to occur due to the lack of suitable habitat (vernal pools).
Santa Rosa Plateau fairy shrimp <i>Linderiella santarosae</i>	Not expected to occur due to the lack of suitable habitat (vernal pools).

Source: ESA PCR, 2016.

4.7.7.4 Narrow Endemic Plant Species Survey Area

The study area is not within the Narrow Endemic Plant Species Survey Area; therefore, no surveys were required for Narrow Endemic plant species.

4.7.7.5 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 special-status plant, amphibian, and mammal species.

Burrowing Owl Survey Area

The study area 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 4.7.6 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, a pre-construction survey is required within 30 days of ground disturbance based on the presence of suitable habitat.

Criteria Area Species Survey Area

The study area is not within the Criteria Area Species Survey Area; therefore, no surveys were required for Criteria Area plant species.

Amphibian Species Survey Area

The study area is not within the Amphibian Species Survey Area; therefore, no surveys are required.

Mammal Species Survey Area

The study area is not within the Mammal Species Survey Area; therefore, no surveys are required.

4.7.7.6 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.

As described in section 4.7.7.1 above, a portion of the off-site area extends into the southwestern corner of Criteria Cell 5419. Although it is ESA PCR's opinion that conservation of the off-site area would not aid in meeting the MSHCP's conservation goals for this Cell, the proximity of the study area to the rest of Cell residing north of Bundy Canyon Road has the potential to indirectly affect MSHCP Conservation Areas. Therefore, the project will be required to comply with measures listed in Section 6.1.4 of the MSHCP, including those related to night lighting, noise, grading/land development. Barriers such as native landscaping, rocks/boulders, fencing, walls, and/or signage are not necessary since Bundy Canyon Road acts as a barrier between the study area and the MSHCP Conservation Area. Additionally, all drainages ultimately drain into to

Murrieta Creek, which is encompassed by Constrained Linkage (13) and a number of criteria cells. Runoff from the site therefore has the potential to affect the quantity and quality of water downstream, in addition to the transport of plant seeds. Since the project will be required to comply with flood and water quality standards,¹⁴ no indirect effects from the quantity and quality of run-off will occur to downstream areas. At minimum, no invasive, non-native plant species listed in Tables 6-2 of the MSHCP, *Plants That Should Be Avoided Adjacent To The MSHCP Conservation Area*, will be utilized in the landscape plans. This will avoid dispersal of invasive plant seeds in the watershed.

¹⁴ The project will be required to prepare a Water Quality Management Plan and Storm Water Pollution Prevention Plan consistent with Regional Water Quality Control Board and County requirements that will outline measures such as Best Management Practices (BMPS) to address water quantity and quality, and to address any potential flooding.

5.0

Thresholds of Significance

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.

Note: Threshold BIO-A also encompasses the threshold on the Riverside County Environmental Assessment/Initial Study form as follows: “Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12).”

Threshold BIO-B Have a substantial adverse effect on any riparian habitat or other sensitive plant 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:

- “Substantial adverse effect” 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 special-status plant 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 quadrangle for the study area, namely Lake Elsinore and Wildomar. 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 study area is considered to comprise the following USGS topographic quadrangles: Alberhill, Murrieta, Perris, Romoland, Sitton Peak, Steele Peak, and Lake Mathews.

- “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

6.1 Regulatory Setting

Special-status 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 the proposed project. 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 special-status 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, *Special-status Biological Resources*.

6.1.1 Federal Regulations

As previously discussed in section 4.7.1, *Federal Special-status 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 would 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 Special-status 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 Wildlife 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 Special-status 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 ranked species are not protected per se, but warrant consideration in the preparation of biological assessments.

6.1.4 Local Regulations

The study area is within the adopted Western Riverside County MSHCP Plan area. The Western Riverside County MSHCP provides permits for the take of all species identified in the MSHCP as covered and conditionally covered, so long as the conditions imposed are satisfied (see also sections 4.7.3 and 4.7.7 above).

6.2 Project Related 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 assessment, 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 project sites.

The determination of impacts in this analysis is based on both the proposed project development plan and the biological values of the habitat and/or sensitivity of plant and wildlife species to be affected. Any recommended mitigation measures to address impacts are discussed in section 7.0 below. Compliance with existing regulations is also outlined in section 7.0 as Conditions of Approval.

The biological values of resources within, adjacent to, and outside the area to be affected by the proposed project were determined by consideration of several factors, as applicable. These included the overall size of habitats to be affected, the study area's previous land uses and disturbance history, the study area'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 study area'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 systems, 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 and guidelines on temporary impact areas for the drainage crossings, both provided by the project engineer. Acreages of impacts were calculated by overlaying the CAD data and adding the fuel modification zones over GPS data of biological resources collected by ESA PCR during the surveys.

6.3 Impact Analysis

6.3.1 Impacts to Special-status 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 Wildlife or U.S. Wildlife Service?

No Impacts (Special-status Plant Species)

Less than Significant with Mitigation Incorporated (Special-status Wildlife Species)

6.3.1.1 Special-status Plant Species

Development of the study area would result in the direct removal of numerous common plant species; a list of plant species observed within the study area is included in Appendix A. Common plant species present within the study area 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 not be considered a significant impact and no mitigation measures are required.

A total of 50 special-status plant species of the 73 species identified as occurring in the project vicinity in available databases (see section 4.7.5 above) are not expected to occur within the study area due to the lack of suitable habitat or because the site is outside the known distribution or elevation range for the species. These species are listed in Appendix B. As discussed in section 4.7.5, above, the remaining 23 special-status plant species were determined to have a potential to occur on-site; however, these 23 species are not expected to occur since focused surveys were

negative. As such, no impacts to special-status plant species would occur as a result of project development and no mitigation measures are required.

6.3.1.2 Special-status Wildlife Species

Development of the study area would result in the disruption and removal of habitat and the loss and displacement of common wildlife species. A list of wildlife species observed within the study area is included in Appendix A. Due to the limited amount of native habitat proposed for permanent project impacts (18.89 acres) and fire maintenance (0.88 acre) and the level of existing disturbance from human activity within the vicinity (e.g., nearby development), these impacts would not be expected to reduce the general wildlife populations below self-sustaining levels within the region and impacts to common wildlife species do not meet the significance thresholds defined in Section 5.0, *Thresholds of Significance* above. Therefore, impacts to common wildlife species would not be considered a significant impact and no mitigation measures are required.

A total of 18 special-status wildlife species of the 38 species identified as occurring in the project vicinity in available databases (see section 4.7.6 above) are not considered to have a potential to occur within the study area due to the lack of suitable habitat or because the site is outside the known distribution range for the species. These species are listed in Appendix C. Since these species are not expected to be present on the study area, no impacts would occur as a result of project development and no mitigation measures are required.

As discussed in section 4.7.5, above, the remaining 20 special-status wildlife species were determined to have a potential to occur on the study area. Of these species, focused surveys were conducted for the least Bell's vireo and burrowing owl, which are conditionally covered by the MSHCP with additional surveys required. A design feature (for least Bell's vireo) and mitigation measure (for burrowing owl) area proposed as discussed in further detail below. Of the remaining 18 potential special-status wildlife species, 13 species are covered by the MSHCP with no survey or conservation requirements for the study area, including Coast Range newt, coast horned lizard, orange-throated whiptail, red diamondback rattlesnake, golden eagle, Swainson's hawk, loggerhead shrike, coastal California gnatcatcher (observed), northwestern San Diego pocket mouse, Stephens' kangaroo rat (covered by the SKR HCP), Los Angeles pocket mouse, San Diego black-tailed jackrabbit (observed), and San Diego desert woodrat. Therefore, assuming payment of the applicable fees (the MSHCP Local Development Mitigation Fee and the SKR HCP fee for the Stephens' kangaroo rat) and compliance with required guidelines in the MSHCP (see section 7.2.3 below), no additional mitigation is required for these species.

The remaining five (5) species, the coast patch-nosed snake, long-eared owl, Dulzura pocket mouse, southern grasshopper mouse, and western mastiff bat are not covered by the MSHCP. These species are listed as species of special concern by the CDFW and do not carry a federal or state listing as threatened or endangered. These species are considered to have a moderate to very low potential to occur on the study area based on the limited habitat and/or quality of the habitat, and no significant impacts are anticipated to these species as described below. The study area also has the potential to support migratory birds and raptors that are discussed further in 6.3.4.2 of this report.

- No significant impacts to coast patch-nosed snake since this species is considered to have a low potential to occur on the study area due to a limited number of burrows observed, which are required for this species for overwintering. The nearest CNDDDB occurrence record of this species was recorded in 2004, approximately 9.5 miles to the northwest of the study area near Alberhill.
- No significant impacts to long-eared owl since this species is considered to have only a very low potential for foraging with no potential for breeding on the study area. The potential for foraging was considered to be very low for this species since the study area supports very few open areas suitable for hunting. There are only two CNDDDB occurrence records of this species in Riverside County, both of which were recorded in 1983 approximately 12.75 miles to the northwest of the study area near Harford Springs County Park in the City of Perris.
- No significant impacts to Dulzura pocket mouse since this species is only considered to have a low potential to occur since only a few fossorial mammal burrows were observed on the study area, and as such, the study area would not be expected to support large populations of this species, if present. Additionally, the study area does not support this species' preferred habitat (grass-chaparral ecotone). The nearest CNDDDB occurrence record of this species was recorded in 2005 approximately 6.75 miles to the southeast of the study area near Murrieta.
- No significant impacts to southern grasshopper mouse since this species is only considered to have a very low potential to occur since only a few fossorial mammal burrows were observed on the study area, and as such, the study area would not be expected to support large populations of this species, if present. Additionally, the preferred habitat type (desert scrub habitat) is not present on the study area. The nearest CNDDDB occurrence record of this species was recorded in 1932 approximately 8.25 miles to the northeast of the study area near Menifee.
- No significant impacts to western mastiff bat is anticipated since this species is only considered to have a low potential to occur for foraging with no suitable roosting habitat on the study area. Foraging habitat exists in the open areas to the north and south of the study area and permanent impacts to a relatively small acreage of suitable foraging habitat (13.99 acres) would not likely impact this species to below self-sustaining populations. The nearest CNDDDB occurrence record of this species was recorded in 2001 approximately 3.1 miles to the northeast of the study area.

The above five species were not considered for coverage under the MSHCP, indicating that regionally significant populations of these species do not exist within the MSHCP boundaries. Based on the above discussion, the study area is not capable of supporting large populations of these species and a loss of a few individuals, if present, is not likely to reduce regional population numbers. Therefore, any impacts to these species would be less than significant and no mitigation measures are considered required.

Least Bell's Vireo

Least Bell's vireo (Federally Endangered, State Endangered), has a potential to occur on the study area due to suitable riparian habitat (coast live oak woodland and red willow thicket) within Drainage A. As discussed in section 4.7.6 above, the riparian habitat associated with Drainage A

was considered only marginally suitable for least Bell's vireo due to lack of vegetation structure, density, and continuous canopy preferred by this species. Although the habitat was considered marginal, focused surveys for least Bell's vireo were conducted, all of which were negative. No direct temporary impacts are proposed to least Bell's vireo habitat associated with the installation of a temporary access road and railroad car bridge since they were specifically designed to occur in areas that are already disturbed and do not support vegetation suitable for least Bell's vireo. No direct permanent impacts are proposed to least Bell's vireo habitat associated with the construction of the permanent bridge crossing to access the development since the bridge is designed to span the entirety of Drainage A in an area that supports little to no understory and the bridge abutments will be placed outside of the limits of the riparian vegetation. To avoid potential indirect impacts to least Bell's vireo habitat during the nesting season, a PDF (PDF-1) is proposed by the project and is discussed in detail above in section 2.2.1, *Project Design Feature*. The PDF requires a 3-day pre-construction survey to be conducted within the bridge impact area (bridge footprint and abutments) and a 500-foot buffer if bridge construction activities commence during the nesting season (April 10-July 31). The PDF would reduce any indirect impacts associated with the construction of the bridge to a less than significant level.

Burrowing Owl

The study area supports potentially suitable burrowing owl (Species of Special Concern) habitat, but no burrowing owl burrows, signs, or individuals were found on-site during the Step I and Step II surveys. Although the study area does not currently support burrowing owls, a pre-construction survey is required in compliance with the MSHCP. Specifically, 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), a pre-construction survey for burrowing owl is required within 30 days prior to ground disturbance to avoid potential direct take of burrowing owls in the future. A Condition of Approval (COA BIO-1) requiring this survey is provided in section 7.2.1 below, in addition to a recommended mitigation measure (MM BIO-1) should burrowing owls be present in the future. Mitigation is proposed consistent with the burrowing owl mitigation guidelines published by CDFW (CDFW, 2012).

6.3.2 Impacts to Special-status Plant Communities

Threshold BIO-B: Would the project have a substantial adverse effect on any riparian habitat or other sensitive plant 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?

Less than Significant (Special-status Plant Communities)

No Impact (CDFW Jurisdiction)

6.3.2.1 Special-status Plant Communities

The study area supports eight native plant communities totaling 26.39 acres, including California buckwheat scrub (3.08 acres), California sagebrush scrub (5.83 acres), California

buckwheat/California sagebrush scrub (3.89 acres), chamise chaparral (8.86 acres), coast live oak woodland (1.64 acres), giant wild rye grassland/non-native grassland (0.03 acre), red willow thicket (0.51 acre), and white sage scrub (2.55 acres), as summarized in **Table 6, Existing and Proposed Impacts to Plant Communities**.

**TABLE 6
EXISTING AND PROPOSED IMPACTS TO PLANT COMMUNITIES^a**

Plant Communities	Existing (acres)	Project Impacts (acres)	Fire Maintenance (acres)	Temporary Construction Disturbance (acres)	Temporary Access Road and Bridge (acres)
California Buckwheat Scrub	3.08	2.16	0.00	0.39	0.02
California Sagebrush Scrub	5.83	1.34	0.36	0.60	0.00
California Buckwheat Scrub/California Sagebrush Scrub	3.89	1.47	0.35	0.64	0.00
Chamise Chaparral	8.86	6.60	0.17	1.11	0.00
Coast Live Oak Woodland	1.64	0.00 ^c	0.00	0.02	0.17
Giant Wild Rye Grassland ^b /Non-native Grassland	0.03	0.00	0.00	0.00 ^e	0.00
Red Willow Thicket ^b	0.51	0.00	0.00	0.00	0.00
White Sage Scrub ^b	2.55	2.42	0.00 ^d	0.09	0.00
Non-native Grassland	0.11	0.01	0.00	0.02	0.00
Ruderal	0.39	0.17	0.00	0.22	0.00
Ruderal/California Buckwheat Scrub	0.16	0.16	0.00	0.00	0.00
Ruderal/California Sagebrush Scrub	0.26	0.00	0.00	0.02	0.04
Disturbed	0.72	0.60	0.00	0.10	0.01
Disturbed-California Buckwheat Scrub	1.45	0.88	0.00	0.35	0.00
Total	29.48	15.81	0.88	3.56	0.24

NOTES:

^a On-site and off-site plant community acreages are combined, where applicable.

^b These communities are high priority [for conservation] vegetation communities denoted on the CDFW "List of California Terrestrial Natural Communities".

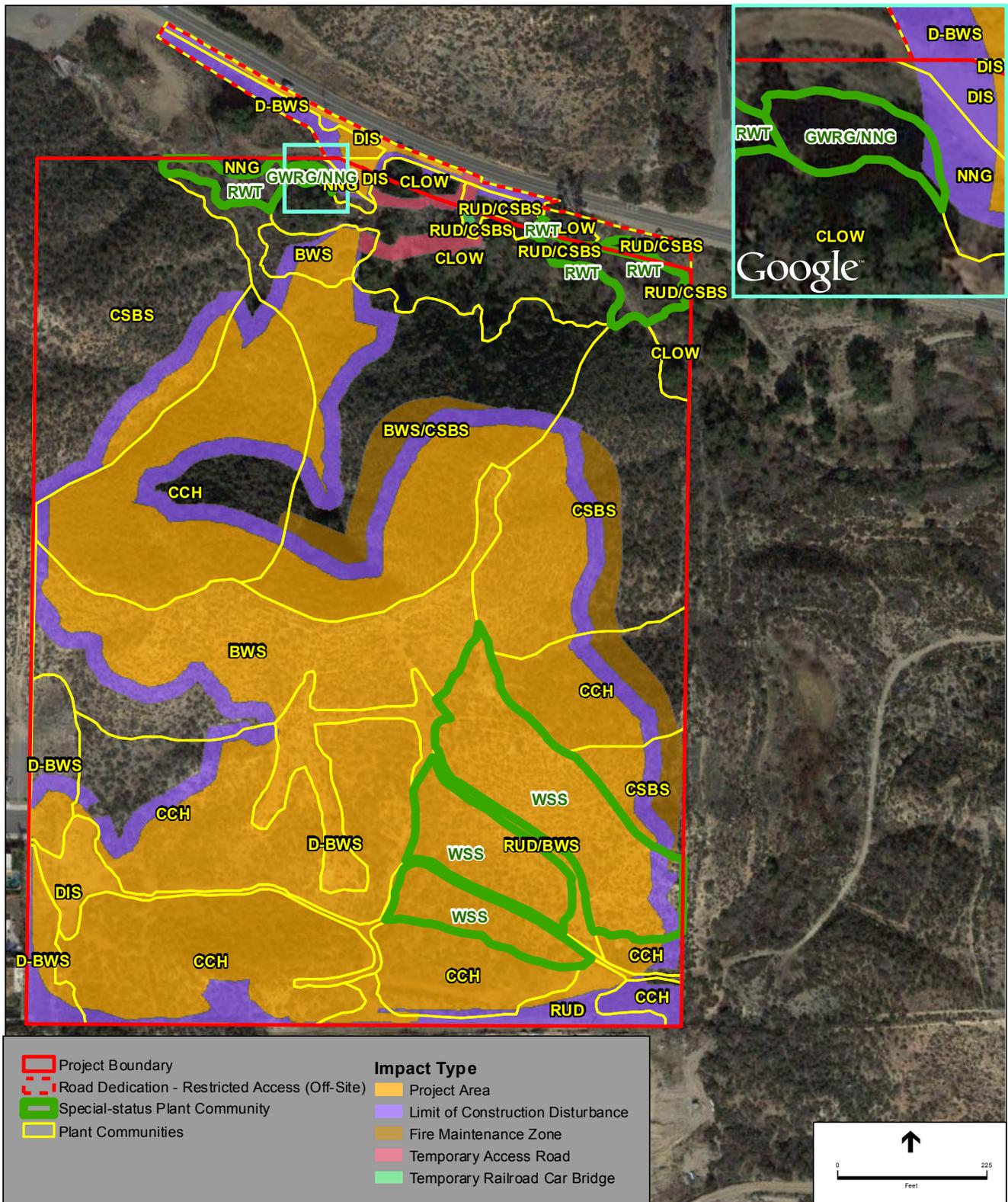
^c Permanent impacts to coast live oak woodland are considered negligible. Actual impacts are 0.001 acre.

^d Fire Maintenance impacts to white sage scrub are considered negligible. Actual impacts are 0.003 acre.

^e Temporary impacts to giant wild rye grassland/non-native grassland are considered negligible. Actual impacts are 0.002 acre.

SOURCE: ESA PCR, 2016

Permanent impacts are proposed to 15.81 acres, which includes 13.99 acres of native plant communities and 1.82 acres of non-native/disturbed vegetation, as shown in as **Figure 11, Impacts to Plant Communities**. A total of 0.88 acre of native vegetation is subject to fuel modification. In addition to permanent impacts, the project proposes 3.56 acres (2.85 acres of native vegetation and 0.71 acre of non-native/disturbed vegetation) of temporary impacts associated with construction and 0.24 acre (0.19 acre of native vegetation and 0.05 acre of non-native/disturbed vegetation) of impacts associated with a temporary access road and railroad car bridge.



SOURCE: Google Maps, 2015 (Aerial).

Bundy Canyon Resort Apartments Project
Figure 11
 Impacts to Plant Communities

Construction of the project requires the use of an existing access road that traverses beneath the canopy of existing oak woodlands and placement of a 50' railroad card intended to span and protect an existing Arizona crossing within Drainage A, which is necessary for construction vehicles to access the study area from Bundy Canyon Road. Approximately 0.19 acre of coast live oak woodland will be temporarily impacted by construction and the access road and bridge; however, no trimming or removal of coast live oak trees will occur. Temporary impacts will be to the understory of the coast live oak woodland only, which primarily consists of upland species such as California sagebrush and tree tobacco. Impacts to vegetation associated with Drainage A that are under CDFW jurisdiction will be avoided.

Three of the eight native plant communities are considered special-status habitats (high priority for inventory) by CDFW, namely giant wild rye grassland/non-native grassland, red willow thicket, and white sage scrub. These three special-status plant communities total 3.09 acres on the study area. The remaining five native communities, four non-native dominated communities, and the disturbed areas are not considered special-status habitats. A total of 2.42 acres of permanent impacts and 0.09 acre of temporary impacts are proposed to white sage scrub only, as summarized in Table 6 below. Impacts to red willow thickets associated with Drainage A and to giant wild rye grassland/non-native grassland will be completely avoided. A total of 0.58 acre of special-status communities would be completely avoided, as shown on Figure 11. With payment of the MSHCP Local Development Mitigation Fee and compliance with required guidelines in the MSHCP (see section 7.2.3 below), no additional mitigation is required for impacts to these two special-status plant communities

6.3.2.2 CDFW Jurisdiction

The study area supports drainages that are considered jurisdictional streambeds pursuant to Section 1602 of the California Fish and Game Code, as regulated by CDFW. Drainages A, A1.1, and B are all jurisdictional. However, the project has been designed to avoid all permanent and temporary impacts to CDFW jurisdictional areas.

No impacts to the streambed or its vegetation within Drainage A associated with a proposed permanent bridge structure or its abutments are anticipated, as shown in **Figure 12, Avoidance of Jurisdictional Features and MSHCP Riparian/Riverine Areas**. Construction of the project requires the use of an existing access road that traverses beneath the canopy of existing oak woodlands and placement of a 50' railroad card intended to span and protect an existing Arizona crossing within Drainage A, which is necessary for construction vehicles to access the study area from Bundy Canyon Road. Neither the railroad car bridge nor the access road will result in impacts to CDFW jurisdictional areas, as the railroad car structure is intended to protect the bed and banks of the construction crossing area which does not support riparian vegetation, and use of the existing access roads will not require trimming of existing oak trees.

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?

No Impacts

The study area supports drainages that are considered jurisdictional streambed pursuant to Section 1602 of the California Fish and Game Code, as regulated by CDFW, which are proposed for impacts. Drainages A, A1.1, and B are all jurisdictional. However, the project has been designed to avoid all permanent and temporary impacts USACE/RWQCB jurisdictional areas.

No impacts to the streambed within Drainage A associated with a proposed permanent bridge structure or its abutments are anticipated, as shown in Figure 12. Construction of the project requires the use of an existing access road that traverses beneath the canopy of existing oak woodlands and placement of a 50' railroad card intended to span and protect an existing Arizona crossing within Drainage A, which is necessary for construction vehicles to access the study area from Bundy Canyon Road. Neither the railroad car bridge nor the access road will result in impacts to USACE/RWQCB jurisdictional areas, as the railroad car structure is intended to protect the bed and banks of the construction crossing area which does not support riparian vegetation, and use of the existing access roads will not require trimming of existing oak trees.

6.3.4 Impacts to Wildlife Movement and Migratory Species

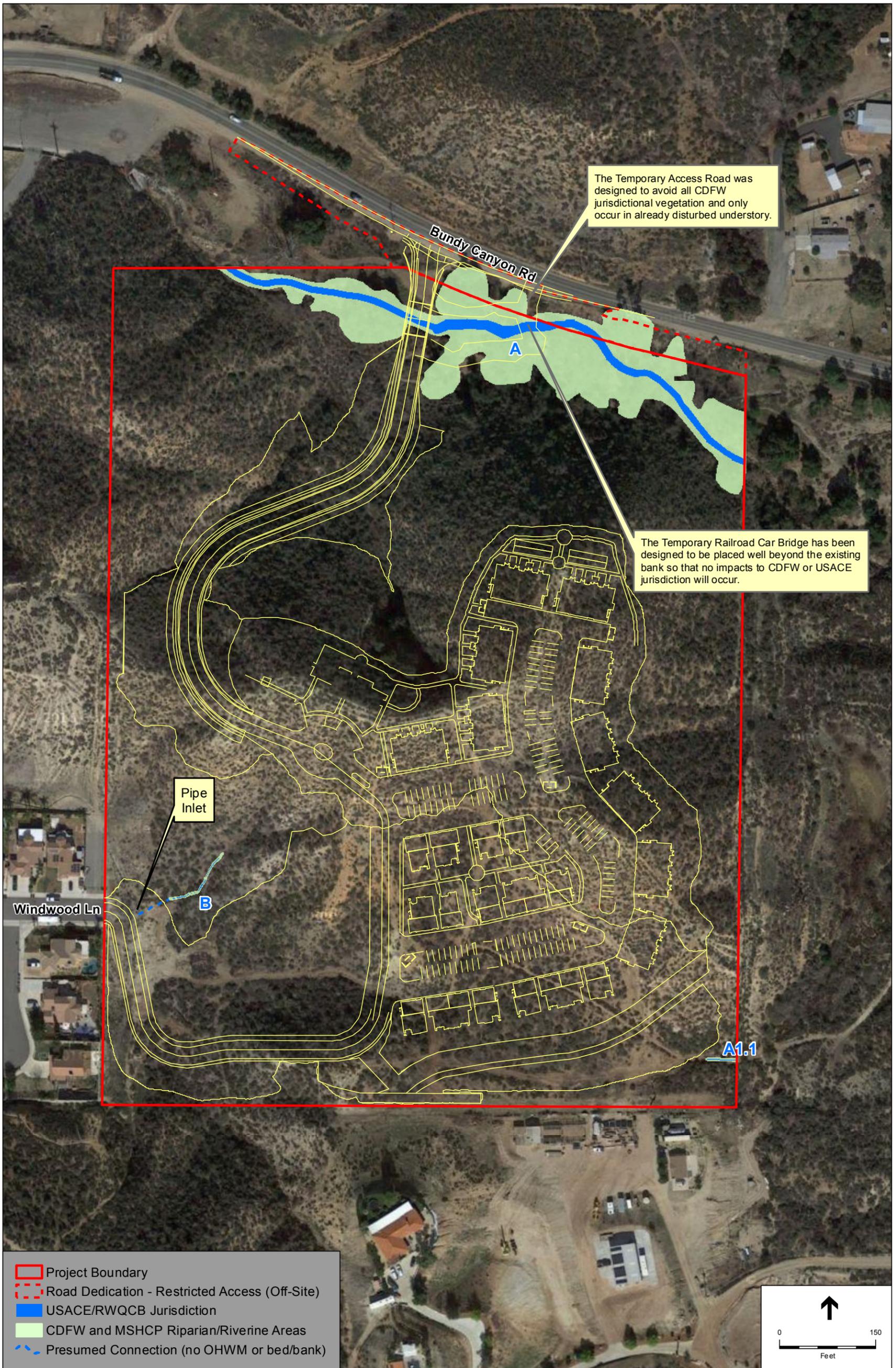
Threshold BIO-D: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery areas?

Less than Significant (Wildlife Movement)

Less than Significant with Mitigation Incorporated (Migratory Species)

6.3.4.1 Wildlife Movement

As described in section 4.6.2 above, the study area 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 mammal species), and may occasionally facilitate regional movement due to the study area's proximity to a MSHCP-proposed linkage. However, regional movement through the study area is likely limited due to topographical constraints, surrounding development, and limited riparian corridor associated with Drainage A. Additionally, the study area is not within an MSHCP Core Area or Linkage and is not identified as a regionally important dispersal or seasonal migration corridor by South Coast Wildlands. Since the study area does not support habitat that connects two or more habitat patches that would otherwise be fragmented or isolated from one another, the study area is not considered a wildlife corridor and development of the project would not impede regional wildlife movement.



SOURCE: Google Maps, 2015.

Bundy Canyon Resort Apartments Project

Figure 12

Avoidance of Jurisdictional Features and MSHCP Riparian/Riverine Areas

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Movement on a local scale likely occurs with species adapted to urban environments due to the development and disturbances in the vicinity of the study area. Although implementation of the project would result in disturbances to local wildlife movement within the study area, those species adapted to developed areas would be expected to persist on-site following construction, particularly within the avoided areas on the study area including Drainage A. As such, impacts would be less than significant and no mitigation measures would be required. Since the study area 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

As previously discussed in section 4.7.6, *Special-status Wildlife Species*, the site supports potential nesting, including shrubs and trees, and potential foraging habitat for migratory birds. Although limited, there is some suitable foraging habitat for raptors, primarily in the disturbed areas in the southern portion of the study area. Due to limited acreage of the study area and its proximity to an existing residential community to the west, the foraging habitat is considered to be moderate quality. Higher quality foraging habitat is considered to occur in less developed areas with larger expanses of open space, such as the areas to the north and south of study area. The loss of a relatively small acreage of habitat would not be expected to significantly impact the foraging of these species as the open areas to the north and south of study area provide higher quality foraging habitat for displaced individuals. Therefore, impacts to foraging habitat would be considered less than significant and no mitigation measures are considered required.

The study area has the potential to support songbird and raptor nests due to the presence of shrubs, ground cover, and trees on-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 Wildlife Code Section 3503. As such direct impacts to breeding birds (e.g. through nest removal) or indirect impacts (e.g. by noise causing abandonment of the nest) is considered a potentially significant impact as defined by the thresholds of significance (Threshold BIO-D) in Section 6.0 above. Compliance with the MBTA would reduce impacts to a less than significant level, as detailed in MM BIO-2 (see Section 7.2.2).

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

The project does not conflict with any local policies or ordinances protecting biological resources, such as tree preservations or ordinances.

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 Mitigation Incorporated

The study area is within the Western Riverside County MSHCP and requires payment of the Local Development Mitigation Fee and compliance with requirements of the MSHCP including the Burrowing Owl Survey Area guidelines (Section 6.3.2 of the MSHCP) and the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (Section 6.1.2 of the MSHCP). As described in section 4.7.7.1 above, a portion of the off-site area (approximately 0.40 acre) is within the southwestern portion of Criteria Cell 5149 and supports disturbed disturbed-California sagebrush scrub. However, since MSHCP conservation goals for this Cell is concentrated in the northern and eastern portion of the Cell and the off-site area is separated from approximately 98 percent of the Cell by Bundy Canyon Road, it is ESA PCR's opinion that conservation of this off-site area would not aid in meeting the MSHCP's conservation goals for this Cell and the project should not be subject to the HANS process, although this determination is subject approval by RCA and the Wildlife Agencies. Nonetheless, the proximity of the study area to the rest of Cell residing north of Bundy Canyon Road has the potential to indirectly affect MSHCP Conservation Areas and the project will be required to comply with measures listed in the Section 6.1.4 of the MSHCP, including those related to drainage, toxics, invasives trash/debris, lighting, noise, and grading/land development. Barriers such as native landscaping, rocks/boulders, fencing, walls, and/or signage are not necessary since Bundy Canyon Road acts as a barrier between the study area and the MSHCP Conservation Area.

Project compliance with the MSHCP pertaining to Burrowing Owl, Riparian/Riverine, and Urban/Wildlands Interface are summarized below:

- The study area is within the Burrowing Owl Survey Area of the MSHCP. Focused burrowing owl surveys were conducted within areas of the study area that support potentially suitable habitat for this species. No burrowing owls were observed. However, due to the presence of potentially suitable habitat, a 30-day pre-construction survey for burrowing owl is required pursuant to the MSHCP. If burrowing owls are found within the study area during the 30-day pre-construction, survey impacts to this species would be potentially significant. The Condition of Approval and mitigation measure prescribed in section 7.2.1 below would reduce this impact to a less than significant level and ensure consistency with the MSHCP.
- The project is proposing full avoidance of all MSHCP Riparian/Riverine Areas on the study area, and therefore a DBESP is not required.
- Although it is ESA PCR's opinion conservation of the off-site area that extends into Cell 5149 should not be subject to the HANS process, the proximity of the rest of the study area to the Cell has the potential to indirectly affect the adjacent MSHCP Conservation

Area. As such, the project is required to comply with the measures outlined in Section 6.1.4 of the MSHCP, including drainage, toxics, invasives, trash/debris, lighting, noise, and grading/land development. Compliance with measures outlined below will minimize the project's potential indirect effect on MSHCP Conservation Areas and are included as Condition of Approval (COA BIO-2) recommended in section 7.2.3.

Drainage/Toxics/Invasives: The project has the potential to affect the quantity and quality of water in downstream MSHCP Conservation Areas or Riparian/Riverine areas via Drainages A, A1.1, and B through runoff generated by the development and transport of invasive, non-native plants species from project landscaping. Since the project will be required to comply with flood and water quality standards,¹⁵ no indirect effects from the quantity and quality of run-off will occur to downstream areas. At minimum, no invasive, non-native plant species listed in Tables 6-2 of the MSHCP, Plants That Should Be Avoided Adjacent To The MSHCP Conservation Area, will be utilized in the landscape plans.

Trash/Debris: The following measures are proposed in order to minimize the amount of trash/debris created by the proposed project: activity restrictions placed on the tenants, the distribution of educational materials to the tenants, the placement of trash receptacles in common areas, street sweeping, and the placement and maintenance of inlet trash racks.

Lighting: The project has been designed to minimize night lighting while remaining compliant with Section 22 of Riverside County Ordinance 461 related to street lighting. Any necessary lighting will be shielded or directed away from Conservation Areas to protect species from direct night lighting.

Noise: Short-term construction-related noise impacts will be reduced by the implementation of a number of measures including the following:

- During all excavation and grading on-site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards to reduce construction equipment noise to the maximum extent possible. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the study area.
- The construction contractor shall stage equipment in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors nearest the study area during all project construction.
- All construction work shall occur during the daylight hours. The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours to be determined by the City.

¹⁵ The project will be required to prepare a Water Quality Management Plan and Storm Water Pollution Prevention Plan consistent with Regional Water Quality Control Board and County requirements that will outline measures such as Best Management Practices (BMPS) to address water quantity and quality, and to address any potential flooding.

- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes shall not pass through sensitive land uses or residential dwellings.

Grading/Land Development: Manufactured slopes associated with the proposed project shall not extend into MSHCP Conservation Areas. In addition, brush management, as well as all ground disturbing activities associated with construction and operation of the project, shall be contained within the project's impact footprint and shall not encroach into the Conservation Areas in accordance with Section 6.4 of the MSHCP.

7.0

Mitigation Measures and Conditions of Approval

7.1 Approach

Mitigation measures are recommended for those impacts determined to be significant to special-status biological resources (identified in italics in section 7.2 below). 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 under the proposed 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.
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
3. Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
5. 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 (identified in non-italics in section 7.2 below).

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 development Project.

7.2.1 Measures to Mitigate Potentially Significant Impacts to Special- status Wildlife Species

COA BIO-1 Due to the presence of suitable habitat and in compliance with the MSHCP, a pre-construction survey for burrowing owl is required within 30 days prior to ground disturbance to determine the presence of burrowing owls and avoid potential direct take of burrowing owls if present.

MM BIO-1 If burrowing owls are determined present during the 30-day 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, conducting pre-construction surveys, 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 the County of Riverside Environmental Programs Department (EPD), in coordination with the CDFW. The Burrowing Owl Exclusion Plan shall be prepared in accordance with the guidelines in the Staff Report on Burrowing Owl Mitigation and the MSHCP.

In accordance with the MSHCP, take of active nests will be avoided. Passive relocation (i.e., the scoping of the burrows by a burrowing owl biologist and collapsing burrows free of young) will occur when owls are present outside the nesting season. The EPD may require translocation sites for the burrowing owl to be created in the MSHCP reserve for the establishment of new colonies pursuant to MSHCP objectives for the species. Translocation sites, if required, will be identified in consultation with EPD and/or CDFW taking into consideration unoccupied habitat areas, presence of burrowing mammals, existing colonies, and effects to other MSHCP Covered Species.

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

MM BIO-2 Prior to the issuance of any grading permit that would remove potentially suitable nesting habitat for raptors or songbirds, the project applicant shall demonstrate to the satisfaction of the City of Wildomar that either of the following have 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 300 feet (500 feet for raptors) around the nest adjacent to construction will be delineated, flagged, and avoided until the nesting cycle is complete. The buffer may be modified and/or other recommendations proposed as determined appropriate by the biological monitor to minimize impacts.

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 MSHCP, including payment of the MSHCP Local Development Mitigation Fee, compliance with Section 6.1.2 of the MSHCP pertaining to Riparian/Riverine Areas, implementation of drainage, toxics, invasives, trash/debris, lighting, noise, and grading/land development guidelines pertaining to the Urban/Wildlands Interface in Section 6.1.4 of the MSHCP, and compliance with Section 6.3.2 of the MSHCP pertaining to Burrowing Owl Survey Area requirements.

8.0

Impacts after Mitigation

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 special-status wildlife species and migratory and/or nesting birds, in addition to providing MSHCP consistency.

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 study area are considered to be less than significant based on compliance with the Western Riverside County MSHCP and regulations for jurisdictional waters. 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* and the PDF described in section 2.2.1, *Project Design Feature*, above. Since the study area was determined not to function as a regional wildlife movement corridor and no impacts are proposed to special-status plant species or to jurisdictional features (including MSHCP Riparian/Riverine Areas), these biological resources are not included below.

- Burrowing owl;
- Least Bell’s vireo;
- Migratory and/or nesting birds;

The proposed mitigation and design feature would result in a minimum no-net-loss of the biological function and value of these 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, conditions of approval, and PDF, impacts would not be considered cumulatively significant. A summary is provided below.

Special-Status Wildlife Species: If any burrowing owls are observed on the study area in the future, mitigation is proposed that would avoid direct impacts in compliance with the Western Riverside County MSHCP. A PDF is incorporated to minimize and avoid any potential indirect impacts to least Bell's vireo associated with the construction of the permanent bridge during the nesting season. 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.

9.0

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APPENDIX A: FLORAL AND FAUNAL COMPENDIUM

ANGIOSPERMS (DICOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME
Adoxaceae	Muskroot Family
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry
Anacardiaceae	Sumac Family
<i>Rhus aromatica</i>	skunkbush
<i>Toxicodendron diversilobum</i>	Pacific poison oak
Asteraceae	Sunflower Family
<i>Acourtia microcephala</i>	sacapellote
<i>Ambrosia acanthicarpa</i>	flatspine bur ragweed
<i>Ambrosia psilostachya</i>	western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia dracunculoides</i>	tarragon
<i>Baccharis salicifolia</i>	mule fat
* <i>Carduus pycnocephalus</i>	Italian thistle
* <i>Centaurea melitensis</i>	toçalote
* <i>Centaurea solstitialis</i>	yellow star-thistle
<i>Corethrogyne filaginifolia</i>	common sandaster
<i>Deinandra fasciculata</i>	fascicled tarplant
<i>Encelia farinosa</i>	brittlebush
<i>Erigeron canadensis</i>	Canadian horseweed
<i>Eriophyllum confertiflorum</i>	golden-yarrow
<i>Eriastrum saphirinum</i>	sapphire woollystar
<i>Gutierrezia californica</i>	San Joaquin snakeweed
* <i>Helianthus annuus</i>	common sunflower
<i>Lepidospartum squamatum</i>	California broomsage
<i>Malacothrix saxatilis</i>	twiggy wreath plant
* <i>Oncosiphon piluliferum</i>	stinknet
<i>Pseudognaphalium californicum</i>	ladies' tobacco
* <i>Pseudognaphalium luteoalbum</i>	Jersey cudweed
* <i>Pulicaria paludosa</i>	Spanish false fleabane
<i>Stephanomeria exigua</i>	small wirelettuce
<i>Stephanomeria virgata</i>	rod wirelettuce
<i>Tetradymia comosa</i>	hairy horsebrush

* non-native

ANGIOSPERMS (DICOTYLEDONS)

SCIENTIFIC NAME

COMMON NAME

Boraginaceae

Amsinckia menziesii
Cryptantha intermedia
Heliotropium curassavicum
Phacelia campanularia
Phacelia cicutaria
Phacelia ciliata
Phacelia minor

Borage Family

Menzies' fiddleneck
 common cryptantha
 salt heliotrope
 desertbells
 caterpillar phacelia
 Great Valley phacelia
 wild canterbury-bells

Brassicaceae

* *Hirschfeldia incana*
 * *Sisymbrium irio*
 * *Sisymbrium orientale*

Mustard Family

short podded mustard
 London rocket
 Indian hedgemustard

Cactaceae

Cylindropuntia sp.

Cactus Family

cholla

Caprifoliaceae

Lonicera subspicata

Honeysuckle Family

southern honeysuckle

Chenopodiaceae

* *Chenopodium album*
 * *Chenopodium murale*
 * *Salsola tragus*

Goosefoot Family

lamb's quarters
 nettle-leaved goosefoot
 prickly Russian thistle

Crassulaceae

Dudleya lanceolata

Stonecrop Family

lanceleaf liveforever

Cuscutaceae

Cuscuta californica

Dodder Family

California dodder

Euphorbiaceae

Chamaesyce serpyllifolia
Euphorbia albomarginata
 * *Euphorbia peplus*
Stillingia linearifolia

Spurge Family

thyme-leaved spurge
 rattlesnake weed
 petty spurge
 linear-leaved stillingia

Fabaceae

Acmispon americanus
Acmispon glaber
 * *Melilotus indicus*

Legume Family

Spanish lotus
 deerweed
 sourclover

Fagaceae

Quercus agrifolia
Quercus berberidifolia

Oak Family

coast live oak
 scrub oak

* non-native

ANGIOSPERMS (DICOTYLEDONS)

SCIENTIFIC NAME

COMMON NAME

Geraniaceae

* *Erodium cicutarium*

Geranium Family

redstem stork's bill

Hydrophyllaceae

Eucrypta chrysanthemifolia

Waterleaf Family

common eucrypta

Lamiaceae

* *Marrubium vulgare*

Salvia apiana

Salvia columbariae

Salvia mellifera

Mint Family

horehound

white sage

Chia

black sage

Malvaceae

* *Malva parviflora*

Mallow Family

cheeseweed

Myrtaceae

* *Eucalyptus* sp.

Myrtle Family

gum tree

Nyctaginaceae

Mirabilis laevis

Four O'Clock Family

wishbone bush

Onagraceae

Camissoniopsis bistorta

Eulobus californicus

Evening Primrose Family

California suncup

California primrose

Papaveraceae

Eschscholzia californica

Poppy Family

California poppy

Phrymaceae

Diplacus aurantiacus

Diplacus brevipes

Lopseed Family

orange bush monkeyflower

wide throated monkeyflower

Plantaginaceae

Antirrhinum nuttallianum

Keckiella antirrhinoides

Plantain Family

Nuttall's snapdragon

chaparral beard-tongue

Polemoniaceae

Eriastrum sapphirinum

Gilia capitata

Phlox Family

sapphire woollystar

blue field gilia

Polygonaceae

Chorizanthe fimbriata

Eriogonum fasciculatum

Eriogonum gracile

Rumex crispus

Buckwheat Family

fringed spineflower

California buckwheat

slender woolly buckwheat

curly dock

Rhamnaceae

Ceanothus crassifolius

Buckthorn Family

hoary leaf ceanothus

* non-native

ANGIOSPERMS (DICOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME
<i>Rhamnus crocea</i>	spiny redberry
Rosaceae	Rose Family
<i>Adenostoma fasciculatum</i>	chamise
<i>Prunus ilicifolia</i>	holly-leaved cherry
Rubiaceae	Madder Family
<i>Galium angustifolium</i>	bedstraw
Salicaceae	Willow Family
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont's cottonwood
<i>Salix gooddingii</i>	black willow
<i>Salix laevigata</i>	red willow
<i>Salix lasiolepis</i>	arroyo willow
Solanaceae	Nightshade Family
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana attenuata</i>	coyote tobacco
* <i>Nicotiana glauca</i>	tree tobacco
<i>Solanum douglasii</i>	Douglas' nightshade
Platanaceae	Sycamore Family
<i>Platanus racemosa</i>	western sycamore

ANGIOSPERMS (MONOCOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME
Agavaceae	Agave Family
<i>Hesperoyucca whipplei</i>	chaparral yucca
Cyperaceae	Sedge Family
<i>Cyperus eragrostis</i>	tall cyperus
Juncaceae	Rush Family
<i>Juncus arcticus</i> ssp. <i>ater</i>	Baltic rush
Liliaceae	Lily Family
<i>Calochortus weedii</i> var. <i>weedii</i>	Weed's mariposa
<i>Dichelostemma capitatum</i>	blue dicks
Poaceae	Grass Family
* <i>Avena fatua</i>	wild oat
* <i>Bromus diandrus</i>	ripgut
* <i>Bromus hordeaceus</i>	soft chess
* <i>Bromus madritensis</i> ssp. <i>rubens</i>	foxtail chess
<i>Bromus tectorum</i>	cheat grass

* non-native

ANGIOSPERMS (MONOCOTYLEDONS)

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<i>Elymus condensatus</i>	giant wild rye
<i>Melica imperfecta</i>	coast range melic
* <i>Schismus barbatus</i>	Mediterranean schismus
<i>Stipa pulchra</i>	purple needlegrass
* <i>Vulpia myuros</i>	rattail fescue

* *non-native*

REPTILES

SCIENTIFIC NAME	COMMON NAME
Phrynosomatidae	Zebratail, Earless, Horned, Spiny, Fringe-Toed Lizards
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Sceloporus orcutti</i>	granite spiny lizard

BIRDS

SCIENTIFIC NAME	COMMON NAME
Anatidae	Waterfowl
<i>Anas platyrhynchos</i>	mallard
Odontophoridae	Quails
<i>Callipepla californica</i>	California quail
Cuculidae	Cuckoos and Roadrunners
<i>Geococcyx californianus</i>	greater roadrunner
Accipitridae	Hawks
<i>Buteo jamaicensis</i>	red-tailed hawk
Falconidae	Falcons
<i>Falco sparverius</i>	American kestrel
Columbidae	Pigeons and Doves
* <i>Columba livia</i>	rock pigeon
* <i>Streptopelia decaocto</i>	Eurasian collared-dove
<i>Zenaida macroura</i>	mourning dove
Trochilidae	Hummingbirds
<i>Calypte anna</i>	Anna's hummingbird
<i>Selasphorus sasin</i>	Allen's hummingbird
Picidae	Woodpeckers
<i>Colaptes auratus</i>	northern flicker
<i>Melanerpes formicivorus</i>	acorn woodpecker
<i>Picoides nuttallii</i>	Nuttall's woodpecker
Tyrannidae	Tyrant Flycatchers
<i>Sayornis nigricans</i>	black phoebe
<i>Myiarchus cinerascens</i>	ash-throated flycatcher
<i>Tyrannus verticalis</i>	western kingbird
Corvidae	Jays and Crows
<i>Aphelocoma californica</i>	western scrub-jay
<i>Corvus brachyrhynchos</i>	American crow

* non-native

BIRDS

SCIENTIFIC NAME	COMMON NAME
Aegithalidae	Bushtits
<i>Psaltriparus minimus</i>	bushtit
Troglodytidae	Wrens
<i>Thryomanes bewickii</i>	Bewick's wren
Sylviidae	Wrentits
<i>Chamaea fasciata</i>	wrentit
Mimidae	Thrashers
<i>Mimus polyglottos</i>	northern mockingbird
<i>Toxostoma redivivum</i>	California thrasher
Sturnidae	Starlings
* <i>Sturnus vulgaris</i>	European starling
Ptilonotidae	Silky-flycatchers
<i>Phainopepla nitens</i>	phainopepla
Parulidae	Wood Warblers
<i>Cardellina pusilla</i>	Wilson's warbler
<i>Setophaga coronata</i>	yellow-rumped warbler
Emberizidae	Emberizine Sparrows and Allies
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Pipilo maculatus</i>	spotted towhee
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
Cardinalidae	Buntings, Grosbeaks, and Tanagers
<i>Piranga ludoviciana</i>	western tanager
Fringillidae	Finches
<i>Haemorhous mexicanus</i>	house finch
<i>Spinus psaltria</i>	lesser goldfinch
<i>Spinus tristis</i>	American goldfinch
Passeridae	Old World Sparrows
* <i>Passer domesticus</i>	house sparrow

* non-native

MAMMALS

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
Canidae	Wolves and Foxes
<i>Canis latrans</i>	coyote
Leporidae	Hares and Rabbits
<i>Lepus californicus</i>	black-tailed jackrabbit
<i>Sylvilagus audubonii sanctidiegi</i>	Audubon's cottontail
Sciuridae	Squirrels and Chipmunks
<i>Otospermophilus beecheyi</i>	California ground squirrel

* *non-native*

APPENDIX B: SPECIAL-STATUS PLANT SPECIES

Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence
Bryophytes (Mosses)								
Bryaceae	Moss Family							
<i>Tortula californica</i>	California screw moss	N/A	None	None	1B.2	None	Sandy soil. Chenopod scrub, Valley and foothill grassland. 10-1460 meters.	None
Marchantiophyta (Liverworts)								
Sphaerocarpaceae	Bottle Liverwort Family							
<i>Geothallus tuberosus</i>	Campbell's liverwort	N/A	None	None	1B.1	None	Coastal scrub, vernal pools. 10-600 meters.	None
<i>Sphaerocarpos drewei</i>	bottle liverwort	N/A	None	None	1B.1	N/A	Chaparral, coastal scrub. 90-600 meters.	None
Pteridophytes (Ferns)								
Aspleniaceae	Spleenwort Family							
<i>Asplenium vespertinum</i>	western spleenwort	Mar.-Jun.	None	None	4.2	None	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. 274-825 meters.	None
Gymnosperms								
Cupressaceae	Cypress Family							
<i>Hesperocyparis forbesii</i>	Tecate cypress	N/A	None	None	1B.1	None	Clay, gabbroic or metavolcanic soils associated with closed-cone coniferous forest and chaparral.	None

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Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence
							80-1500 meters.	
Angiosperms (Dicots)								
Apiaceae	Carrot Family							
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	Apr.-Jun.	FE	SE	1B.1	MSHCP	Coast scrub, valley and foothill grassland, vernal pools. 20-620 meters.	None
Asteraceae	Sunflower Family							
<i>Ambrosia pumila</i>	San Diego ambrosia	Apr.-Oct.	FE	None	1B.1	MSHCP(b)	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; often in disturbed areas; sometimes alkaline sandy loam or clay soils. 20-415 meters.	Absent
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	Apr.-Sep.	None	None	1B.1	MSHCP(d)	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline. 0-640 meters.	Absent
<i>Deinandra paniculata</i>	paniculate tarplant	Apr.-Nov.	None	None	4.2	None	Generally vernal mesic; coastal scrub; valley and foothill grassland; vernal pools. 25-940 meters.	None
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	graceful tarplant	May-Nov.	None	None	4.2	MSHCP(e)	Chaparral; cismontane woodland; coastal scrub; valley and foothill woodland. 60-1100 meters.	None
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	Feb.-Jun.	None	None	1B.1	MSHCP(d)	Marshes and swamps (coastal salt), playas, vernal pools. 1-1220 meters.	None
<i>Microseris douglasii</i> ssp. <i>platycarpha</i>	small-flowered microseris	Mar.-May	None	None	4.2	None	Clay soils in cismontane woodland; coastal scrub; valley and foothill grassland; vernal pools. 15-1070 meters	None

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Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence
<i>Pseudognaphalium leucocephalum</i>	white-rabbit tobacco	Jul.-Dec.	None	None	2B.2	None	Chaparral, cismontane woodland, coastal scrub, riparian woodland. 0-2100 meters.	Absent
<i>Symphotrichum 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 (vernally mesic); near ditches, streams and springs. 2-2040 meters.	Absent
<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Wright's trichocoronis	May-Sep.	None	None	2B.1	MSHCP(b)	Meadows and seeps, marshes and swamps, riparian scrub, vernal. 5-435 meters.	None
<i>Viguiera laciniata</i>	San Diego County viguiera	Feb.-Jun.	None	None	4.2	None	Chaparral, coastal scrub; grows along slopes and ridgelines. 60-750 meters.	None
<i>Viguiera purisimae</i>	La Purisima Viguiera	Apr.-Sep.	None	None	2B.3	None	Coastal bluff scrub, chaparral; grows in arid, rocky areas within shrublands. 365-425 meters.	None
Boraginaceae	Borage Family							
<i>Amsinckia douglasiana</i>	Douglas' fiddleneck	Mar.-May	None	None	4.2	None	Valley and foothill grassland, oak woodland; grows on substrate composed of Monterey shale within arid habitats. 0-1950 meters.	None
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	Mar.-May	None	None	4.2	MSHCP	Chaparral, coastal scrub, valley and foothill grassland; open grassy areas within shrubland; clay soils. 20-955 meters.	Absent
Brassicaceae	Mustard Family							
<i>Caulanthus simulans</i>	Payson's jewel-flower	Feb.-Jun.	None	None	4.2	MSHCP	Chaparral, coastal scrub; sandy, granitic soils. 90-2200 meters.	Absent

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Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	Jan.-Jul.	None	None	4.3	None	Chaparral, coastal scrub; shrubland; dry soils. 1-885 meters.	Absent
<i>Sibaropsis hammittii</i>	Hammitt's clay-cress	Mar.-Apr.	None	None	1B.2	MSHCP(b)	Chaparral, valley and foothill grassland. 720-1065 meters.	None
Chenopodiaceae	Saltbush Family							
<i>Atriplex coronata</i> var. <i>notatior</i>	San Jacinto Valley crownscale	Apr.-Aug.	FE	None	1B.1	MSHCP(d)	Alkaline flats, playas, valley and foothill grassland, vernal pools. 139-500 meters.	None
<i>Atriplex pacifica</i>	south coast saltscale	Mar.-Oct.	None	None	1B.2	N/A	Coastal bluff scrub, coastal dunes, coastal scrub, playas. 0-140 meters.	None
<i>Atriplex parishii</i>	Parish's brittlescale	Jun.-Oct.	None	None	1B.1	MSHCP(d)	Chenopod scrub, playas, vernal pools. 25-1900 meters.	None
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale	Apr.-Oct.	None	None	1B.2	MSHCP(d)	Coastal bluff scrub, coastal scrub. 10-200 meters.	Absent
Convolvulaceae	Morning-glory Family							
<i>Convolvulus simulans</i>	small-flowered morning-glory	Mar.-Jul.	None	None	4.2	MSHCP(e)	Clay soils, serpentinite seeps; openings in chaparral; coastal sage scrub; valley and foothill grassland. 30-700 meters.	None
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer holly	Apr.-Jun.	None	None	1B.2	None	Chaparral, cismontane woodland, mixed chaparral; sometimes found in burned areas. 30-790 meters	None
Crassulaceae	Stonecrop Family							
<i>Dudleya multicaulis</i>	many-stemmed dudleya	Apr.-Jul.	None	None	1B.2	MSHCP(b)	Chaparral, coastal scrub, valley and foothill grassland often on clay soils.	Absent

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Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence
							15-790 meters.	
<i>Dudleya viscida</i>	sticky dudleya	May-Jun.	None	None	1B.2	MSHCP(f)	Coastal bluff scrub, chaparral, cismontane woodland, coastal scrub. 10-550 meters.	None
Ericaceae	Heath Family							
<i>Arctostaphylos rainbowensis</i>	rainbow manzanita	Dec.-Mar.	None	None	1B.1	MSHCP(e)	Chaparral. 205-670 meters.	Absent
Fabaceae	Legume Family							
<i>Pickeringia montana</i> var. <i>tomentosa</i>	woolly chaparral-pea	May-Aug.	None	None	4.3	None	Chaparral; grows on gabbroic or granitic substrates within clay soils. 0-1700 meters.	None
Fagaceae	Oak Family							
<i>Quercus engelmannii</i>	Engelmann oak	Mar.-Jun.	None	None	4.2	MSHCP	Cismontane woodland, chaparral, riparian woodland, valley and foothill grassland. 50-1300 meters.	None
Geraniaceae	Geranium Family							
<i>California macrophylla</i>	round-leaved filaree	Mar.-May	None	None	1B.1	MSHCP(d)	Cismontane woodland, valley and foothill grassland; clay. 15-1200 meters.	Absent
Juglandaceae	Walnut Family							
<i>Juglans californica</i>	southern California black walnut	Mar.-Jun.	None	None	4.2	MSHCP	Chaparral, coastal scrub, cismontane woodland, slopes, canyons, alluvial habitats. 50-900 meters.	None
Lamiaceae	Mint Family							
<i>Clinopodium chandleri</i>	San Miguel savory	Mar.-Jul.	None	None	1B.2	MSHCP	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland; grows within rocky, gabbroic, or metavolcanic soils.	Absent

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Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence
							120-1075 meters.	
<i>Lepechinia cardiophylla</i>	heart-leaved pitcher sage	Apr.-Jul.	None	None	1B.2	MSHCP(d)	Closed-cone coniferous forest, chaparral, cismontane woodland. 520-1370 meters.	None
<i>Monardella hypoleuca</i> ssp. <i>intermedia</i>	intermediate monardella	Apr.-Sep.	None	None	1B.3	None	Chaparral, cismontane woodland, lower montane, occasionally coniferous forest; generally grows on steep hillsides with dense brush. 400-1250 meters.	Absent
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella	Jun.-Aug.	None	None	1B.2	None	Chaparral, cismontane woodland; typically found as an understory species within sandy soils. 300-1575 meters.	None
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	Jun.-Oct.	None	None	1B.3	MSHCP	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. 730-2195 meters.	None
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	southern mountains skullcap	Jun.-Aug.	None	None	1B.2	None	Chaparral, cismontane woodland, lower montane coniferous forest; typically grows in gravelly soil on moist embankments of montane creeks. 425-2000 meters.	None
Limnanthaceae	Meadowfoam Family							
<i>Limnanthes alba</i> ssp. <i>parishii</i>	Parish's meadowfoam	Apr.-Jun.	None	SE	1B.2	MSHCP	Lower montane coniferous forest, meadows and seeps, vernal pools. 600-2000 meters.	None
Malvaceae	Stick-leaf Family							
<i>Ayenia compacta</i>	California ayenia	Mar.-Apr.	None	None	2B.3	None	Mojavean desert scrub, Sonoran desert scrub. 150-1095 meters.	None
Nyctaginaceae	Four O'Clock Family							

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Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand-verbena	Jan.-Sep.	None	None	1B.1	None	Chaparral, coastal scrub, desert dunes; sandy. 75-1600 meters.	Absent
Papaveraceae	Poppy Family							
<i>Romneya coulteri</i>	Coulter's matilija poppy	Mar.-Jul.	None	None	4.2	MSHCP(e)	Dry washes and canyons in sage scrub and chaparral. 20-1200 meters.	None
Phrymaceae	Lopseed Family							
<i>Mimulus clevelandii</i>	Cleveland's bush monkeyflower	Apr.-Jul.	None	None	4.2	MSHCP (f)	Chaparral, cismontane woodland, lower montane coniferous forest; grows within disturbed gravelly areas, such as long roadside. 450-2000 meters.	None
<i>Mimulus diffusus</i>	Palomar monkeyflower	Apr.-Jun.	None	None	4.3	MSHCP	Chaparral, lower montane coniferous forest. Grows in sandy or gravelly areas. 1220-1830 meters.	None
Picrodendraceae	Bitter-Tree Family							
<i>Tetradloccus dioicus</i>	Parry's tetradloccus	Apr.-May	None	None	1B.2	N/A	Chaparral and coastal scrub. 165-1000 meters.	None
Polemoniaceae	Phlox Family							
<i>Navarretia fossalis</i>	spreading navarretia	Apr.-Jun.	FT	None	1B.1	MSHCP(b)	Chenopod scrub, marshes and swamps, playas, vernal pools. 30-655 meters.	None
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	Apr.-Jul.	None	None	1B.1	MSHCP(d)	Coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. 5-1210 meters.	None
Polygalaceae	Milkwort Family							
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish's milkwort	May-Aug.	None	None	4.3	MSHCP(e)	Cismontane woodland, riparian woodland, chaparral; typically grows among oaks along ridges	None

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Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence
							and scree slopes and is often found along streams. 100-1000 meters.	
Polygonaceae	Buckwheat Family							
<i>Chorizanthe leptotheca</i>	Peninsular spineflower	May-Aug.	None	None	4.2	MSHCP(e)	Chaparral, coastal scrub, lower montane coniferous forest; granitic soils and alluvial fans. 300-1900 meters.	None
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	Apr.-Jun.	None	None	1B.1	MSHCP(e)	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; sandy or rocky, openings. 275-1220 meters.	Absent
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	Apr.-Jul.	None	None	1B.2	MSHCP	Chaparral, coastal scrub, meadow and seep, valley and foothill grassland, vernal pools; ultramafic, often clay. 30-1530 meters.	Absent
<i>Dodecahema leptoceras</i>	slender-horned spineflower	Apr.-Jun.	FE	SE	1B.1	MSHCP(b)	Chaparral, cismontane woodland, coastal scrub (alluvial fan); sandy. 200-760 meters.	Absent
Ranunculaceae	Buttercup Family							
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	Mar.-Jun.	None	None	3.1	MSHCP(d)	Associated with vernal pools and inundated grassland habitats. 20-640 meters.	None
Rosaceae	Rose Family							
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	Feb.-Sep.	None	None	1B.1	None	Chaparral (maritime), cismontane woodland, coastal scrub; sandy or gravelly soils. 70-810 meters.	Absent

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Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence
Angiosperms (Monocots)								
Cyperaceae	Sedge Family							
<i>Carex buxbaumii</i>	Buxbaum's sedge	Mar.-Aug.	None	None	4.2	None	Bogs, fens, meadows, seeps, marshes, and swamps. 3-3000 meters.	None
Juncaceae	Rush Family							
<i>Juncus acutus</i> ssp. <i>Leopoldii</i>	southwestern spiny rush	Mar.-Jun.	None	None	4.2	None	Mesic soils in coastal dunes; alkaline seeps in meadows; coastal salt marshes and swamps. 3-900 meters.	None
<i>Juncus luciensis</i>	Santa Lucia dwarf rush	Apr.-Jul.	None	None	1B.2	None	Chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, vernal pools. 300-2040 meters.	None
Liliaceae	Lily Family							
<i>Allium munzii</i>	Munz's onion	Mar.-May	FE	ST	1B.1	MSHCP(b)	Prefers chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland; mesic, clay soils. 297-1070 meters.	Absent
<i>Calochortus catalinae</i>	Catalina mariposa lily	Feb.-Jun.	None	None	4.2	None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; typically found in heavy soils within openings. 15-700 meters.	None
<i>Calochortus plummerae</i>	Plummer's mariposa lily	May-Jul.	None	None	4.2	MSHCP(e)	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest; rocky and sandy areas, typically of granitic or alluvial material; typically common after fire.	None

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Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence
							100-1700 meters.	
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily	May-Jul.	None	None	1B.2	MSCHP	Coastal scrub, chaparral, valley and foothill grassland on rocky soil and rocky outcrops. 105-855 meters.	Absent
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	ocellated Humboldt lily	Mar.-Jul.	None	None	4.2	MSHCP(e)	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, openings. 30-1800 meters.	None
<i>Lilium parryi</i>	lemon lily	Jul.-Aug.	None	None	1B.2	MSHCP(f)	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. 1220-2745 meters.	None
Poaceae	Grass Family							
<i>Hordeum intercedens</i>	vernal barley	Mar.-Jun.	None	None	3.2	MSHCP	Valley and foothill grassland, vernal pools, coastal dunes, coastal scrub, dry saline streambeds, alkaline flats. 5-1000 meters.	None
<i>Orcuttia californica</i>	California Orcutt grass	Apr.-Aug.	FE	SE	1B.1	MSHCP (b)	Vernal pools. 100-2000 meters.	None
Ruscaceae	Ruscus Family							
<i>Nolina cismontana</i>	chaparral nolina	May-Jul.	None	None	1B.2	None	Xeric Diegan sage scrubs, open chaparral, coastal scrub; generally grows within sandstone and shale substrates and occasionally within gabbro. 140-1275 meters.	Absent
Themidaceae	Butcher's-Broom Family							
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	Mar.-Jun.	FT	SE	1B.1	MSHCP(d)	Clay soils in coastal scrub, valley and foothill grassland, cismontane	Absent

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Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	MSHCP	Preferred Habitat	Potential For Occurrence																								
							woodland, and vernal pools. 25-1120 meters.																									
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	May-Jul.	None	None	1B.1	MSHCP	Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools. 30-1692 meters.	None																								
<i>Brodiaea santarosae</i>	Santa Rosa Basalt brodiaea	May-Jun.	NONE	NONE	1B.2	None	Valley and foothill grassland. 565-1045 meters.	Absent																								
Fungi (Ascomycota)																																
Caliciaceae	Lichen-forming Fungi																															
<i>Texosporium sancti-jacobi</i>	woven-spored lichen	N/A	None	None	3	None	Chaparral; found in open areas with chamise, buckwheat, club moss, and sometimes on small mammal droppings. 290-660 meters.	None																								
<p>Key to Species Listing Status Codes</p> <table> <tbody> <tr> <td>FE</td> <td>Federally Endangered</td> <td>SE</td> <td>State Listed as Endangered</td> </tr> <tr> <td>FT</td> <td>Federally Threatened</td> <td>ST</td> <td>State Listed as Threatened</td> </tr> <tr> <td>FC</td> <td>Federal Candidate</td> <td>SCE</td> <td>State Candidate for Endangered</td> </tr> <tr> <td>FPE</td> <td>Federally Proposed as Endangered</td> <td>SCT</td> <td>State Candidate for Threatened</td> </tr> <tr> <td>FPT</td> <td>Federally Proposed as Threatened</td> <td>SFP</td> <td>State Fully Protected</td> </tr> <tr> <td>FPD</td> <td>Federally Proposed for Delisting</td> <td>SSC</td> <td>California Species of Special Concern</td> </tr> </tbody> </table> <p>MSHCP Western Riverside County Multiple Species Habitat Conservation Plan covered species MSHCP (a) Surveys may be required as part of wetlands mapping per MSHCP Section 6.1.2. MSHCP (b) Surveys may be required within Narrow Endemic Plant Species survey area per MSHCP Section 6.1.3. MSHCP (c) Surveys may be required per MSHCP Section 6.3.2. MSHCP (d) Surveys may be required within Criteria Area per MSHCP Section 6.3.2. MSHCP (e) These Covered Species will be considered to be Covered Species Adequately Conserved when conservation requirements identified in species-specific conservation objectives have been met per MSHCP Section 9.0 (Table 9-3). MSHCP (f) These Covered Species will be considered to be Covered Species Adequately Conserved when a Memorandum of Understanding is executed with the Forest Service that addresses management for these species on Forest Service Land per MSHCP Table 9-3.</p> <p>SOURCE: ESA PCR, 2016</p>									FE	Federally Endangered	SE	State Listed as Endangered	FT	Federally Threatened	ST	State Listed as Threatened	FC	Federal Candidate	SCE	State Candidate for Endangered	FPE	Federally Proposed as Endangered	SCT	State Candidate for Threatened	FPT	Federally Proposed as Threatened	SFP	State Fully Protected	FPD	Federally Proposed for Delisting	SSC	California Species of Special Concern
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Appendix C: Special-Status Wildlife Species

Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
INVERTEBRATES						
Crustacea/Branchipoda	Fairy Shrimp					
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	NONE	MSHCP(a)	Valley and foothill grassland, vernal pool, wetland.	NONE No suitable habitat on the study area.
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE	NONE	MSHCP(a)	Coastal scrub, valley and foothill grassland, vernal pool, wetland.	NONE No suitable habitat on the study area.
Insecta/Lepidoptera	Butterflies and Moths					
<i>Euphydryas editha quino</i>	quino checkerspot butterfly	FE	NONE	MSHCP	Chaparral and coastal scrub with sunny clearings. Require high densities of host plants, cuhs as <i>Plantago erecta</i> , <i>P. insularis</i> , and <i>Orthocarpus purpureus</i> .	NONE No host species on-site.
FISHES						
Cyprinidae	Carp and Minnows					
<i>Gila orcutti</i>	arroyo chub	NONE	SSC	MSHCP	Aquatic and south coast flowing waters; slow water stream sections with mud or sand bottoms; feeds heavily on aquatic vegetation and associated invertebrates.	NONE There are no perennial water sources on the study area.
<i>Oncorhynchus mykiss irideus</i>	southern steelhead (southern California)	FE	NONE	N/A	Federal listing refers to populations from the Santa Maria River south to the southern extent of the species range (San Mateo Creek in San Diego County). Southern steelhead likely has greater	NONE Suitable perennial streams are not present.

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OBSERVED = Species was observed during surveys conducted on the study area.

Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
					physiological tolerance of warmer water and more variable conditions than northern subspecies.	
AMPHIBIANS						
Ranidae	True Frogs					
<i>Rana draytonii</i>	California red-legged frog	FT	SSC	MSHCP(c)	Aquatic, flowing and standing waters, marsh and swamps, riparian areas, wetlands. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	NONE No suitable habitat on the study area.
Salamandridae	Newts					
<i>Taricha torosa</i>	Coast Range newt	NONE	SSC	MSHCP	Terrestrial habitats, including valley-foothill hardwood/hardwood-conifer, coastal scrub, mixed chaparral, annual grassland, and mixed conifer habitats. This species will migrate over 1 kilometer to breed in ponds, reservoirs and slow-moving streams.	POTENTIAL [VERY LOW] There is marginally suitable habitat for this species within the coast live oak woodland forest associated with Drainage A and within sagebrush (e.g. California sagebrush scrub) and chaparral (e.g. chamise chaparral) habitats on the study area. The habitat is considered marginal since the study area and surrounding vicinity does not support water sources suitable for breeding.
Scaphiopodidae	North American Spadefoots					
<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,	None No suitable habitat on the study area.

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Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
					washes, and floodplains. Requires temporary pools for reproduction.	
Bufo	True Toads					
<i>Anaxyrus californicus</i>	arroyo toad	FE	SSC	MSHCP (c)	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.	NONE No suitable habitat on the study area.
REPTILES						
Colubridae	Colubrid Snakes					
<i>Salvadora hexalepis virgulata</i>	coast patch-nosed snake	NONE	SSC	N/A	Coastal scrub habitat or other scrub habitats near the coast; small mammal burrows are necessary for overwintering.	POTENTIAL [Low] The study area supports suitable scrub habitat (e.g. California buckwheat scrub and chamise chaparral) for this species, although only a limited number of suitable burrows for overwintering were observed within suitable habitat. The nearest CNDDDB occurrence record of this species was recorded in 2004, approximately 9.5 miles to the northwest of the study area near Alberhill.
<i>Thamnophis hammondi</i>	two-striped garter snake	NONE	SSC	N/A	Riparian and freshwater marshes with perennial water.	NONE There are no perennial water sources on the study area.
Emydoidea	Box and Water Turtles					
<i>Emys marmorata</i>	western pond turtle	None	SSC	MSHCP	Aquatic environments; artificial flowing waters; marsh and swamp;	None The drainages on-site consist of

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Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
					south coast flowing and standing waters; wetlands. Requires upland habitat up to 0.5 km from water for egg laying and sandy banks or open fields for basking.	ephemeral waters and wash areas.
Phrynosomatidae	Zebratail, Earless, Horned, Spiny, Fringe-Toed Lizards					
<i>Phrynosoma blainvillii</i>	coast horned lizard	NONE	SSC	MSHCP	Chaparral; cismontane woodland; coastal bluff scrub; coastal scrub; desert wash; pinyon and juniper woodlands; riparian scrub; riparian woodland; valley and foothill grassland. Requires opens areas for basking, bushes for cover, loose soil for burrowing, and insects for food.	POTENTIAL [MODERATE] The majority of the study area supports sagebrush (e.g. California sagebrush scrub) and chaparral (e.g. chamise chaparral) habitat for this species.
Teiidae	Whiptail Lizards					
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	NONE	SSC	MSHCP	Chaparral; cismontane woodland; coastal scrub. Typically found along washes and other sandy sites. Requires perennial plants that host termites.	POTENTIAL [MODERATE] The majority of the study area supports suitable chaparral and sagebrush habitat for this species.
Viperidae	Vipers					
<i>Crotalus ruber</i>	red diamond rattlesnake	None	SSC	MSHCP	Chaparral, woodland, and arid desert habitats in rocky areas with dense vegetation.	POTENTIAL [Low] The majority of the study area supports suitable chaparral and sagebrush habitat for this species; however, they are few suitable rocky areas on the study area.

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Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
BIRDS						
Accipitridae	Hawks					
<i>Aquila chrysaetos</i>	golden eagle	NONE	SFP	MSHCP	Mountains, deserts, and open country; prefer to forage over grasslands, deserts, savannahs and early successional stages of forest and shrub habitats.	NONE [N]; POTENTIAL [F, VERY LOW] This species typically requires wide open areas for foraging, which is not present on the study area. The study area does support shrub habitat that could support a prey source for this species, although limited burrows were observed.
<i>Buteo swainsoni</i>	Swainson's hawk	NONE	ST	MSHCP	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires suitable foraging areas adjacent to breeding areas such as grasslands that support rodent populations. This species will also hunt for reptiles and occasionally insects.	NONE (N); POTENTIAL (F, VERY LOW) Although there are a few trees within Drainage A, the trees are not likely to be suitable for breeding habitat due to noise disturbance from Bundy Canyon Road located directly to the north of the study area. The potential for foraging was considered to be very low for this species since the study area supports very few open areas suitable for hunting. Additionally, this species has not been recorded on CNNDDB within the vicinity of the project since 1933.
<i>Elanus leucurus</i>	white-tailed kite	NONE	SFP	MSHCP	Cismontane woodland; marsh and swamp; riparian woodland; valley and foothill grassland; wetland. Requires open grasslands, meadows, or marshes for foraging near isolated full-canopied trees for nesting.	NONE (N); NONE (F) No suitable habitat on the study area.

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Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
<i>Haliaeetus leucocephalus</i>	bald eagle	NONE	SE	MSHCP	Lower montane coniferous forest; old growth.	NONE (N); NONE (F) No suitable habitat on the study area.
Charadriidae	Plovers					
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT	SSC	N/A	Coastal scrub, chaparral, grasslands, sagebrush; typically feeds in wrackline along shore near beaches, lagoons, alkaline or saline lakes, reservoirs, and ponds. Breeds on dry land scattered with pebbles and/or coarse gravel.	NONE (N); NONE (F) No suitable habitat on the study area. Although the study area supports sagebrush and chaparral habitat, there is no open water habitat for this species to use for foraging. The study area lacks breeding habitat that is adjacent to suitable foraging habitat.
Strigidae	True Owls					
<i>Athene cunicularia</i>	burrowing owl	NONE	SSC	MSHCP(c)	Disturbed; low-growing vegetation within coastal prairie, coastal scrub, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, valley and foothill grassland; bare ground, disturbed.	NOT EXPECTED Although potentially suitable habitat was observed within the disturbed and ruderal areas in the southern and northern portions of the study area, no burrowing owls were observed during the focused surveys.
<i>Asio otus</i>	long-eared owl	NONE	SSC	N/A	Dense riparian bottomlands with tall willows & cottonwoods; also found in live oak patches along streams. Require adjacent open land with mice and old nests of crows, hawks, or magpies for breeding.	NONE (N); POTENTIAL (F, VERY LOW) The riparian habitat within Drainage A was not considered suitable breeding habitat for this species since it is limited and directly adjacent to Bundy Canyon Road, which creates noise disturbance. The potential for foraging was considered to be very low for this species since the study area supports very few open areas suitable for hunting. Additionally, there are only two CNDDB

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Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
						occurrence records of this species in Riverside County, both of which are approximately 12.75 miles to the northwest of the study area near Harford Springs County Park in the City of Perris.
Laniidae	Shrikes					
<i>Lanius ludovicianus</i>	loggerhead shrike	NONE	SSC	MSHCP	Broken woodlands, savannah, pinyon-juniper, Joshua tree, & riparian woodlands, desert oases, scrub & washes; open country with perches for hunting and relatively dense shrubs for nesting.	POTENTIAL (N, MODERATE); POTENTIAL (F, LOW) The majority of the study area supports relatively dense shrub habitat suitable for nesting. The potential for foraging was considered to be low for this species since the study area supports few open areas suitable for hunting and impaling prey.
Vireonidae	Vireos					
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE	SE	MSHCP(a)	Riparian forest; riparian scrub; riparian woodland.	NOT EXPECTED Although potentially suitable habitat was observed within the coast live oak woodland and red willow thickets, no individuals were observed during the focused surveys.
Parulidae	Wood Warblers					
<i>Icteria virens</i>	yellow-breasted chat	NONE	SSC	MSHCP	Nests in low, dense riparian willow thickets & other brushy tangles (e.g. blackberry, wild grape) near water. Forages and nests within 10 feet of ground.	NONE (N); NONE (F) The majority of the riparian vegetation associated with Drainage A lacks a dense understory with structural complexity that is typically preferred by this species.

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Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
Poliptilidae	Gnatcatchers					
<i>Poliptila californica californica</i>	coastal California gnatcatcher	FT	SSC	MSHCP	Coastal bluff scrub; coastal scrub.	OBSERVED This species was observed in the southern portion of the study area during the focused plant survey performed on May 17, 2016.
Icteridae	Blackbirds					
<i>Agelaius tricolor</i>	tricolored blackbird	NONE	SSC	MSHCP	Highly colonial species. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	NONE (N); NONE (F) No suitable habitat on the study area. There is no open water on the study area or within the immediate vicinity.
MAMMALS						
Heteromyidae	Pocket Mice and Kangaroo Rats					
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	NONE	SSC	N/A	Chaparral, coastal scrub, and valley and foothill grassland. Frequently found within grass-chaparral ecotone.	POTENTIAL [Low] The study area supports suitable chaparral and sagebrush habitat, although limited burrows were observed. Grass-chaparral ecotone preferred by this species is not present on the study area. The nearest CNDDB occurrence record of this species was recorded in 2005 approximately 6.75 miles to the southeast of the study area near Murrieta.
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	NONE	SSC	MSHCP	Coastal scrub, sagebrush, chaparral, grasslands, pinyon-juniper, and desert wash and scrub. Found in sandy, herbaceous areas with nearby	POTENTIAL [Low] A few fossorial burrows were observed, primarily in the open areas within the southern portion of the study area. The

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POTENTIAL = Preferred habitat was considered potentially present based on the literature review and observed habitat in the study area.

POTENTIAL (N) = Preferred nesting or roosting habitat was considered potentially present based on the literature review and observed habitat in the study area.

POTENTIAL (F) = Preferred foraging habitat was considered potentially present based on the literature review and observed habitat in the study area.

OBSERVED = Species was observed during surveys conducted on the study area.

Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
					shrubs for cover. Burrows are typically dug within gravelly or sandy soil.	majority of the study area supports compact soils and the few sandy areas on-site support limited herbaceous cover. The nearest CNDDDB occurrence record of this species is 4.5 miles to the southwest of the study area in the City of Murrieta.
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE	ST	MSHCP/SKR HCP	Prefers annual and perennial grasslands, but can occasionally be found in sparse coastal scrub or sagebrush. Sandy to sandy loam soils with low clay to gravel content.	POTENTIAL [Low] There are only two small pockets of fragmented grassland habitat in the northern portion of the study area. Although not preferred by this species, the southern portion of the study area supports some areas of sparse sagebrush habitat where a few fossorial burrows were observed. The northern portion of the site supports denser sagebrush habitat not considered suitable habitat for this species. The nearest CNDDDB occurrence record of this species was recorded in 1998 approximately 1.5 miles the southeast of the study area in the City of Wildomar.
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	NONE	SSC	MSHCP(c)	Lower elevation grasslands, alluvial sage scrub, and coastal sage communities. Sparsely vegetated habitat areas in patches of fine sandy soils associated with washes. May not dig burrows, rather using weeds and dead leaves.	POTENTIAL [VERY Low] There are only two small pockets of fragmented grassland habitat in the northern portion of the study area, although the site does support sagebrush habitat. There are some patches of open, sandy areas within Drainage A. The majority of CNDDDB occurrence records of this species are east of the I-215 freeway; the nearest record is 8.5 miles to the southeast of the study area.

NONE = Species not expected to occur due to the lack of suitable habitat, or the study area's location is outside of the species' range.

NONE (N) = Species not expected to nest or roost due to the lack of suitable habitat, or the study area's location is outside of the species' range.

NONE (F) = Species not expected to forage due to lack of food sources, or the study area's location is outside of the species' range.

NOT EXPECTED = Preferred habitat was considered potentially present based on the literature review and anticipated habitat in the study area, however no individuals were observed and/or suitable habitat was absent based on the general field survey or focused surveys.

POTENTIAL = Preferred habitat was considered potentially present based on the literature review and observed habitat in the study area.

POTENTIAL (N) = Preferred nesting or roosting habitat was considered potentially present based on the literature review and observed habitat in the study area.

POTENTIAL (F) = Preferred foraging habitat was considered potentially present based on the literature review and observed habitat in the study area.

OBSERVED = Species was observed during surveys conducted on the study area.

Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
Leporidae	Hares and Rabbits					
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	NONE	SSC	MSHCP	Arid regions with short grasses; coastal scrub.	OBSERVED This species was observed on 4/21 during the final BUOW survey.
Muridae	Mice, Rats, and Voles					
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	NONE	SSC	MSHCP	Coastal scrub and chaparral. Prefer areas with moderate to dense canopy cover. Frequently found in areas with rock outcrops and cliffs.	POTENTIAL [LOW] Low potential to occur within the suitable habitat in the northern portion of the study area (supports moderate to dense canopy cover). There are few exposed boulders and no cliffs on the study area. There is only one CNDDDB occurrence record of this species within the vicinity of the study area, which was recorded 16.25 miles to the northeast of the study area, just east of Lake Mathews.
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	NONE	SSC	N/A	Prefers alkali desert scrub and desert scrub habitats, although also found in succulent shrub, wash, riparian, coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats. Friable soil for digging burrows within habitats with low to moderate shrub cover is preferred. Food source is arthropods, especially scorpions and grasshoppers.	POTENTIAL [VERY LOW] Only a few fossorial burrows were observed, primarily in the open areas within the southern portion of the study area. Although preferred habitat is not present, potentially suitable habitat is present within the chaparral and coastal scrub habitats in the southern portion of the study area. The northern portion also supports chaparral and coastal scrub habitat, though the shrub cover is much denser than in the southern portion of the site. The nearest CNDDDB occurrence record of this species was recorded in 1932 approximately 8.25 miles to the northeast of the study area near Menifee

NONE = Species not expected to occur due to the lack of suitable habitat, or the study area's location is outside of the species' range.

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POTENTIAL = Preferred habitat was considered potentially present based on the literature review and observed habitat in the study area.

POTENTIAL (N) = Preferred nesting or roosting habitat was considered potentially present based on the literature review and observed habitat in the study area.

POTENTIAL (F) = Preferred foraging habitat was considered potentially present based on the literature review and observed habitat in the study area.

OBSERVED = Species was observed during surveys conducted on the study area.

Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
Mustelidae	Weasels, Badgers, and Otters					
<i>Taxidea taxus</i>	American badger	NONE	SSC	N/A	Open shrub, forest, and herbaceous habitats, with friable soils to dig burrows. Requires rodent populations for food source.	NONE No large burrows suitable for American badger were incidentally observed during focused surveys conducted for burrowing owl. The majority of soils are compact and not suitable for digging new burrows. There is only one CNDDDB occurrence record of this species within the vicinity of the study area, which was recorded 18.25 miles to the northeast near Perris Reservoir in the City of Lakeview.
Molossidae	Free-Tailed Bats					
<i>Eumops perotis californicus</i>	western mastiff bat	NONE	SSC	N/A	Chaparral; cismontane woodland; coastal scrub; valley and foothill grassland; mainly within arid open habitats. Preferred roosting habitat consists of crevices within rock outcrops and tall buildings, although this species has been known to use trees and tunnels for roost sites. Feeds on flying insects.	NONE [R]; POTENTIAL [F, MODERATE] The study area does not support this species preferred roosting habitat. The majority of the study area supports chaparral and costal scrub habitat suitable for this species to hunt insects. The nearest CNDDDB occurrence record of this species was recorded in 2001 approximately 3.1 miles to northeast of the study area.
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	NONE	SSC	N/A	Joshua tree woodland; pinyon and juniper woodland; desert scrub, palm oasis, desert wash, and desert riparian; Sonoran desert scrub. Typically roost in caves and rocky outcrops; prefers cliffs in order to obtain flight speed. Feeds on insects flying, over bodies of	NONE [R]; NONE [F] The study area does not support preferred roosting habitat, such as caves or rocky outcrops. Additionally, there is no suitable foraging habitat on the study area.

NONE = Species not expected to occur due to the lack of suitable habitat, or the study area's location is outside of the species' range.

NONE (N) = Species not expected to nest or roost due to the lack of suitable habitat, or the study area's location is outside of the species' range.

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POTENTIAL (N) = Preferred nesting or roosting habitat was considered potentially present based on the literature review and observed habitat in the study area.

POTENTIAL (F) = Preferred foraging habitat was considered potentially present based on the literature review and observed habitat in the study area.

OBSERVED = Species was observed during surveys conducted on the study area.

Scientific Name	Common Name	Federal	State	MSHCP	Preferred Habitat	Potential For Occurrence
					water or arid desert habitats to capture prey.	
Vespertilionidae	Evening Bats					
<i>Lasiurus xanthinus</i>	western yellow bat	NONE	SSC	N/A	Desert wash. Known to occur in palm oases.	NONE [R]; NONE [F] No suitable habitat on the study area.

Key to Species Listing Status Codes

FE	<i>Federally Endangered</i>	SE	<i>State Listed as Endangered</i>
FT	<i>Federally Threatened</i>	ST	<i>State Listed as Threatened</i>
FC	<i>Federal Candidate</i>	SCE	<i>State Candidate for Endangered</i>
FPE	<i>Federally Proposed as Endangered</i>	SCT	<i>State Candidate for Threatened</i>
FPT	<i>Federally Proposed as Threatened</i>	SFP	<i>State Fully Protected</i>
FPD	<i>Federally Proposed for Delisting</i>	SSC	<i>California Species of Special Concern</i>
MSHCP	<i>Western Riverside County Multiple Species Habitat Conservation Plan covered species</i>		
MSHCP(a)	<i>Surveys may be required as part of wetlands mapping per MSHCP Section 6.1.2.</i>		
MSHCP(b)	<i>Surveys may be required within Narrow Endemic Plant Species survey area per MSHCP Section 6.1.3.</i>		
MSHCP(c)	<i>Surveys may be required per MSHCP Section 6.3.2.</i>		
MSHCP(d)	<i>Surveys may be required within Criteria Area per MSHCP Section 6.3.2.</i>		
MSHCP(e)	<i>These Covered Species will be considered to be Covered Species Adequately Conserved when conservation requirements identified in species-specific conservation objectives have been met per MSHCP Section 9.0 (Table 9-3).</i>		
MSHCP(f)	<i>These Covered Species will be considered to be Covered Species Adequately Conserved when a Memorandum of Understanding is executed with the Forest Service that addresses management for these species on Forest Service Land per MSHCP Table 9-3.</i>		

Source: ESA PCR, 2016

NONE = Species not expected to occur due to the lack of suitable habitat, or the study area's location is outside of the species' range.

NONE (N) = Species not expected to nest or roost due to the lack of suitable habitat, or the study area's location is outside of the species' range.

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POTENTIAL (F) = Preferred foraging habitat was considered potentially present based on the literature review and observed habitat in the study area.

OBSERVED = Species was observed during surveys conducted on the study area.

Appendix D
**Burrowing Owl Focused Survey
Report**

June 16, 2016

Mr. Richard Darling
Darling Development Group
30770 Russel Ranch Road, Suite I
Westlake Village, CA 91362

Subject: Results of focused burrowing owl surveys for the Bundy Canyon Resort Apartments project in the City of Wildomar, Riverside County, California

Dear Mr. Darling:

This letter report summarizes the methodology and findings of focused burrowing owl (*Athene cunicularia*) surveys conducted by **ESA PCR** on the approximately 29-acre proposed Bundy Canyon Resort Apartment project with Assessor's Parcel Number (APN) 367-250-008 ("project site") and 0.44 acre off-site area located in the City of Wildomar, Riverside County, California. The surveys were conducted within suitable habitat on the project site, associated off-site area, and a 500-foot survey buffer surrounding the perimeter of the project site (collectively, the "survey area").

Project Site Description

The project site is located directly south of Bundy Canyon Road and east of Windwood Lane, approximately 0.85 mile to the east of the intersection of Interstate 15 (I-15) and Bundy Canyon Road, as shown in **Figure 1**, *Regional Map* (attached). The off-site area is located directly adjacent and to the north of the project site and south of Bundy Canyon Road. The project site and off-site area are depicted on the U.S. Geological Survey (USGS) 7.5' Lake Elsinore¹ and Wildomar² topographic quadrangle map (unsectioned), as shown in **Figure 2**, *Vicinity Map* (attached).

The project site is dominated by a steep hill that occurs in the center of the project site with relatively flat areas along the northern and southern boundaries. On-site elevations range from the lowest of approximately 1,465 feet above mean sea level (MSL) along the northern boundary to a high of approximately 1,690 feet above MSL along the main ridgeline in the center of the project site. Immediate surrounding land uses include residential development to the west, rural residential to the east, and open area to the north and south. Bundy Canyon Road abuts the northern project boundary.

Plant Communities

The project site and off-site area consist primarily of native upland vegetation characterized by California buckwheat scrub, California sagebrush scrub, chamise chaparral, and white sage scrub, with smaller patches of

¹ United States Geological Survey (USGS). 1953a. *Lake Elsinore*. California topographic quadrangle map. Photorevised 1988.

² USGS. 1953a. *Wildomar*. California topographic quadrangle map. Photorevised 1988

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riparian vegetation, including coast live oak woodland and red willow thicket. There are also some areas **that** are dominated by non-native vegetation, which are generally associated with the disturbed areas and ruderal vegetation on the project site. A brief description of each plant community that was surveyed for the presence of burrowing owl (BUOW) is provided below. The California Natural Community Code (CaCodes) assigned by the California Fish and Wildlife Department (CDFW) are in parentheses next to each community name.³

Coast Live Oak Woodland (71.060.00)

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*) trees and is the dominant community associated with Drainage A in the northern portion of the project site, and extends into a portion of the off-site area. Although some areas support contiguous canopy cover, there are some portions with openings in the canopy, which allows for emergent shrubs and herbaceous species such as mule fat (*Baccharis salicifolia*), red willow (*Salix laevigata*), western ragweed (*Ambrosia psilostachya*), giant wild rye (*Elymus condensatus*), and tree tobacco (*Nicotiana glauca*). A few western sycamores (*Platanus racemosa*) were also observed within the canopy layer of this community. Coast live oak woodland comprises approximately 1.46 acres on-site and 0.18 acre off-site.

Giant Wild Rye Grassland/Non-native Grassland (41.265.00)

Giant wild rye grassland/non-native grassland is dominated by giant wild rye interspersed with non-native grassland species such as foxtail chess (*Bromus madritensis* ssp. *rubens*), redstem stork's bill (*Erodium cicutarium*), and prickly Russian thistle (*Salsola tragus*). Giant wild rye grassland typically occurs on north-facing slopes at low elevations within loamy soil. Other associated species observed in this community include blue elderberry (*Sambucus nigra* ssp. *caerulea*) and California buckwheat (*Eriogonum fasciculatum*). Giant wild rye grassland/non-native grassland occurs in one small patch adjacent to Bundy Canyon Road in the northern portion of the project site and comprises approximately 0.03 acre on-site only.

Non-native Grassland (Not Applicable)

Non-native grassland is a semi-natural community of dense to sparse cover of exotic annual grasses, often with native annual forbs ("wildflowers"). On the project site, this community is dominated by wild oat. Other species observed within this community included foxtail chess, soft chess (*Bromus hordeaceus*), cheat grass (*Bromus tectorum*), ripgut (*Bromus diandrus*), redstem stork's bill, short podded mustard (*Hirschfeldia incana*), and western ragweed. Non-native grassland occurs in two small patches adjacent to Bundy Canyon Road near the northern boundary of the project site and comprises approximately 0.11 acre on-site only.

³ CDFW. 2010. *List of vegetation Alliances and Associations*. The Vegetation Classification and Mapping Program. Wildlife & Habitat Data Analysis Branch. September 2010.

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Ruderal (Not Applicable)

Ruderal vegetation is found in areas heavily disturbed by human activities, such as roadsides, graded fields, and manufactured slopes and is dominated by non-native species. Within the project site, species observed within this community include short podded mustard, prickly Russian thistle, Italian thistle (*Carduus pycnocephalus*), foxtail chess, and London rocket (*Sisymbrium irio*). Ruderal vegetation occurs along the southern boundary of the project site and occupies approximately 0.39 acre on-site only.

Ruderal/California Buckwheat Scrub (Not Applicable/32.040.02)

Ruderal/California buckwheat scrub is dominated by ruderal, weedy species but exhibits sparse, remnant species associated with California buckwheat scrub community, including California buckwheat, brittlebush (*Encelia farinosa*), and black sage (*Salvia mellifera*), interspersed throughout the community. The ruderal/California buckwheat scrub community occurs in a single linear patch in the southeastern portion of the project site and comprises approximately 0.16 acre on-site only.

Ruderal/California Sagebrush Scrub (Not Applicable/32.010.00)

Ruderal/California sagebrush scrub is dominated by ruderal, weedy species but exhibits sparse, remnant species associated with the California sagebrush community, including California sagebrush (*Artemisia californica*), California buckwheat, and western ragweed, interspersed throughout the community. The ruderal/California sagebrush scrub community occurs in two small patches adjacent to Bundy Canyon Road near the northern boundary of the project site and comprises approximately 0.06 acre on-site and 0.20 acre off-site.

Disturbed (Not Applicable)

Disturbed areas are areas that support little to no vegetation due to excessive human disturbance. Scattered vegetation included species such as brittlebush, chamise (*Adenostoma fasciculatum*), prickly Russian thistle, short podded mustard, and Mediterranean schismus (*Schismus barbatus*). Disturbed areas were observed adjacent to Bundy Canyon Road in the northern portion of the project site and within the off-site area. A disturbed area was also observed adjacent to the residential development at Windwood Lane in the southeastern portion of the project site, and includes a trail that extends from the disturbed patch through the southern portion of the project site. Disturbed areas comprise approximately 0.51 acre on-site and 0.02 acre off-site.

Disturbed-California Buckwheat Scrub (Not Applicable–32.040.02)

The disturbed-California buckwheat scrub community is dominated by non-native, exotic species introduced by human activities and disturbances, and also supports native species associated with California buckwheat scrub community. Within the project site, non-native, weedy species intermixed with the California buckwheat scrub species included those described above in the disturbed areas. The disturbed-California buckwheat scrub was

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observed in the southern portion of the project site in the flatter areas adjacent to the California buckwheat scrub community. Disturbed-California buckwheat scrub comprises approximately 1.24 acres on-site only.

Methodology

Since the project site and off-site area are within the Burrowing Owl Survey Area for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), Step I and Step II burrowing owl surveys are required. Surveys were conducted in accordance with the County of Riverside's 2006 *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area*.⁴

Step I - Habitat Assessment

A Step I Habitat Assessment was conducted on January 5, 2016 and areas supporting suitable habitat were identified on the survey area (project site, off-site area, and 500-foot buffer), including disturbed areas with low-growing vegetation, bare ground, and small fossorial mammal burrows.

Step II – Locating Burrows and Burrowing Owls

Step II surveys were conducted on the study area and focused on the detection of BUOW individuals, small fossorial mammal burrows potentially suitable for BUOW, and BUOW diagnostic sign (e.g., molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance). Areas within the 500-foot survey buffer were surveyed by foot where accessible, or with the use of binoculars in areas that were inaccessible.

Focused surveys were conducted on March 1 and 23; and April 4 and 21, 2016 by ESA PCR biologist Ezekiel Cooley. Surveys were conducted between one hour prior to and two hours after sunrise during suitable weather conditions. Transects were utilized in all accessible areas, spaced no more than 100 feet apart, to allow for 100 percent visibility (**Figure 3**, *Transect Map*, attached). In addition, observations were made with the use of binoculars. Weather conditions consisted of hazy to cloudy skies with winds between 0 and 5 miles per hour (mph) and air temperatures ranging from 52° to 76° Fahrenheit. Survey data is presented in **Table 1**, *Survey Data*, below.

⁴ County of Riverside. 2006. *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area*. March 2006.

**TABLE 1
 SURVEY DATA**

Date	Time Start-End	Wind (mph) Start-End	Temperature (°F) Start-End	Cloud Cover (%) Start-End	Results	Surveyor
3/01/2016	06:00 – 08:00	0-1 / 0-1	59° - 60°	40% - 5%	No BUOW or BUOW sign	E. Cooley
3/23/2016	06:20 – 08:30	0-1 / 0-1	55° - 62°	Overcast - Overcast	No BUOW or BUOW sign	E. Cooley
4/04/2016	06:30 – 08:30	0-1 / 0-1	57° - 64°	Overcast - Overcast	No BUOW or BUOW sign	E. Cooley
4/21/2016	06:30-08:30	0-1 / 0-1	55° - 63°	60% - 10%	No BUOW or BUOW sign	E. Cooley

SOURCE: ESA PCR, 2016

Results

The following results present the findings of the Step I Habitat Assessment and Step II Locating Burrows and Burrowing Owls.

Step I - Habitat Assessment

Results of the Step I Habitat Assessment concluded that the survey area exhibited suitable BUOW habitat consisting of disturbed, low-growing vegetation; bare ground; and a limited number of fossorial mammal burrows potentially suitable for use by BUOW.

Step II – Locating Burrows and Burrowing Owls

As shown in Table 1, no individual BUOW, active BUOW burrows, or BUOW sign were observed within the survey area during the four focused surveys. A complete list of all avian species observed within the project site is included in **Appendix A**, *Avian Compendium*, attached.

Recommendations

Since the survey area supports a few fossorial mammal burrows potentially suitable for use by BUOW, a pre-construction survey for BUOW is required within 30 days prior to ground disturbance, as required by the MSHCP. The pre-construction is required to determine the presence of BUOW prior to project impacts and to avoid potential direct take of burrowing owls, if present at the time of the survey.

Mr. Richard Darling
June 16, 2016
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Should you have any questions concerning the methodology or findings in this report, please contact Ezekiel Cooley (E.Cooley@pcrnet.com) at (949) 753-7001.

Sincerely,
ESA PCR

A handwritten signature in black ink, appearing to read 'E. Cooley', with a long horizontal flourish extending to the right.

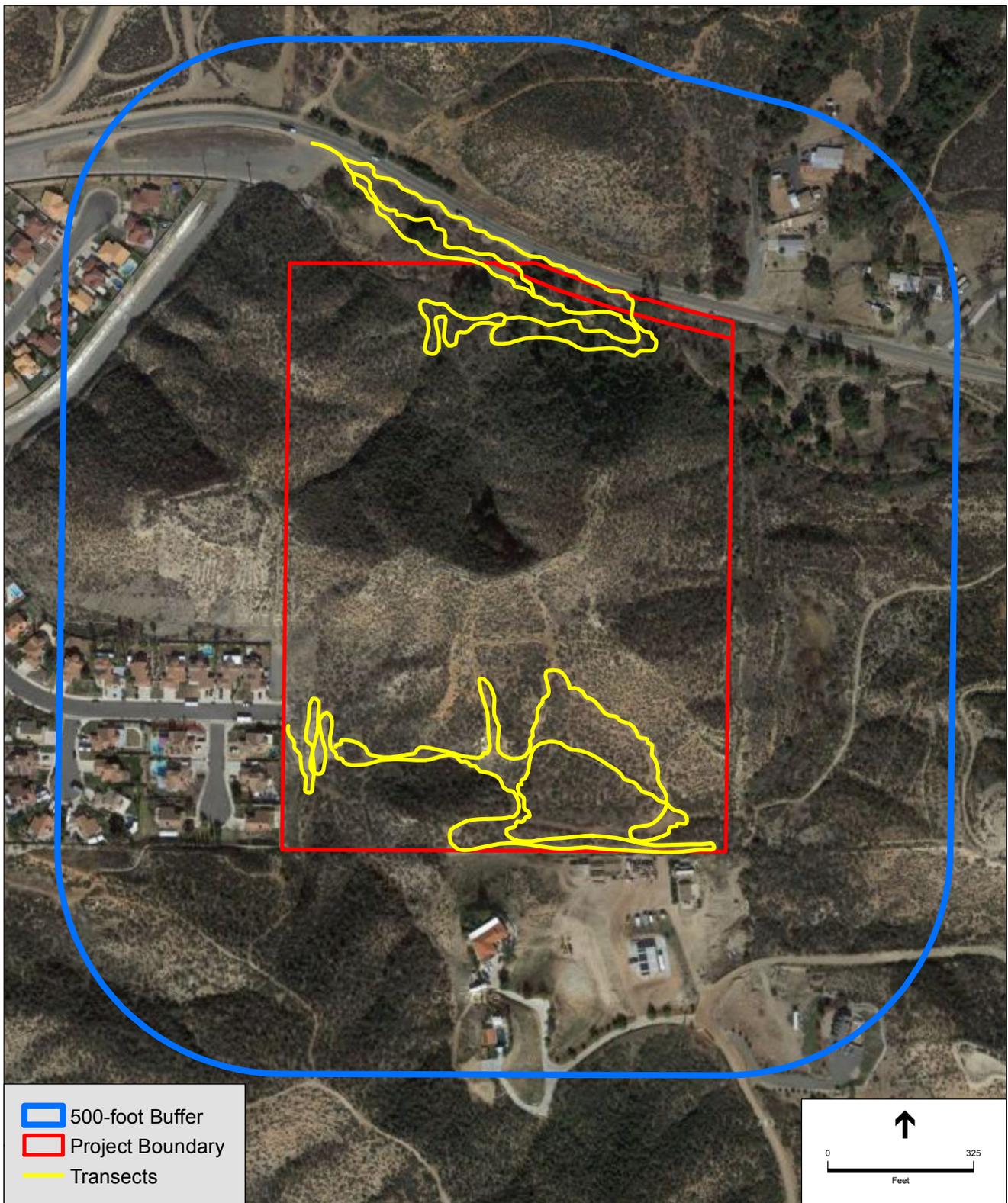
Ezekiel Cooley
Senior Biologist

Attachments:
Figure 1: Regional Map
Figure 2: Vicinity Map
Figure 3: Transect Map
Appendix A: Avian Compendium



SOURCE: ESRI Street Map, 2009; PCR Services Corporation, 2016

Bundy Canyon Road
Figure 1
 Regional Map



SOURCE: Google, 2015; ESA PCR, 2016

Bundy Canyon Road
Figure 3
Transect Map

APPENDIX A: AVIAN COMPENDIUM

BIRDS

Scientific Name

Odontophoridae

Callipepla californica

Accipitridae

Buteo jamaicensis

Falconidae

Falco sparverius

Columbidae

* *Columba livia*

* *Streptopelia decaocto*

Zenaidura macroura

Trochilidae

Calypte anna

Corvidae

Aphelocoma californica

Corvus brachyrhynchos

Aegithalidae

Psaltriparus minimus

Troglodytidae

Thryomanes bewickii

Sylviidae

Chamaea fasciata

Mimidae

Mimus polyglottos

Toxostoma redivivum

Ptilonotidae

Phainopepla nitens

Parulidae

Setophaga coronata

Emberizidae

Melospiza melodia

Melospiza crissalis

Pipilo maculatus

Zonotrichia leucophrys

Common Name

Quails

California quail

Hawks

red-tailed hawk

Falcons

American kestrel

Pigeons and Doves

rock pigeon

Eurasian collared-dove

mourning dove

Hummingbirds

Anna's hummingbird

Jays and Crows

western scrub-jay

American crow

Bushtits

bushtit

Wrens

Bewick's wren

Wrentits

wrentit

Thrashers

northern mockingbird

California thrasher

Silky-flycatchers

phainopepla

Wood Warblers

yellow-rumped warbler

Emberizine Sparrows and Allies

song sparrow

California towhee

spotted towhee

white-crowned sparrow

BIRDS

Scientific Name

Fringillidae

Haemorhous mexicanus

Passeridae

* *Passer domesticus*

Common Name

Finches

house finch

Old World Sparrows

house sparrow

Appendix E
**Least Bell's Vireo Focused
Survey Report**

July 1, 2016

Ms. Esther Burkett
California Department of Fish and Wildlife
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

Subject: Results of the focused least Bell's vireo surveys for the Bundy Canyon Resort Apartments project in the City of Wildomar, Riverside County, California

Dear Ms. Burkett:

This report summarizes the methodology and findings of surveys for the least Bell's vireo (*Vireo bellii pusillus*) (LBV) conducted by **ESA PCR** on the approximately 29-acre proposed Bundy Canyon Resort Apartment project within Assessor's Parcel Number (APN) 367-250-008 ("project site") and an approximately 0.44 acre off-site area located in the City of Wildomar, Riverside County, California. The surveys were conducted within approximately 2.15 acres (1.93 acres on-site, 0.22 acre off-site) of potentially suitable habitat, including coast live oak woodlands and red willow thicket communities ("survey area"), to determine the presence and location or absence of LBV within the survey area.

Project Site Description

The project site is located directly south of Bundy Canyon Road and east of Windwood Lane, approximately 0.85 mile to the east of the intersection of Interstate 15 (I-15) and Bundy Canyon Road, as shown in **Figure 1, Regional Map** (attached). The off-site area is located directly adjacent and to the north of the project site and south of Bundy Canyon Road. The project site and off-site area are depicted on the U.S. Geological Survey (USGS) 7.5' Lake Elsinore¹ and Wildomar² topographic quadrangle map (unsectioned), as shown in **Figure 2, Vicinity Map** (attached).

The project site is dominated by a steep hill that occurs in the center of the project site with relatively flat areas occurring along the northern and southern boundaries. On-site elevations range from the lowest of approximately 1,465 feet above mean sea level (MSL) along the northern boundary to a high of approximately 1,690 feet above MSL along the main ridgeline in the center of the project site. Immediate surrounding land uses include residential development to the west, rural residential to the east, and open area to the north and south. Bundy Canyon Road abuts the northern project boundary.

¹ United States Geological Survey (USGS). 1953a. *Lake Elsinore*. California topographic quadrangle map. Photorevised 1988.

² USGS. 1953a. *Wildomar*. California topographic quadrangle map. Photorevised 1988

Ms. Esther Burkett

California Department of Fish and Wildlife

July 1, 2016

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Plant Communities

The project site consists primarily of native upland vegetation characterized by California buckwheat scrub, California sagebrush scrub, chamise chaparral, and white sage scrub, with smaller patches of riparian vegetation, including coast live oak woodland and red willow thicket. There are also some areas that are dominated by non-native vegetation, which are generally associated with the disturbed areas and ruderal vegetation on the project site. The survey area included coast live oak woodland and red willow thicket habitats, as shown in **Figure 3**, *Riparian Communities Surveyed* (attached). A brief description of each plant community that was surveyed for the presence of LBV is provided below. The California Natural Community Code (CaCodes) assigned by the California Fish and Wildlife Department (CDFW) are in parentheses next to each community name.³

Coast Live Oak Woodland (71.060.00)

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*) trees and is the dominant community associated with Drainage A in the northern portion of the project site and off-site area. Although some areas support contiguous canopy cover, there are some portions with openings in the canopy, which allows for emergent shrubs and herbaceous species such as mule fat (*Baccharis salicifolia*), red willow (*Salix laevigata*), western ragweed (*Ambrosia psilostachya*), giant wild rye (*Elymus condensatus*), and tree tobacco (*Nicotiana glauca*). A few western sycamores (*Platanus racemosa*) were also observed within the canopy layer of this community. Coast live oak woodland comprises approximately 1.46 acres on-site and 0.18 acre off-site.

Red Willow Thicket (61.205.00)

Red willow thicket is dominated by red willow (*Salix laevigata*) and typically occurs in ditches, floodplains, lake edges, and low-gradient depositions along streams. On the project site and off-site area, red willow thicket occurs in two patches associated with Drainage A. Other species observed within this community include coast live oak, Fremont's cottonwood (*Populus fremontii* ssp. *fremontii*), mule fat, western ragweed, and curly dock (*Rumex crispus*). Red willow thicket occupies approximately 0.47 acre on-site and 0.04 acre off-site.

³ CDFW. 2010. *List of vegetation Alliances and Associations*. The Vegetation Classification and Mapping Program. Wildlife & Habitat Data Analysis Branch. September 2010.

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Methodology

Surveys for LBV were conducted by ESA PCR biologist Ezekiel Cooley. Methods employed were in conformance with U.S. Fish and Wildlife Service (USFWS) *Least Bell’s Vireo Survey Guidelines* issued January 19, 2001.⁴ Accordingly, eight (8) surveys were conducted between April 11 and June 28, 2016 within all portions of the survey area containing potentially suitable habitat and adjacent habitat potentially used for foraging. Surveys were conducted no less than ten (10) days apart between 6:00 AM and 11:00 A.M. Weather conditions were suitable for surveys, with conditions ranging from cloudy to clear skies and winds consisting of a slight breeze when present. Temperatures during surveys ranged between 52 and 80 degrees Fahrenheit.

The field investigator slowly walked the suitable habitat, stopping intermittently to look and listen for LBV. Surveys were conducted on April 11, 21; May 2, 12, 23; June 2, 15, and 28, 2016. Survey details are listed in **Table 1, Survey Data**, below.

TABLE 1
SURVEY DATA

Date	Time Start-End	Wind (mph) Start-End	Temperature (°F) Start-End	Cloud Cover (%) Start-End	Results	Surveyor
4/11/2016	07:30 – 09:30	0-2 / 0-2	60° - 62°	80% - 80%	No LBV Observed	E. Cooley
4/21/2016	08:00 – 10:00	0-1 / 0-1	63° - 72°	10% - 30%	No LBV Observed	E. Cooley
5/02/2016	07:55 – 09:55	0-1 / 1-2	62° - 72°	0% - 0%	No LBV Observed	E. Cooley
5/12/2016	06:30 – 08:30	0-1 / 0-1	52° - 55°	0% - 20%	No LBV Observed	E. Cooley
5/23/2016	07:00 – 09:00	0-1 / 0-1	52° - 60°	80% - 40%	No LBV Observed	E. Cooley
6/02/2016	07:45 – 10:00	0-1 / 0-1	64° - 80°	10% - 08%	No LBV Observed	E. Cooley
6/15/2016	08:00 – 09:30	0-1 / 0-1	56° - 61°	Overcast – 0%	No LBV Observed	E. Cooley
6/28/2016	07:15 – 08:45	0-1 / 0-1	77° - 79°	40% - 50%	No LBV Observed	E. Cooley

SOURCE: ESA PCR, 2016

Results

No LBV were observed during the 2016 focused surveys. The habitat appeared marginally suitable for LBV; however, no LBV were observed on the project site. No brown-headed cowbirds (*Molothrus ater*), which are

⁴ U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2001. *Least Bell’s Vireo Survey Guidelines*. Ecological Services. Carlsbad Fish and Wildlife Office. January 19, 2001.

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brood parasites, were observed within the survey area. A complete list of avian species observed within the survey area is provided in **Appendix A**, *Avian Compendium*, attached.

I certify that the information in this survey report and the attachments fully and accurately represent my work. Should you have any questions concerning the methodology or findings in this report, please contact Ezekiel Cooley (ECooley@esassoc.com) at (949) 753-7001.

Sincerely,

ESA PCR

A handwritten signature in black ink, appearing to read 'E. Cooley', with a long horizontal flourish extending to the right.

Ezekiel Cooley
Senior Biologist

Attachments:

Figure 1: Regional Map

Figure 2: Vicinity Map

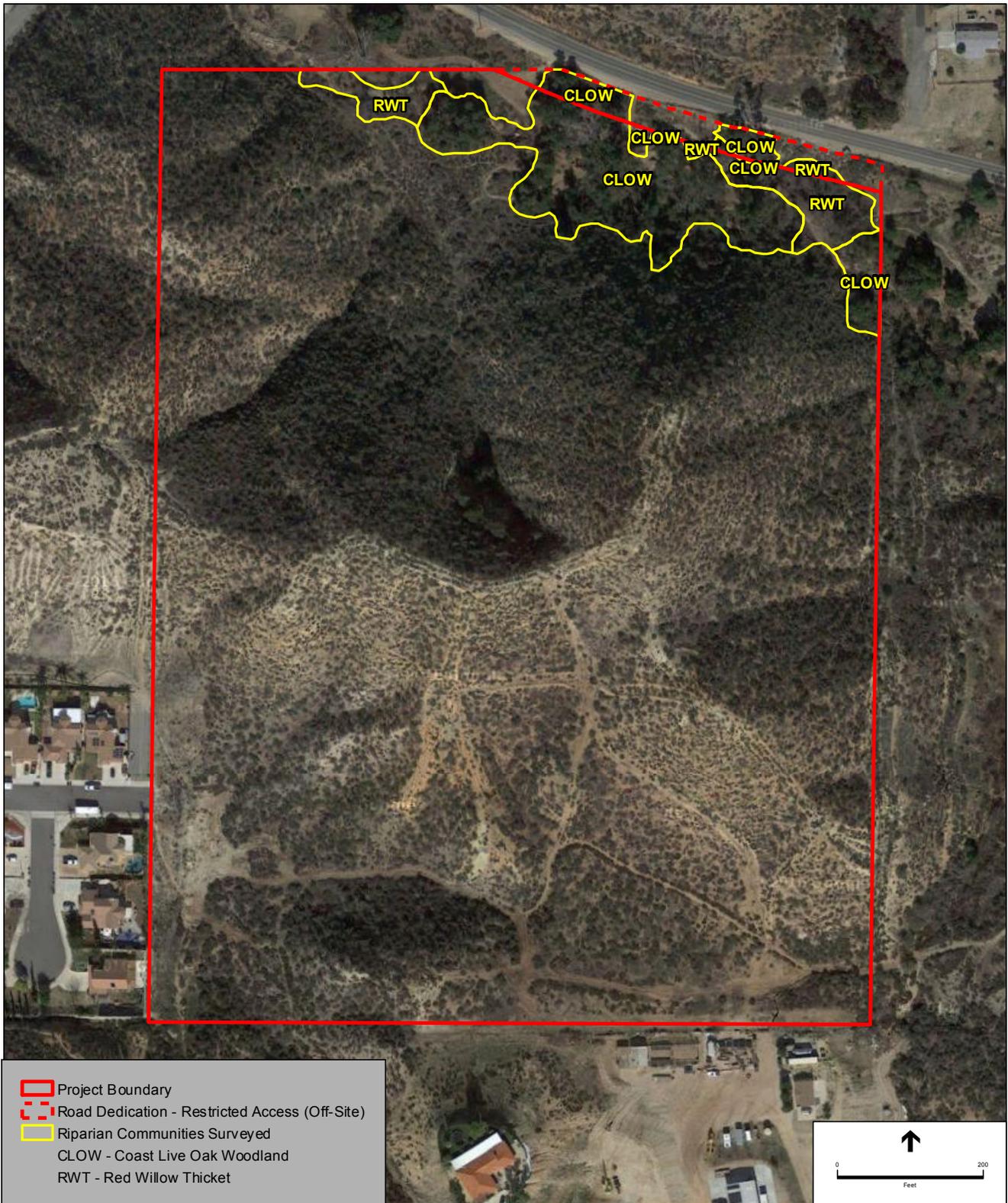
Figure 3: Riparian Communities Surveyed

Appendix A: Avian Compendium



SOURCE: ESRI Street Map, 2009; PCR Services Corporation, 2016

Bundy Canyon Road
Figure 1
 Regional Map



SOURCE: Google Maps, 2015 (Aerial).

Bundy Canyon Road
Figure 3
 Riparian Communities Surveyed

APPENDIX A – AVIAN COMPENDIUM

Scientific Name	Common Name
Anatidae	Waterfowl
<i>Anas platyrhynchos</i>	mallard
Odontophoridae	Quails
<i>Callipepla californica</i>	California quail
Accipitridae	Hawks
<i>Buteo jamaicensis</i>	red-tailed hawk
Falconidae	Falcons
<i>Falco sparverius</i>	American kestrel
Columbidae	Pigeons and Doves
<i>Zenaida macroura</i>	mourning dove
Trochilidae	Hummingbirds
<i>Calypte anna</i>	Anna's hummingbird
<i>Selasphorus sasin</i>	Allen's hummingbird
Picidae	Woodpeckers
<i>Colaptes auratus</i>	northern flicker
<i>Melanerpes formicivorus</i>	acorn woodpecker
<i>Picoides nuttallii</i>	Nuttall's woodpecker
Tyrannidae	Tyrant Flycatchers
<i>Sayornis nigricans</i>	black phoebe
<i>Myiarchus cinerascens</i>	ash-throated flycatcher
<i>Tyrannus verticalis</i>	western kingbird
Corvidae	Jays and Crows
<i>Corvus brachyrhynchos</i>	American crow
Aegithalidae	Bushtits
<i>Psaltriparus minimus</i>	bushtit
Troglodytidae	Wrens
<i>Thryomanes bewickii</i>	Bewick's wren
Sylviidae	Wrentits
<i>Chamaea fasciata</i>	wrentit
Mimidae	Thrashers
<i>Mimus polyglottos</i>	northern mockingbird
Sturnidae	Starlings
* <i>Sturnus vulgaris</i>	European starling
Ptilonotidae	Silky-flycatchers
<i>Phainopepla nitens</i>	phainopepla
Parulidae	Wood Warblers
<i>Cardellina pusilla</i>	Wilson's warbler

* Non-native species

Scientific Name

Geothlypis trichas

Emberizidae

Melospiza melodia

Melospiza crissalis

Pipilo maculatus

Cardinalidae

Piranga ludoviciana

Fringillidae

Haemorhous mexicanus

Spinus psaltria

Spinus tristis

Common Name

common yellowthroat

Emberizine Sparrows and Allies

song sparrow

California towhee

spotted towhee

Buntings, Grosbeaks, and Tanagers

western tanager

Finches

house finch

lesser goldfinch

American goldfinch

* *Non-native species*