Biological Technical Report

Wildomar Master Drainage Plan Lateral C Revision Project

Riverside County, California

Prepared for:

Riverside County Flood Control
and Water Conservation District
1995 Market Street
Riverside, California 92501

Prepared by:

ECORP Consulting, Inc.
215 North Fifth Street
Redlands, California 92374

May 2020

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ACRONYMS AND ABBREVIATIONS

CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
ESA	Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
DBESP	Determination of Biologically Equivalent or Superior Preservation
District	Riverside County Flood Control and Water Conservation District
ECORP	ECORP Consulting, Inc.
HCP	Habitat Conservation Plan
I-15	Interstate 15
IA	Implementing Agreement
MBTA	Migratory Bird Treaty Act
MDP	Wildomar Master Drainage Plan
MSHCP	Multiple Species Habitat Conservation Plan
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NEPSSA	Narrow Endemic Plant Species Survey Area
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
Project	Wildomar Master Drainage Plan Lateral C Revision Project
RCA	Regional Conservation Authority
RCB	reinforced concrete box
RCFC	Riverside County Flood Control
RCHCA	Riverside County Habitat Conservation Agency
SKR	Stephens' kangaroo rat
SSAR,	Society for the Study of Amphibians and Reptiles
SSC	Species of Special Concern
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 INTRODUCTION

ECORP Consulting, Inc. (ECORP) was retained by Riverside County Flood Control and Water Conservation District (District) to provide California Environmental Quality Act (CEQA) services for the Wildomar Master Drainage Plan Lateral C Revision Project (Project) located in the City of Wildomar, Riverside County. Two reconnaissance-level biological surveys were conducted to document the existing biological resources, to assess the habitat for its potential to support sensitive plant and wildlife species, and to determine whether impacts would occur to sensitive biological resources, as required under CEQA. The Project site is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) planning area. This report also fulfills the reporting requirements for sensitive biological resources covered under the MSHCP.

1.1 Project Location

The Project site is located within the City of Wildomar in southwest Riverside County (Figure 1). The proposed Bundy Canyon Basin is located on two vacant parcels totaling approximately 19 acres and situated on the southeast corner of Bundy Canyon Road and Monte Vista Drive. The Bundy Canyon Basin outlet structure begins at the southeast corner of the basin site and runs parallel to Monte Vista Drive for approximately 1,050 feet before ending at the existing Caltrans culvert under the Interstate 15 (I-15) freeway. The proposed storm drains are located mostly within existing paved and unpaved street rights-of-way. More specifically, the Line C realignment begins just southwest of the I-15 freeway and continues south along the White Street right-of-way until it approaches Central Street. At Central Street, the storm drain continues southwest to Como Street, where it continues along Como Street for approximately 1,200 feet. Line C-2 begins at the White Street and Baxter Road interchange and continues east within the Baxter Road right-of-way for approximately 1,180 feet. Line C-3 begins at the White Street and Grove Street intersection and continues with the Grove Street right-of-way for approximately 720 feet. The Project is located within Township 6 South, Range 4 West, Sections 26 and 35 West on the United States Geological Survey (USGS) Wildomar 7.5 Series Topographic Quadrangle map.

1.2 Project Description

The District, in partnership with the City of Wildomar, is proposing to revise the originally proposed Wildomar Master Drainage Plan (MDP) Lateral C facility. Lateral C, Stage 1, from Wildomar Channel to Palomar Street, was constructed in 1987; Stage 2, from Palomar Street to Pasadena Street, was constructed in 1992. The remaining components of the Lateral C system have not been constructed; however, the remaining portions of the alignment were originally proposed to be aligned with Bundy Canyon Wash. The purpose of the original alignment was to capture storm runoff at the downstream end of the existing Caltrans double 10- x 6-foot reinforced concrete box (RCB) culvert under the I-15, approximately half a mile south of Bundy Canyon Road, and convey it to Wildomar Channel, just northeasterly of McVicar Street.

Location: N:\2015\2015-159.007 Wildomar MDP Lateral C Revision Project\MAPS\Location_Vicinity\WLC_Vicinity_20171003.mxd (AMyers)-mapping_guest 10/3/2017

Map Date: 10/3/2017

Service Layer Credits: Sources: Esri, USGS, NOAA

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicinity

2015-159.007 Wildomar Lateral C

Phase 1 of the Project would include the development of Bundy Canyon Basin at the southeast corner of Bundy Canyon Road and Monte Vista Drive, including the extension of Lateral A. Phase 2 includes revisions to Lateral C. The revised alignment of Lateral C (mainline) would begin and end at the same locations. However, instead of a concrete lined trapezoidal channel aligned with the existing ephemeral drainage along Bundy Canyon Wash, a RCB would be constructed mostly within existing street right-of-way. Lateral C has been revised to allow for current low flows to maintain the existing conditions found within Bundy Canyon Wash. In addition to the revision of Lateral C, as a part of Phase 2 the District is also proposing Lateral C-2 and Lateral C-3 as part of the revised Wildomar MDP Lateral C system.

The original design for the Wildomar MDP Lateral C system only included open channel facilities, whereas the revised system has been designed to include five components in order to address the current and reasonably foreseen future drainage needs of the community. The Project components include the following:

- Bundy Canyon Basin

  The proposed basin is located at the southeast corner of Bundy Canyon Road and Monte Vista Drive, just upstream of the I-15. The basin has a right-of-way footprint of approximately 19 acres and a storage volume of 143 acre-feet. The basin inlet would be located at the southwestern, terminal end of an existing open, concrete lined channel (Wildomar Bundy Canyon Channel Lateral A) and situated between Valley Vista Circle and Sunnybrook Drive. The water flow from this channel would enter the proposed basin then outlet at the southwestern end of the basin. The basin outlet is proposed as a double 6-foot wide by 5-foot high RCB and connects to a proposed 14-foot wide by 8-foot high RCB that connects to the existing double 10-foot wide by 6-foot high RCB culvert at I-15. The basin outlet would replace the existing concrete lined channel that is located south of the basin site and runs parallel to Monte Vista Drive. If design capacity permits, Bundy Canyon Basin would include a low flow design feature allowing for dry weather flow to concentrate within the southern portion of the basin.

- Bundy Canyon Channel Lateral A Extension (Main Inlet Channel)

  The Existing Trapezoidal Channel adjacent to Tract 23281 will be extended to meet the proposed basin bottom. This will be accomplished by constructing a Transition Structure, U.S. Bureau of Reclamation Type III Stilling basin, and a 14-foot-wide by 10-foot-high double RCB.

- Lateral C (mainline facility)

  The proposed underground storm drains downstream of the I-15 ranges in size from a double 10-foot wide by 6-foot high RCB to a single 14-foot wide by 8-foot high RCB. From downstream of the I-15, the storm drain would be located along White Street, southwesterly along Central Avenue, and southeasterly along Como Street to Bundy Canyon Wash. The most southern end of the Lateral C facility also includes a segment of open channel, approximately 680 liner feet of 24-foot wide earthen bottom trapezoidal channel with rock-lined side slopes (2:1), and a depth ranging from 9 feet to 10.65 feet.

Location: N:\2015\2015-159.007 Wildomar MDP Lateral C Revision Project\MAPS\Meeting_Maps_and_Analysis\2017_10_19_Project_Components\Wildomar_Project_Components_v6.mxd (MAG)-mguidry 4/24/2020

Map Date: 4/24/2020
Photo Source: ESRI

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2. Project Components

Wildomar MDP Lateral C Revision Project

- Lateral C-2

  The proposed facility is approximately 1,180 linear feet of 60-inch reinforced concrete pipe (RCP) along unimproved Baxter Road as shown on Figure 2.

- Lateral C-3

  This facility is proposed as an approximately 720 linear feet of 60-inch RCP along unimproved Grove Street as shown on Figure 2.

2.0 REGULATORY REQUIREMENTS

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (ESA) protects plants and animals that are listed as endangered or threatened by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. Section 9 of the ESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in intentional violation of state law or regulation (16 U.S. Code [USC] 1538). Under Section 7 of ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.1.3 Federal Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the United States (U.S.) without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency (USEPA) acts as a cooperating agency to set policy, guidance and criteria for use in evaluation permit applications and also reviews USACE permit applications.

The USACE regulates "fill" or dredging of fill material within its jurisdictional features. "Fill material" means any material used for the primary purpose of replacing an aquatic area with dry land or changing the bottom elevation of a water body. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the State Water Quality Control Board, administered by each of nine California Regional Water Quality Control Boards.

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California Endangered Species Act (ESA) generally parallels the main provisions of the federal ESA, but unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as "*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill*." The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code § 4700) provide that fully protected species may not be taken or

possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The California ESA of 1984 (Fish and Game Code Section 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.4 California Fish and Game Code

Streambed Alteration Agreement

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Streambed Alteration Agreement. Often, projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

Migratory Birds

CDFW enforces the protection of non-game native birds in Sections 3503, 3503.5, and 3800 of the California Fish and Game Code. Section 3513 of the California Fish and Game Code prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California non-game native birds' nests and also make it unlawful to take these birds. All raptor species are protected from "take" pursuant to California Fish and Game Code Section 3503.5 and are also protected at the federal level by the MBTA of 1918 (USFWS 1918).

2.2.5 Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

The Western Riverside MSHCP is a comprehensive, multi-jurisdictional HCP focusing on conservation of species and their associated habitats in western Riverside County. The MSHCP identified 146 species, referred to as "Covered Species," for which the federal and California ESA "take" authorization has been granted to signatories to the plan as long as they comply with its requirements. Of the 146 Covered Species within the MSHCP, 118 are considered to be "adequately conserved." The remaining 28 Covered Species will be considered to be adequately conserved when certain landmark conservation requirements are met during the course of future development. The goal of the MSHCP is to maintain the biological and ecological diversity within a rapidly urbanizing region while also improving the future economic development in the County by providing an efficient, streamlined regulatory process through which development can proceed in and efficient way.

The approval of the MSHCP and execution of the Implementing Agreement (IA) by the wildlife agencies allows signatories of the IA to issue "take" authorizations for all species covered by the MSHCP, including state- and federally listed species as well as other identified sensitive species and/or their habitats. Each city of local jurisdiction will impose a Development Mitigation Fee for projects within their jurisdiction. With payment of the mitigation fee to the County and compliance with the survey requirements of the MSHCP where required, full mitigation in compliance with CEQA, National Environmental Policy Act (NEPA), and the federal and California ESAs, will be granted. The Development Mitigation Fee applies to residential, commercial, and industrial development and varies according to project size and project description and is dependent on development density (Riverside County Ordinance No. 810.2). Payment of the mitigation fee and compliance with the requirements of Section 6.0 of the MSHCP are intended to provide full mitigation under CEQA, NEPA, and the federal and California ESAs for impacts to the species and habitats covered by the MSHCP, pursuant to agreements with USFWS, CDFW, and/or any other appropriate participating regulatory agencies as set forth in the IA for the MSHCP.

2.2.6 CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- 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 CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those

that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of an important resource on a population-wide or region-wide basis.

3.0 METHODS

3.1 Literature Search

ECORP biologists performed a literature search to determine the special-status species that have been documented in the Alberhill, Fallbrook, Lake Elsinore, Margarita Peak, Murrieta, Romoland, Sitton Peak, Temecula, and Wildomar USGS 7.5-minute topographic quadrangles. This literature search included the Riverside County Regional Conservation Authority (RCA) MSHCP Information Map (County of Riverside 2019); CDFW California Natural Diversity Database (CNDDB; CDFW 2019a) and the California Native Plant Society's (CNPS) Electronic Inventory (CNPSEI; CNPS 2019a). Additional information was gathered from the following sources:

- CDFW Special Animals List (CDFW 2019b);
- California Natural Diversity Database Special Vascular Plants, Bryophytes and Lichens List (CDFW 2019c);
- The Jepson Manual: Vascular Plants of California (Baldwin et al. 2012);
- Documents published by the regulatory agencies and other scientific literature; and
- Various online websites (e.g., CalFlora 2019).

Using this information and observations in the field, a list of special-status plant and animal species that may have the potential to occur within the Project site was generated. For the purposes of this assessment, special-status species are defined as plants or animals that:

- Are covered species under the Western Riverside MSHCP;
- Have been designated as either rare, threatened, or endangered by CDFW or the USFWS, and are protected under either the federal or California ESA;
- Are candidate species being considered or proposed for listing under these same acts;
- Are fully protected by the California Fish and Wildlife Code, Sections 3511, 4700, 5050, or 5515; and/or
- Are of expressed concern to resource and regulatory agencies, or local jurisdictions.

Sensitive species reported for the region in the literature search or for which suitable habitat occurs in the Project site were assessed for potential to occur within the area based on the following guidelines:

Present:	Species was observed within the Project site during a site visit or focused survey.
High:	Habitat (including soils and elevation factors) for the species occurs within the Project site and a known occurrence has recently been recorded (within the last 20 years) within 5 miles (8 km) of the Project site.
Moderate:	Habitat (including soils and elevation factors) for the species occurs within the Project site and a documented observation occurs within the database search, but not within 5 miles (8 km) of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles (8 km) of the Project site; or a recently documented observation occurs within 5 miles (8 km) of the area and marginal or limited amounts of habitat occurs in the Project site.
Low:	Limited or marginal habitat for the species occurs within the Project site and a recently documented observation occurs within the database search, but not within 5 miles (8 km) of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles (8 km) of the Project site; or suitable habitat strongly associated with the species occurs on the site, but no records or only historic records were found within the database search.
Presumed Absent:	Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist on the site; or the known geographic range of the species does not include the Project site.

(Note: Location information on some sensitive species may be of questionable accuracy or unavailable; therefore, for survey purposes, environmental factors associated with species occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence).

Plant nomenclature follows that of The Jepson Manual: Vascular Plants of California (Baldwin et al. 2012). Wildlife nomenclature follows the Society for the Study of Amphibians and Reptiles (SSAR, 2019), the Checklist of North American Birds (American Ornithologists' Union [AOU] 2018), and the Revised Checklist of North American Mammals North of Mexico (Bradley et al. 2014).

3.2 Field Surveys

Two reconnaissance-level biological surveys were performed at the entire Project site. The first was performed in 2017 following the initial Project design, and the second was conducted in 2019 once a portion of the Project design became more finalized. The surveys were conducted in such a way that 100 percent visual coverage of the Project site and surrounding vicinity was achieved. The field surveys included the following:

- Recording plant and wildlife species observed on the Project site and in immediately adjacent areas;
- Characterizing plant communities present on the Project site;
- Searching for animal sign (e.g., detections of burrows, scat, tracks, vocalizations);
- Taking photographs at the Project site; and
- Recording weather data including time, temperature, cloud cover, and wind speed at the beginning and end of the survey.

Plant species not recognized in the field were collected and identified using botanical references (e.g., Baldwin et al. 2012).

During the field surveys, the property was checked for the presence of potential areas subject to USACE jurisdiction pursuant to Section 404 of the CWA, State Water Resources Control Board (SWRCB) pursuant to Section 401 of the CWA, and CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. Due to the presence of potentially jurisdictional features, a formal delineation was performed at the Project site and the results of which are presented under a separate cover (ECORP 2020).

4.0 RESULTS

4.1 Field Surveys

Two reconnaissance-level field surveys were conducted by ECORP senior biologist Kristen Wasz in support of the Project, one on October 5, 2017, and the second on June 25, 2019. Summarized below are the results of the literature review and field surveys, including area characteristics, plant communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors). Weather conditions during each survey are summarized in Table 1.

Table 1. Weather Conditions during the Surveys

Date	Time		Temperature (˚F)		Cloud Cover (%)		Wind Speed (mph)	
	Start	End	Start	End	Start	End	Start	End
10/5/17	1115	1330	80	91	0	0	0-1	0-1
6/25/19	1120	1515	64	75	100	50	5-15	2-5

4.1.1 Site Characteristics and Land Use

The Project site (comprising the Lateral C revision, Lateral C-2, Lateral C-3, and the proposed Bundy Canyon Basin) and surrounding vicinity are dominated by development, disturbances, and previous agricultural use. Some areas containing native vegetation are found within and adjacent to the Project site; however, these areas have been subjected to human disturbances as well and are not considered high quality native habitats. Much of the Project area is developed and disturbed. The surrounding area consists of rural-suburban development with sparse commercial development, mostly concentrated around the I-15 corridor. More specifically, development within this portion of the Project area includes medium density single-family residences, a high school, and varied commercial businesses (e.g., a convenience store and restaurant). Bundy Canyon Wash is located adjacent and meanders approximately parallel to the Lateral C revision. Several paved and dirt roads run throughout the Project site. The proposed Bundy Canyon Basin is an undeveloped parcel that is subject to ongoing disturbances such as mowing and other ground disturbances, presence of trash and concrete debris, and dominance of nonnative plant growth. Bundy Canyon Wash, one concrete-lined channel along Monte Vista Drive southwest of the proposed Bundy Canyon Basin, two additional ephemeral drainages and three riparian areas (north of Baxter Road, adjacent to Monte Vista Drive along the western boundary of the proposed Bundy Canyon Basin, and a corridor along the southern boundary of the proposed Bundy Canyon Basin

located within a drainage) are found throughout the Project site. Representative site photographs are included in Appendix A.

4.1.2 Soils

Soils types were determined using the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2019). Soils within the Project site consist of Cieneba sandy loam, eroded, 8 to 15 percent slopes; Cieneba sandy loam, eroded, 15 to 20 percent slopes; Cieneba rocky sandy loam, eroded, 15 to 50 percent slopes; Greenfield sandy loam, eroded, 2 to 8 percent slopes; Greenfield sandy loam eroded, 8 to 15 percent slopes; Hanford coarse sandy loam, 2 to 8 percent slopes; Hanford coarse sandy loam, eroded, 8 to 15 percent slopes; Honcut sandy loam, 2 to 8 percent slopes; Monserate sandy loam, eroded, 8 to 15 slopes; Monserate sandy loam, shallow, eroded, 5 to 15 percent slopes; Placentia fine sandy loam, 0 to 5 percent slopes; Ramona sandy loam, eroded, 2 to 5 percent slopes; Ramona sandy loam, eroded 8 to 15 percent slopes; Riverwash; Tujunga loamy sand, channeled, 0 to 8 percent slopes; and Yokohl loam, severely eroded, 8 to 25 percent slopes. Soil types are shown on Figure 3.

4.1.3 Plants

Plant species observed on the Project site were generally characteristic of disturbed urban areas. Although a focused rare plant survey was not conducted, special-status plant species were not observed during the surveys. Plant species observed in the upland areas included dove weed (*Croton setigerus*), mustards (*Brassica* spp.), California buckwheat (*Eriogonum fasciculatum*), eucalyptus trees (*Eucalyptus* spp.), and Russian thistle (*Salsola tragus*). Plant species observed in the riparian areas include mulefat (*Baccharis salicifolia*), red willow (*Salix laevigata*), and black willow (*Salix gooddingii*). Of the 31 plant species observed on the Project site, 11 of which were nonnative, or exotic, species. A complete list of plant species observed during the surveys on and adjacent to the Project site is found in Appendix B.

4.1.4 Wildlife

The majority of the Project site provided habitat for species adapted to disturbances and urban environments. A total of 33 wildlife species were observed during the reconnaissance surveys, including three reptile, 27 birds, and three mammals. Common species observed during the survey include western whiptail (*Aspidoscelis tigris*), house finch (*Haemorhous mexicanus*), and burrows belonging to Botta's pocket gopher (*Thomomys bottae*). Although focused (i.e., protocol-level) special-status wildlife surveys were not conducted during the surveys, two special-status species were observed during the reconnaissance survey: loggerhead shrike (*Lanius ludovicianus*), a California Species of Special Concern (SSC), and coastal California gnatcatcher (*Polioptila californica californica*), a federally listed threatened species. Special-status species are addressed in more detail in Section 4.3.2. A complete list of wildlife species observed or detected during the surveys on and adjacent to the Project site is found in Appendix C.

Map Features

Project Area

Delineation Area

GSSURGO_Clip500ft_20190815 (LEGEND)

Series Number - Series Name

CaF2 - Cajalco fine sandy loam, 15 to 35 percent slopes, eroded

ChD2 - Cieneba sandy loam, 8 to 15 percent slopes, eroded

ChF2 - Cieneba sandy loam, 15 to 50 percent slopes, eroded

CkF2 - Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded

GyA - Greenfield sandy loam, 0 to 2 percent slopes

GyC2 - Greenfield sandy loam, 2 to 8 percent slopes, eroded

GyD2 - Greenfield sandy loam, 8 to 15 percent slopes, eroded

HcC - Hanford coarse sandy loam, 2 to 8 percent slopes

HcD2 - Hanford coarse sandy loam, 8 to 15 percent slopes, eroded

HnC - Honcut sandy loam, 2 to 8 percent slopes

MmB - Monserate sandy loam, 0 to 5 percent slopes

MmC2 - Monserate sandy loam, 5 to 8 percent slopes, eroded

MmD2 - Monserate sandy loam, 8 to 15 percent slopes, eroded

MnD2 - Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded

MnE3 - Monserate sandy loam, shallow, 15 to 25 percent slopes, severely eroded

PlB - Placentia fine sandy loam, 0 to 5 percent slopes

PlD - Placentia fine sandy loam, 5 to 15 percent slopes

RaB2 - Ramona sandy loam, 2 to 5 percent slopes, eroded

RaD2 - Ramona sandy loam, 8 to 15 percent slopes, eroded

RaD3 - Ramona sandy loam, 8 to 15 percent slopes, severely eroded

ReC2 - Ramona very fine sandy loam, 0 to 8 percent slopes, eroded

RsC - Riverwash

TvC - Tujunga loamy sand, channeled, 0 to 8 percent slopes

YbE3 - Yokohl loam, 8 to 25 percent slopes, severely eroded

Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Riverside, CA

Scale in Feet

0 700

Location: N:\2015\2015-159.007 Wildomar MDP Lateral C Revision Project\MAPS\soils_and_geology\soils\Wildomar_Soils_V1.mxd (MAG)-mguidry 4/24/2020

Map Date: 4/24/2020

Base Source: NAIP 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3. Natural Resource Conservation Service Soil Types

Wildomar MDP Lateral C Revision Project

4.2 Vegetation Communities/Habitats

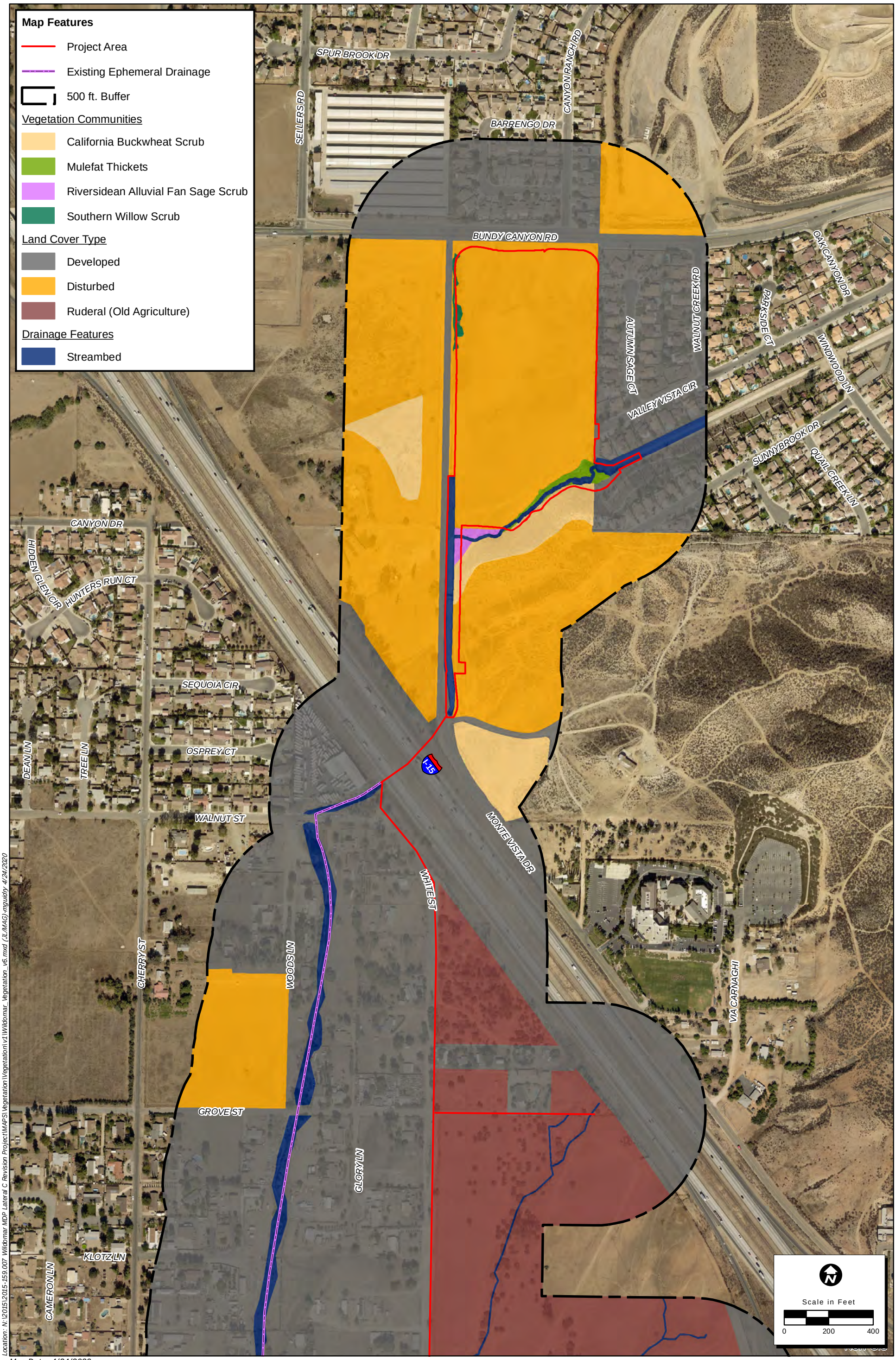
The Project site is within an urban environment that is generally subjected to repeated and ongoing disturbance from human activities. Small areas of disturbed native vegetation communities and riparian vegetation were present in patches throughout the Project site and 500-foot buffer. One state-sensitive vegetation community was observed on the Project site but was highly disturbed and contained substantial nonnative cover. In addition, three land cover types: disturbed areas, developed areas, and ruderal (old agriculture) areas were observed on the Project site. The plant species observed within these cover types generally consisted of ornamental, nonnative, or invasive weedy species. Classification of the vegetation communities and land cover types within the Project area and 500-foot buffer generally follow the Manual of California Vegetation (Sawyer et al. 2009) where feasible, are described in detail below, and displayed in Figure 4.

4.2.1 Southern Willow Scrub

Southern willow scrub occurs in seasonally flooded freshwater habitats or saturated areas, often on gently sloping rocky floodplains, rivers, streams, or meadow edges. This community generally consists of an open shrub layer and a variable herbaceous layer (depending upon inundation). Not necessarily dominated by any specific species of willow, willows on the site include black willow (*Salix goodingii*) and also included nonnative tamarisk (*Tamarix* sp.) and mustards. A single mature Fremont's cottonwood (*Populous fremontii*) was present on the eastern-most end of the community. The southern willow scrub on the site was classified as disturbed due to the substantial amount of nonnative weedy plants interspersed throughout the community. This community was present in a small patch along the northwest edge of the proposed Bundy Canyon Basin.

4.2.2 Mulefat Thickets – Disturbed (Baccharis salicifolia Shrubland Alliance)

Baccharis salicifolia Shrubland Alliance (mulefat thickets) is a vegetation type characterized by shrubs growing between six and 15 feet tall where mulefat, an evergreen shrub, represents more than 50 percent of the relative cover in the shrub canopy. This community was present in a small patch within Bundy Canyon Wash along the southern edge of the proposed Bundy Canyon Basin. The mulefat thickets present within the survey area consisted mainly of mulefat, but also included Fremont's cottonwood and California buckwheat. The mulefat thickets were classified as disturbed due to the substantial amount of nonnative weedy plants interspersed throughout the community including mustards and Russian thistle.



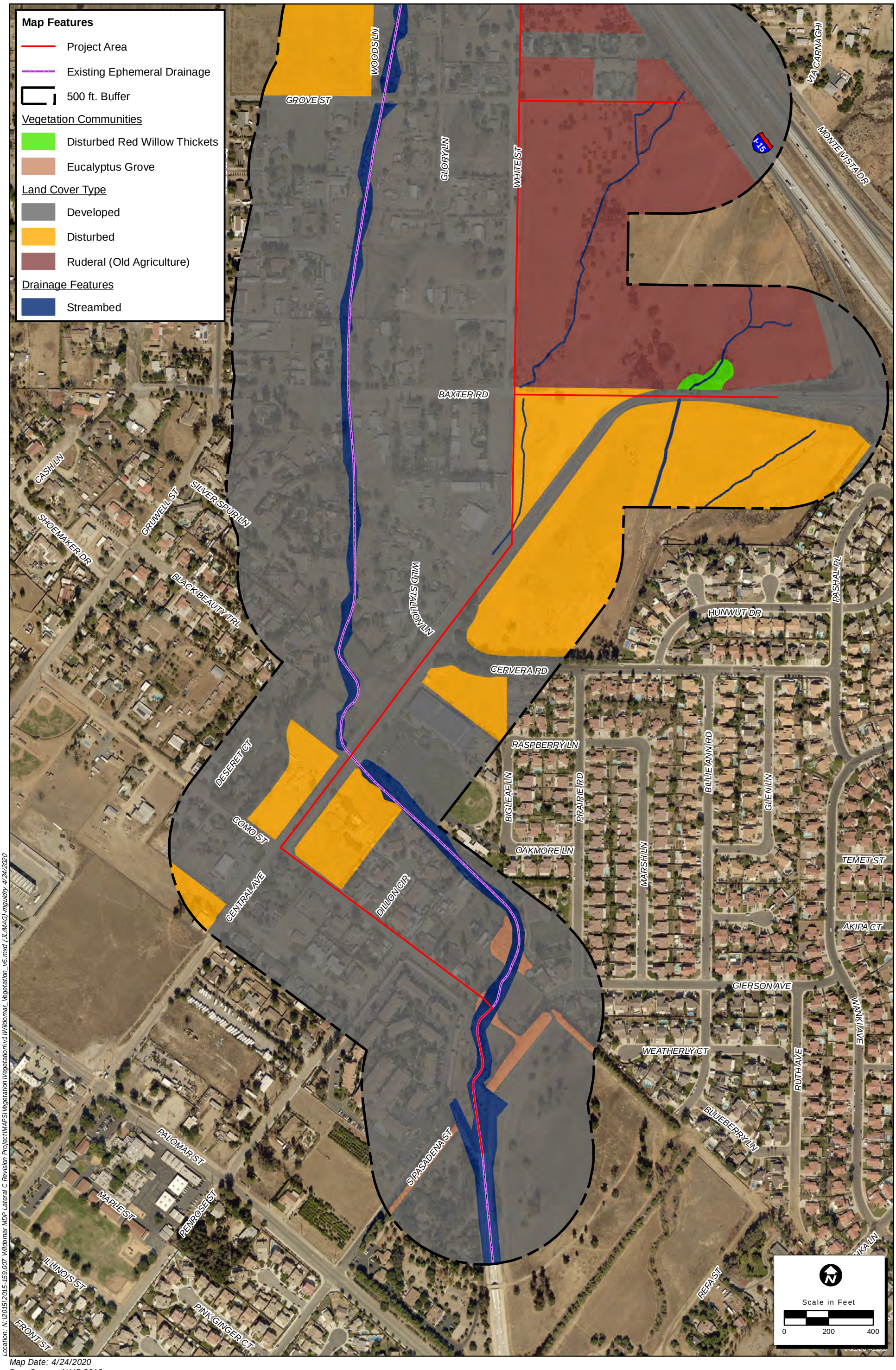
Location: N:\2015\2015-159.007 Wildomar MDP Lateral C Revision Project\MAPS\Vegetation\Vegetation\v1\Wildomar_Vegetation_v6.mxd (JL/MAG)-mguidry 4/24/2020

Map Date: 4/24/2020
Base Source: NAIP 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 4. Wildomar Lateral C Vegetation

2015-159.007 Wildomar Lateral C



Location: N:\2015\2015-159.007 Wildomar MDP Lateral C Revision Project\MAPS\Vegetation\Vegetation\v1\Wildomar_Vegetation_v6.mxd (JLIWAG) -nguidry 4/24/2020

Map Date: 4/24/2020
Base Source: NAIP 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 4. Wildomar Lateral C Vegetation

2015-159.007 Wildomar Lateral C

4.2.3 Red Willow Thickets – Disturbed (Salix laevigata Woodland Alliance)

Salix laevigata Woodland Alliance (red willow thickets) is a vegetation type characterized by an open to continuous tree canopy where red willow is dominant or co-dominant in the tree layer and represents a minimum of five percent absolute canopy cover. Red willow thickets is considered a state-sensitive vegetation community and has a State Rarity Rank of S3 indicating that it is a vulnerable community with 21 to 100 viable occurrences and/or more than 2,590 to 12,950 hectares statewide. This community was present along the proposed Lateral C-2 facility in a small patch north of Baxter Road. The red willow thickets present within the survey area consisted mainly of red willow, but included nonnative gum trees (*Eucalyptus* spp.), mustard, and olive trees (*Olea europaea*). The red willow thickets were classified as disturbed due to the substantial amount of nonnative weedy plants interspersed throughout the community.

4.2.4 Riversidean Alluvial Fan Sage Scrub - Disturbed

Riversidean alluvial fan sage scrub is associated with alluvial fans of large canyons on the coastal slopes of the Transverse and Peninsular Mountain ranges in San Bernardino and Riverside counties. This community is considered sensitive by CDFW and has a State Rarity Ranking of S1 (critically imperiled and susceptible to extirpation). It is a typical dominant habitat type for some of the more xeric alluvial drainages and alluvial fans. As a flood-adapted plant community, its structure is composed of several stages of successional growth at any given time. The flood adaptative properties of the community, its tendency to support unique suites of plant and animal life, and the general rarity of intact alluvial systems have resulted in the community being considered sensitive. The plant community on the site was dominated by scale broom (*Lepidospartum squamatum*) and California buckwheat. Associated plant species included cholla (*Cylindropuntia* sp.), common fiddleneck (*Amsinckia menziesii*), and mustards. Riversidean alluvial fan sage scrub is present in a small area in and adjacent to the southwest corner of the proposed Bundy Canyon Basin, at the western extent of Bundy Canyon Wash adjacent to Monte Vista Drive. The Riversidean alluvial fan sage scrub was classified as disturbed due to the substantial amount of nonnative weedy plants interspersed throughout the community.

4.2.5 California Buckwheat Scrub – Disturbed (Eriogonum fasciculatum Shrubland Alliance)

Eriogonum fasciculatum Shrubland Alliance (California buckwheat scrub) is a vegetation type characterized by low-growing shrubs where California buckwheat, a drought deciduous shrub, represents more than 50 percent of the relative cover in the shrub canopy. The disturbed California buckwheat scrub community was present in large patches east and south of the proposed Bundy Canyon Basin and north of I-15. The California buckwheat scrub present within the survey area consisted mainly of California buckwheat, but also included dove weed and nonnative mustards. The California buckwheat scrub was classified as disturbed due to the substantial amount of nonnative weedy plants interspersed throughout the community.

4.2.6 Eucalyptus Groves – (Eucalyptus [globulus, camaldulensis] Woodland Semi-Natural Alliance)

Eucalyptus [*globulus, camaldulensis*] Woodland Semi-Natural Alliance (eucalyptus groves) is a semi-natural vegetation type characterized by tall (50 meters or less) trees where eucalyptus species represent more than 80 percent of the relative cover in the tree layer. Eucalyptus species are not native to California and some species are considered invasive. Eucalyptus groves were present in the southern portion of the Project site along the natural-bottomed channel feature and Pasadena Street. The eucalyptus groves consisted mainly of eucalyptus tree species, but also included Russian thistle (*Salsola tragus*), California buckwheat (*Eriogonum fasciculatum)*, mustards, and tree tobacco (*Nicotiana glauca*).

4.2.7 Disturbed/Nonnative Grassland

Areas mapped as disturbed/nonnative grassland were largely devoid of native vegetation due to human disturbance and were dominated by open areas of nonnative grasses including nonnative weedy and ruderal vegetation. The disturbed/nonnative grassland land cover type was present within and west of the proposed Bundy Canyon Basin and south of the proposed Lateral C-2 facility. Plants present in this land cover type were dominated by nonnative weedy species such as Russian thistle, mustards, and brome grasses (*Bromus* sp.) but also included sparse occurrences of native species such as dove weed.

4.2.8 Developed

Developed is not a vegetation classification, but rather a land cover type. Areas mapped as developed were devoid of natural vegetation due to human development and contained only landscaped vegetation and ornamental street trees, buildings, and paved and/or gravel ground cover. Because the Project site is located in an urban area, the developed land cover type represented the majority of the survey area and included residential areas, industrial areas, highways, and city streets.

4.2.9 Ruderal (Old Agriculture)

Ruderal (old agriculture) is not a vegetation classification, but rather a land cover type. Areas mapped as ruderal (old agriculture) did not contain natural vegetation communities and instead were previously cultivated areas sparsely covered with nonnative vegetation that appeared to have been cleared and/or disced on a regular basis. The ruderal (old agriculture) land cover type was present between the proposed Lateral C-2 and C-3 facilities and between the Lateral C-3 facility and I-15. These areas appeared to have previously been olive tree (*Olea* sp.) groves and were currently covered in ruderal vegetation including mustards and brome grasses.

4.3 Special-Status Species

Special-status plant and wildlife species were evaluated for their potential to occur within the Project site based on the results of the literature searches and the site visit. Complete lists of special status plant and wildlife species that were evaluated for their potential to occur in the area are included as Appendices D and E, respectively. The Project site does not fall into any designated critical habitat for federally listed plant or wildlife species.

4.3.1 Special-Status Plants

The literature search conducted for the Project documented 56 special-status plant species (nine are federally and/or state-listed, 28 species covered by the MSHCP) within five miles of the Project site, 38 of which were presumed absent from both Phases 1 and 2 due to lack of suitable habitat. The remaining 18 species have either a moderate or low potential to occur in the disturbed habitat in the proposed Bundy Canyon Basin and in some Phase 2 areas. These species are discussed below. The remaining portions of the Project site were developed or severely disturbed and do not provide habitat for special-status species. There were no plant species in the literature review that have a high potential to occur. A complete list of the 56 special-status plant species, with details regarding blooming periods, habitat requirements, and potential for occurrence designations, is included as Appendix D.

With various habitat types occurring within the 9-quadrangle search, including Lake Elsinore, Canyon Lake, and the Santa Ana Mountain Range, several species appeared in the literature review results that had no potential to occur on or in the vicinity of the Project site. Additionally, for the purposes of this study, plants with CNPS designation of 4.3 were not included in this analysis, as they are defined as "not very endangered in California (<20 percent of occurrences threatened or no current threats known)" (CNPS 2019). The 18 special-status plant species with a moderate to low potential to occur are listed below with their status designation. Descriptions of the CNPS designations can be found in Table 2.

Table 2. California Native Plant Society List Designation Meanings

List Designation	Meaning
1A	Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B	Plants Rare, Threatened, or Endangered in California and Elsewhere
2A	Plants Presumed Extirpated in California, But Common Elsewhere
2B	Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3	Plants about which we need more information; a review list
4	Plants of limited distribution; a watch list
Threat Ranks:	
.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2	Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3	Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Plant Species with a Moderate Potential to Occur

The following three species have a moderate potential to occur on the Project site because either habitat for the species occurs on the site and a known occurrence has been reported in the database, but not within five miles of the site, a historic documented observation (more than 20 years old) was recorded

within five miles of the Project site; or a known occurrence within five miles of the site and marginal or limited amounts of habitat occurs on the site. Unless otherwise noted, the species listed below are not covered by the MSHCP.

Smooth tarplant

The smooth tarplant (*Centromadia pungens* ssp. *laevis*) is a CNPS List 1B.1 species. This annual herb occurs in a variety of habitats including chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland. This species occurs at an elevation between 0 and 480 meters above mean sea level and typically flowers from April to September. Multiple occurrences of this species have been documented within five miles of the Project site, the closest was documented in 2017 approximately two miles west of the Project. Marginally suitable habitat exists within the riparian areas of the proposed Bundy Canyon Basin, the riparian area north of Baxter Road, and around Pasadena Street. Therefore, this species has a moderate potential to occur. The smooth tarplant is a covered species under the MSHCP.

Parry's spineflower

Parry's spineflower (*Chorizanthe parryi* var. *parryi*) is a CNPS List 1B.1 species. This annual herb occurs in chaparral and coastal scrub in sandy or rocky openings. This species occurs at an elevation between 40 and 1,705 meters above sea level and typically flowers from April to June. Two occurrences of this species were documented within one mile of the Project site in 2011 and 2006. Marginally suitable habitat exists within the proposed Bundy Canyon Basin, and in the undeveloped properties north and south of Baxter Road and around Pasadena Street. Therefore, this species has a moderate potential to occur. Parry's spineflower is a covered species under the MSHCP.

Long-spined spineflower

The long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) is a CNPS 1B.2 species. This annual herb occurs in a variety of habitats including chaparral, coastal scrub, meadows and seeps, and valley and foothill grasslands. This species occurs at an elevation between 30 and 1,450 meters above sea level and typically flowers from April to July. One occurrence of this species was documented within one mile of the Project site in 2011. Marginally suitable habitat exists within the proposed Bundy Canyon Basin, and in the undeveloped properties north and south of Baxter Road and around Pasadena Street. Therefore, this species has a moderate potential to occur. The long-spined spineflower is a covered species under the MSHCP.

Plant Species with a Low Potential to Occur

The following 15 species have a low potential to occur on the Project site because limited habitat for the species occurs on the site and a known occurrence has been reported in the database, but not within five miles of the site or a historic documented observation (more than 20 years old) was recorded within five miles of the Project site; or suitable habitat strongly associated with the species occurs on the site, but no recent records were found in the database search. Unless otherwise noted, these species are not covered by the MSHCP:

- Munz's onion (*Allium munzii*), federally listed endangered, state-listed threatened, CNPS 1B.1, MSHCP Covered

- San Diego ambrosia (*Ambrosia pumila*), federally listed endangered, CNPS 1B.1, MSHCP Covered
- Douglas' fiddleneck (*Amsinckia douglasiana*), CNPS 4.2
- Jaeger's milk-vetch (*Astragalus pachypus* var. *jaegeri*), CNPS List 1B.1, MSHCP Covered
- Thread-leaved brodiaea (*Brodiaea filifolia*), federally listed threatened, state-listed endangered, CNPS 1B.1, MSHCP Covered
- Round-leaved filaree (*California macrophylla*), CNPS 1B.2, MSHCP Covered
- Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), CNPS 1B.2, MSHCP Covered
- San Miguel savory (*Clinopodium chandleri*), CNPS 1B.2, MSHCP Covered
- Paniculate tarplant (*Deinandra paniculata*), CNPS 4.2
- Slender-horned spineflower (*Dodecahema leptoceras*), federally listed endangered, state-listed endangered, CNPS 1B.1, MSHCP Covered
- Many-stemmed dudleya (*Dudleya multicaulis*), CNPS List 1B.2, MSHCP Covered
- Palmer's grappling hook (*Harpagonella palmeri*), CNPS 4.2, MSHCP Covered
- Hall's monardella (*Monardella micrantha* ssp. *hallii*), CNPS List 1B.3, MSHCP Covered
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*), CNPS 2B.2
- California screw moss (*Tortula californica*), CNPS 1B.2

4.3.2 Special-Status Wildlife

The literature search documented 42 special-status wildlife species (15 federally and/or state-listed species, 29 covered by the MSHCP) in the vicinity of the Project site. The list of special-status wildlife includes species that are federally and state-listed, which are protected under federal and/or California ESAs, and CDFW SSCs. In Phase 1, two special-status wildlife species were observed in the vicinity of the proposed Bundy Canyon Basin during the reconnaissance survey conducted in 2019, four species were determined to have a high potential to occur, three species with a moderate potential to occur, 18 species with a low potential to occur, and 15 species were presumed absent. In Phase 2, five species were determined to have a high potential to occur, two with a moderate potential to occur, 18 with a low potential to occur, and 17 species were presumed absent. Potential for occurrence determinations for the Phase 2 Project components differed slightly than those made for Phase 1 in that they were downgraded due to lack of or poor quality of habitat in the Phase 2 area. Each species and its occurrence designation are discussed separately below. Appendix E contains the full potential for occurrence analysis for both Project phases.

Wildlife Species Present on or Adjacent to the Project Site

Coastal California Gnatcatcher

Coastal California gnatcatcher is a federally Listed (Threatened) and California SSC. This species is an obligate permanent resident of coastal sage scrub habitats below 2,500 feet (762 meters) in elevation in southern California (USFWS 2010). This species is found in low growing coastal sage scrub, particularly those dominated by California sagebrush (*Artemisia californica*). Suitable habitat for this species is not present anywhere within the Project footprint (including the proposed Bundy Canyon Basin); however, coastal California gnatcatchers were observed and heard vocalizing in the scrub habitat both west and immediately south of the proposed Bundy Canyon Basin and a male was observed flying around in the scrub habitat south of the proposed Bundy Canyon Basin during the survey conducted in 2019. No suitable habitat is present in the Phase 2 areas south of I-15. Coastal California gnatcatcher has a low potential to occur in Phase 2 of the Project because of the proximity to recent sightings of the species, but the lack of suitable habitat reduces the potential for coastal California gnatcatcher to occur. The coastal California gnatcatcher is a covered species under the MSHCP.

Loggerhead Shrike

The loggerhead shrike is an SSC. The loggerhead shrike feeds on a variety of prey including insects, small mammals, and other birds. It occurs in such habitats as grasslands, open areas with scattered trees, and shrublands (Zeiner et al. 1990a). Suitable open habitat occurs within and adjacent to the proposed Bundy Canyon Basin, Baxter Road in the central portion of the Project, and Pasadena Street in the extreme southern portion of the Project area. An individual was observed in the proposed Bundy Canyon Basin during the survey conducted in 2019. Additionally, one recent occurrence from 2001 was reported approximately three miles west of the Project site. This species has a high potential to occur in the Phase 2 areas due to the presence of suitable habitat in the locations described above. The loggerhead shrike is a covered species under the MSHCP.

Wildlife Species with a High Potential to Occur

The following species have a high potential to occur on the Project site due to the presence of suitable habitat for the species occurring on the Project site and a known occurrence that has been recorded within five miles of the Project site:

Southern California Legless Lizard

Southern California legless lizard (*Anniella stebbinsi*) is a California SSC that primarily lives underground in a wide range of habitats containing loose or sandy soils. The southern California legless lizard can be found in chaparral, scrub, wash, and dune habitats, but will also frequent suburban gardens within its range. Presence of soil moisture is important for the survival of this species. During the day, the species forages in leaf litter and other natural debris for invertebrates such as beetles, spiders, and termites. Suitable habitat is present in and adjacent to the proposed Bundy Canyon Basin and the undeveloped areas around Baxter Road and Pasadena Street in the extreme southern portion of the Project area. The closest record of this species was documented less than one mile east of the proposed Bundy Canyon Basin in 2011, when an individual was observed in the backyard of a residence in the residential development just east of the proposed Bundy Canyon Basin (CDFW 2019a).

Coast Horned Lizard

Coast horned lizard (*Phrynosoma blainvillii*) is a California SSC that occurs in open scrub and riparian habitats and other open areas with sandy soils and ample ant prey base (Zeiner et al. 1990b). Suitable open habitat occurs within and adjacent to the proposed Bundy Canyon Basin, Baxter Road in the central portion of the Project, and Pasadena Street in the extreme southern portion of the Project area. Several recent occurrences have been reported within five miles of the site, the closest of which was in 2001 approximately two miles northeast. Therefore, this species has a high potential to occur. The coast horned lizard is a covered species under the MSHCP.

Coastal Whiptail

The coastal whiptail (*Aspidoscelis tigris stejnegeri*) is a California SSC that is found in woodland, riparian, and arid open areas with sparse vegetation (CDFW 2019a). Suitable open habitat occurs within and adjacent to the proposed Bundy Canyon Basin, Baxter Road in the central portion of the Project, and Pasadena Street in the extreme southern portion of the Project area. One recent occurrence from 2001 was reported approximately three miles northeast of the Project site. Therefore, this species has a high potential to occur. The coastal whiptail is a covered species under the MSHCP.

San Diego Black-Tailed Jackrabbit

The San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) is a California SSC that occurs in the intermediate canopy stages of shrub and open shrub habitats, herbaceous and tree habitats, and herbaceous edges (Zeiner et al. 1990c). Suitable open habitat occurs within and adjacent to the proposed Bundy Canyon Basin, Baxter Road in the central portion of the Project, and Pasadena Street in the extreme southern portion of the Project area. Several recent occurrences have been reported within five miles of the site, the closest of which were in 1998 when two occurrences were documented approximately two miles southeast and two miles east of the Project site. Therefore, this species has a high potential to occur. The San Diego black-tailed jackrabbit is a covered species under the MSHCP.

Wildlife Species with a Moderate Potential to Occur

The following species have a moderate potential to occur on the Project site because either habitat for the species occurs on the site and a known occurrence has been reported in the database, but not within five miles of the site, a historic documented observation (more than 20 years old) was recorded within five miles of the Project site; or a known occurrence within five miles of the site and marginal or limited amounts of habitat occurs on the site:

Western spadefoot

The western spadefoot (*Spea hammondii*) is a California SSC. This species occurs in coastal sage scrub, chaparral, and grasslands, where it may be found in sandy washes, on floodplains and in low hills. Temporary breeding pools are a crucial requirement for the spadefoot's continued occupation of an area. Marginally suitable habitat is present within and adjacent to the proposed Bundy Canyon Basin, within the undeveloped properties north and south of Baxter Road, and around Pasadena Street. One occurrence of this species was documented in 2005 approximately two miles east of the Project site. Therefore, this species has a moderate potential to occur in the Project area. The western spadefoot is a covered species under the MSHCP.

Red-diamond rattlesnake

The red-diamond rattlesnake (*Crotalus ruber*) is a California SSC. This species typically inhabits rocky areas in a variety of habitats including desert scrub, thorn scrub, open chaparral, and sometimes sand dunes. This species feeds primarily on small mammals, including ground squirrels, mice, and rabbits. Suitable habitat is present within the proposed Bundy Canyon Basin and in the adjacent disturbed California buckwheat scrub to the south. Marginally suitable habitat is present in the undeveloped properties north and south of Baxter Road; however, this area does not contain any native scrub vegetation and reduces the potential for this species to occur there. An occurrence of this species was documented in 2001 approximately two miles northeast of the Project area. This species was determined to have a moderate potential to occur in and around the proposed Bundy Canyon Basin, but a low potential for occurrence in the remaining portions of the Project. The red-diamond rattlesnake is a covered species under the MSHCP.

Burrowing owl

The burrowing owl (*Athene cunicularia*) is a California SSC. Burrowing owls historically occurred throughout much of California; however, many former populations have vanished. The burrowing owl is a year-round resident in California that inhabits open habitats, primarily grasslands and deserts. Most of their time is spent on the ground in front of burrow entrances or sitting on low perches near their burrows. These owls are unusual in that they either excavate their own burrows for shelter and breeding purposes, or they rely on California ground squirrels (*Otospermophilus beecheyi*) and other burrowing mammals for burrow construction. Burrowing owls have also been known to nest within natural rock cavities, debris piles, culverts and pipes (Rosenberg et al. 1998). Habitat requirements for burrowing owls consist of arid, open areas with sparse vegetation cover such as deserts, abandoned agricultural areas, grasslands, and disturbed open habitats. Friable soils are also important habitat requirements for this species. Suitable foraging habitat is present throughout the entire Project site; however, suitably-sized burrows were not identified during the reconnaissance-level surveys. A documented occurrence was recorded in 2007 approximately four miles northeast of the Project site. Therefore, this species has a moderate potential to occur. The burrowing owl is a covered species under the MSHCP.

Wildlife Species with a Low Potential to Occur

The following species have a low potential to occur on the Project site because limited habitat for the species occurs on the site and a known occurrence has been reported in the database, but not within five miles of the site or a historic documented observation (more than 20 years old) was recorded within five miles of the Project site, or suitable habitat strongly associated with the species occurs on the site, but no records were found in the database search:

- Quino checkerspot butterfly (*Euphydryas editha quino*), Federally Listed (Endangered), MSHCP Covered
- Coast range newt (*Taricha torosa*), CDFW SSC, MSHCP Covered
- California glossy snake (*Arizona elegans occidentalis*), CDFW SSC
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*), CDFW SSC

- Golden eagle (*Aquila chrysaetos*), CDFW Fully Protected, MSHCP Covered
- Swainson's hawk (*Buteo swainsoni*), State Listed (Threatened), MSHCP Covered
- White-tailed kite (*Elanus leucurus*), CDFW Fully Protected, MSHCP Covered
- Least Bell's vireo (*Vireo bellii pusillus*), Federally Listed (Endangered), State Listed (Endangered), MSHCP Covered
- Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), CDFW SSC, MSHCP Covered
- Yellow-breasted chat (*Icteria virens*), CDFW SSC, MSHCP Covered
- Pallid bat (*Antrozous pallidus*), CDFW SSC
- Western yellow bat (*Lasiurus xanthinus*), CDFW SSC
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*), CDFW SSC
- Dulzura pocket mouse (*Chaetodipus californicus femoralis*), CDFW SSC
- Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), CDFW SSC, MSHCP Covered
- Stephens' kangaroo rat (*Dipodomys stephensi*), Federally Listed (Endangered), State Listed (Threatened), MSHCP Covered
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), CDFW SSC, MSHCP Covered
- Southern grasshopper mouse (*Onychomys torridus ramona*), CDFW SSC

4.3.3 Raptors and Migratory Birds

CDFW enforces the protection of non-game native birds in Sections 3503, 3503.5, and 3800 of the California Fish and Game Code. Raptor and songbird species are protected by the MBTA (USFWS 1918), and Section 3513 of the California Fish and Game Code prohibits the possession or take of birds listed under the MBTA. Trees and shrubs (both native and nonnative), power poles, and other structures (e.g., abandoned buildings and cellular towers) that provide suitable nesting substrates for raptor and songbirds were relatively abundant within and adjacent to the Project site including in developed areas. These substrates may also provide hunting perches for larger raptors. Shrubby vegetation was present mostly adjacent to the Project site, which provides suitable nesting habitat for songbirds. It is likely that raptors and songbirds use the Project site and surrounding areas for nesting activities. Raptors in the area typically breed between February and August while songbirds protected under the MBTA generally nest between March and August.

4.4 Jurisdictional Waters

Several aquatic features were mapped within or immediately adjacent to the Project site that are considered potentially jurisdictional to USACE, CDFW, and/or SWRCB. These features are described in more detail under a separate cover (ECORP 2020); however, tables of jurisdictional feature acreages from the Aquatic Resources Delineation Report have been copied below for reference (Tables 3 and 4).

Table 3. Potential Waters of the U.S.*

Classification	Acreage[1]	Linear Feet
Wetlands:		
None	-	-
Other Waters (Non-wetland Waters):		
Bundy Canyon Wash (ED-02, ED-03, ED-04, and ED-10)	3.17	7,260
ED-01	1.14	2,431
ED-05	0.05	1,930
ED-06	0.02	741
ED-07	0.03	810
ED-08	0.07	510
ED-09	0.06	615
Total:	4.54	14,297

[1]Acreages in this table represent a calculated estimation and are subject to modification following USACE's verification process. Waters areas are measured in State Plane (NAD83) coordinates. All measurements are in the defined units for this coordinate system (feet) and all calculations and summations are calculated in square feet. Results are converted to acreages for ease of use. However, this conversion may lead to minor rounding errors in the reporting of acreage summaries.

*Locations of aquatic features are presented in the Aquatic Resources Delineation Report (ECORP 2020)

Table 4. California Department of Fish and Wildlife Jurisdiction

Type	Acreage
Streambed	15.37
Disturbed Mulefat Thickets	0.45
Disturbed Red Willow Thickets	0.42
Disturbed Riversidean Alluvial Fan Sage Scrub	0.32
Total	16.56

4.5 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor is varied, but corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges, for example. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of

wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. Naturally, the nature of corridor use and wildlife movement patterns varies greatly among species.

Drainages generally serve as movement corridors because wildlife can move easily through these areas, and fresh water is available. Corridors also offer wildlife unobstructed terrain to forage in and for the dispersal of young individuals. Movement corridors are particularly important to larger terrestrial species, such as mountain lions (*Felis concolor*), coyotes (*Canis latrans*), bobcats (*Lynx rufus*), and mule deer (*Odocoileus hemionus*) due to the protective cover afforded by dense vegetation.

The majority of the Project site is heavily disturbed and contain very little cover that would only allow for limited movement of smaller, resident populations of wildlife. The riparian areas and drainages present throughout the Project site may be conducive to wildlife movement; however, these areas are not considered substantial corridors and they do not connect two large, undeveloped blocks of land that wildlife may need to move between. Furthermore, no MSHCP-designated corridors or linkages are present on or adjacent to the Project site.

4.6 Western Riverside Multiple Species Habitat Conservation Plan

The Project site was reviewed to determine consistency with the MSHCP. The RCA MSHCP Information Map was queried to determine requirements for habitat assessment(s), potential focused survey(s), or other issues related to biological resources that could exist on the Project site (County of Riverside 2019).

The Project site is not located within any Conservation Areas, Criteria Cells, or other specially-designated area according to the Western Riverside MSHCP.

Section 6.0 of the MSHCP requires assessment of the potential effects from the Project on biological resources including riparian/riverine areas, vernal pools, and fairy shrimp, burrowing owl, and Narrow Endemic Plant Species. In addition, the MSHCP requires an Urban/Wildlands Interface analysis be conducted in order to address the indirect effects associated with locating proposed development in proximity of MSHCP conservation areas. These resources were assessed during the reconnaissance survey and are discussed below in relation to the Project.

4.6.1 Riparian/Riverine, Vernal Pool, and Fairy Shrimp Habitat Assessment (Section 6.1.2)

In accordance with Section 6.1.2 of the Western Riverside MSHCP, a habitat assessment was performed for riparian and riverine communities, vernal pools, and fairy shrimp. The Project site did not contain vernal pool habitat or suitable habitat for fairy shrimp. There were four areas where riparian or riverine vegetation were documented (Figure 4).

Three areas of riparian/riverine vegetation were located within and adjacent to the proposed Bundy Canyon Basin: one along the western boundary, another along the southern boundary, and adjacent to the boundary to the southwest. The riparian vegetation along the western boundary (adjacent to Monte Vista Drive), mapped as southern willow scrub, was dominated by black willows and was narrow in size. It is associated with a seasonal wetland swale and a culvert that drains a nearby housing development to the north. This patch of habitat is narrow and subjected to disturbances from vehicular traffic along Monte

Vista Drive and Bundy Canyon Road, as well as disturbances from periodic mowing/maintenance activities at the proposed Bundy Canyon Basin. The channel associated with this habitat ultimately flows across Monte Vista Drive and flows west towards I-15. Nonnative species were abundant, including tamarisk and mustards. The willows do not likely provide suitable nesting habitat for riparian obligate special-status species, such as least Bell's vireo, but could provide habitat during temporary migratory stopovers.

The riparian area along the southern boundary of proposed Bundy Canyon Basin is associated with a natural-bottomed drainage and was dominated by mulefat (disturbed mulefat thickets). This drainage is located at the base of a small hill and drained into the concrete-lined channel adjacent to Monte Vista Drive described above. The vegetation in this area is narrow and subject to disturbances associated with the housing development located to the east and mowing/maintenance activities at proposed Bundy Canyon Basin. Nonnative plant species, such as mustards and grasses, were present in this community. One Fremont's cottonwood is located near the eastern end of the drainage. Like the southern willow scrub described above, the disturbed mulefat thickets in this area do not provide suitable nesting habitat for riparian obligate special-status species, but it could be used during migratory stopovers.

A patch of disturbed Riversidean alluvial fan sage scrub is located within and adjacent to the southwest boundary of the proposed Bundy Canyon Basin. This community is also associated with the natural-bottomed drainage that supports the disturbed mulefat thickets described above. The disturbed Riversidean alluvial fan sage scrub was dominated by California buckwheat and scalebroom and is subject to disturbances associated with Monte Vista Road to the west and anthropogenic influences from nearby residential areas and the unofficial walking trail along the southern boundary of the proposed Bundy Canyon Basin. Nonnative plant species, such as mustards and grasses, were present in this community. Like the communities described above, the disturbed Riversidean alluvial fan sage scrub does not provide suitable nesting habitat for special-status species, but it could be used during migratory stopovers.

The fourth patch of riparian habitat was located just north of Baxter Road on the northern boundary of the proposed Lateral C-2. This area was dominated by red willow (disturbed red willow thickets), was very small in size, and did not appear to be associated with a defined drainage. The area surrounding the disturbed red willow thickets had previously been agricultural (olive grove) and was overrun by nonnatives. Several large eucalyptus trees were associated with this small patch of habitat. Evidence of mowing or other mechanical disturbances were present, and a homeless encampment was observed nearby. Similar to the riparian areas described above, this habitat does not provide suitable nesting habitat for riparian obligate special-status species, but it could be used during migratory stopovers.

4.6.2 Narrow Endemic Plant Species (Section 6.1.3)

The RCA MSHCP Information Map was reviewed to determine whether the Project site is located within a Narrow Endemic Plant Species Survey Area (NEPSSA), in accordance with Section 6.1.3 of the Western Riverside MSHCP. The Project site is not located within a NEPSSA or a Criteria Area. However, seven of the NEPSS appeared in the literature search, four of which were found to have a low potential to occur due to poor quality habitat present (Munz's onion, San Diego ambrosia, slender-horned spineflower, and many-stemmed dudleya). The remaining three species were presumed absent based on the lack of suitable habitat (spreading navarretia [*Navarretia fossalis*], California Orcutt grass [*Orcuttia californica*], and Hammitt's claycress [*Sibaropsis hammittii*]).

4.6.3 Burrowing Owl Habitat Assessment (Section 6.3.2)

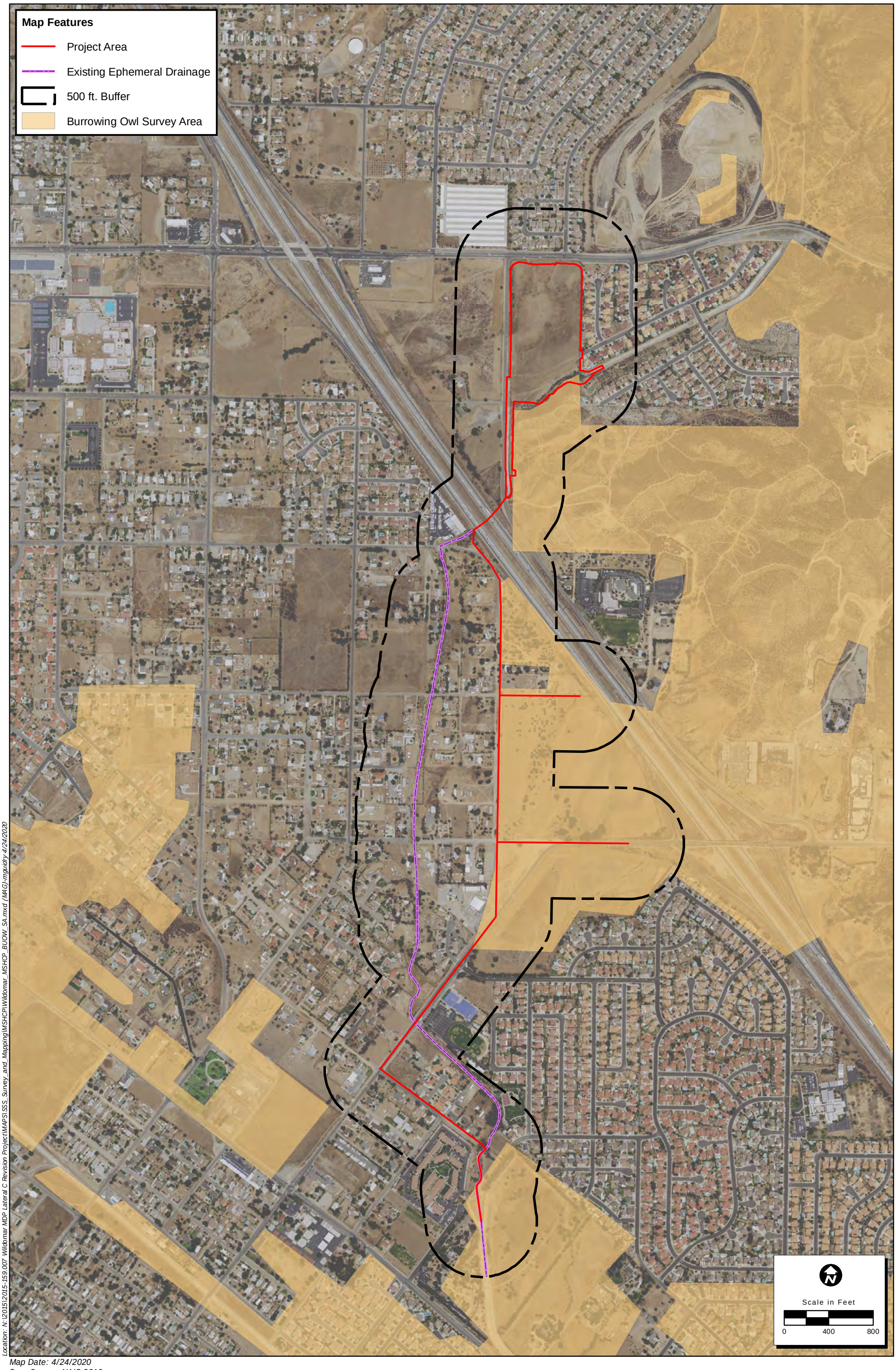
In accordance with Section 6.3.2 of the Western Riverside MSHCP, a habitat assessment for burrowing owl was performed. Additionally, the RCA MSHCP Information Map was reviewed to identify areas within the Project site that may fall within the designated burrowing owl survey areas. The majority of the Project site is located adjacent to the MSHCP-designated burrowing owl survey area (Figure 5). The extreme southeast corner of the proposed Bundy Canyon Basin, Lateral C-2, Lateral C-3, and portions of Lateral C (along Central Avenue and the extreme southern end) are all located within the burrowing owl survey area. Burrowing owls or suitably-sized burrows were not identified on the Project site during the burrowing owl habitat assessment that was performed during the reconnaissance survey.

Areas within 500 feet of the Project site provide suitable habitat; however, these open and undeveloped areas had evidence of frequent mowing, disking, and other mechanical disturbances that may preclude burrowing owls from occupying the areas adjacent to the Project site. In the extreme southeastern portion and immediately south of the proposed Bundy Canyon Basin is a MSHCP-designated burrowing owl survey area within the disturbed California buckwheat scrub, but this area contained steep slopes that generally do not provide suitable open and flat habitat for the species. One portion of the Project site, Lateral C-3, was inaccessible due to private property. This portion of the Project is located along an existing driveway to a private residence and did not appear to provide suitable burrowing owl habitat or contain suitably-sized burrows based on a visual assessment using binoculars.

Based on the results of the burrowing owl habitat assessment, focused burrowing owl surveys will likely not be required for the Project due to the lack of suitable habitat and potential burrows; however, due to the mobile nature of the species, there is possibility for the Project site to be occupied by burrowing owls prior to construction. A pre-construction survey for burrowing owls will need to be completed prior to construction activities in accordance with the Western Riverside MSHCP burrowing owl survey guidelines (County of Riverside 2006).

4.6.4 Urban/Wildlands Interface (Section 6.1.4)

The requirements for Urban/Wildlands Interface for the management of edge factors do not apply to the Project site because the Project site is not situated adjacent to any wildlands or MSHCP-designated Conservation Area. The Project site is relatively isolated from larger, contiguous blocks of native habitat and completely surrounded by residential development, previous agricultural areas, and other anthropogenic land use. A net long-term increase of edge impacts is not expected as a result of this Project.



Location: N:\2015\2015-159.007 Wildomar MDP Lateral C Revision Project\MAPS\SSS_Survey_and_Mapping\MSHCP\Wildomar_MSHCP_BUOWL_SA.mxd (MAG)-mguidry 4/24/2020

Map Date: 4/24/2020
Base Source: NAIP 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 5. Wildomar Lateral C MSHCP Burrowing Owl Survey Area

2015-159.007 Wildomar Lateral C

5.0 IMPACT ANALYSIS

The following section summarizes the results of the biological surveys and analyzes the Project's potential impacts in light of the CEQA Initial Study Checklist and the MSHCP. The Project will be constructed in two phases: the first will involve excavation of material from the proposed Bundy Canyon Basin and construction of an outlet structure, and the second phase will involve utility trenching, Project construction, and paving along the Lateral C mainline, Lateral C-2, and Lateral C-3. Because the Project is split into two phases, impacts to biological resources for each phase are presented separately below.

5.1 Phase 1 (Proposed Bundy Canyon Basin and Outlet Structure)

Construction of the proposed Bundy Canyon Basin and outlet structure would result in the loss of hydrology that supports the southern willow scrub located along the northwest boundary of the proposed Bundy Canyon Basin. Furthermore, there will be impacts to the natural-bottomed drainage along the southern boundary of the proposed basin as well as to some of the vegetation associated with that drainage. These impacts are described in more detail in the subsections below.

5.1.1 Special-Status Species

Phase 1 of the Project would involve excavation of the proposed Bundy Canyon Basin, which would include vegetation removal. As such, the Proposed Project would have the potential to have a substantial adverse effect, either directly or through habitat modifications, on special-status species identified by CDFW, and/or USFWS. Impacts to each special-status species identified as having a potential to occur are described below.

Table 5 contains the acreages of vegetation communities that may be affected by construction of Phase 1. The vegetation communities and land cover types within the Phase 1 Project area all provide some level of suitable habitat for special-status species except for areas classified as developed.

Table 5. Phase 1 Vegetation Communities and Land Covers

Community/Land Cover Name	Direct Impact Acreage (within Project Boundaries)	Indirect Impact Acreage
California Buckwheat Scrub	0.25	0.00
Mulefat Thickets	0.44	0.00
Southern Willow Scrub	0.13	0.27*
Disturbed Riversidean Alluvial Fan Sage Scrub	0.11	0.00
Streambed	1.07	0.00
Disturbed/Nonnative Grassland	16.54	0.00
Developed	0.20	0.00

*Due to dewatering

Of the 56 special status plants identified in the literature search, 18 species were determined to have a moderate to low potential to occur in the Phase 1 work areas, particularly within or immediately adjacent

to the proposed Bundy Canyon Basin. Of these 18 species, 14 are considered adequately conserved by the MSHCP (smooth tarplant, Parry's spineflower, long-spined spineflower, Munz's onion, San Diego ambrosia, Jaeger's milk-vetch, thread-leaved brodiaea, round-leaved filaree, intermediate mariposa lily, San Miguel savory, slender-horned spineflower, many-stemmed dudleya, Palmer's grappling hook, and Hall's monardella) and impacts to these species do not require additional surveys or mitigation because Phase 1 is not located within a NEPSSA or Criteria Area.

The remaining four species are not covered by the MSHCP (Douglas' fiddleneck, paniculate tarplant, white rabbit-tobacco, and California screw moss) and have a low potential to occur within Phase 1. The lack of high-quality habitat on and adjacent to the Phase 1 Project areas, existing level of disturbances, and mechanically disturbed soils within the proposed Bundy Canyon Basin likely preclude these species from occurring. The removal of marginally suitable habitat in the disturbed California buckwheat scrub and disturbed/nonnative grassland communities within Phase 1 for these plant species would not be expected to contribute substantially to the overall decline of these species. As such, any Project-related impacts to Douglas' fiddleneck, paniculate tarplant, white rabbit-tobacco, and California screw moss would be less than significant.

Of the 42 special-status wildlife species identified in the literature search, two were observed and detected in the immediate vicinity of the proposed Bundy Canyon Basin, the coastal California gnatcatcher (federally listed as threatened and a California SSC) and loggerhead shrike (California SSC). Coastal California gnatcatcher Vocalizations were detected in the disturbed California buckwheat scrub south and west of the proposed Bundy Canyon Basin and a male was observed flying in the scrub habitat south of the proposed Bundy Canyon Basin. The loggerhead shrike was observed flying within the proposed Bundy Canyon Basin. Both species are covered species under the MSHCP. Coastal California gnatcatcher is considered adequately conserved under the MSHCP through the designation of conserved lands with suitable coastal California gnatcatcher habitat. Impacts to loggerhead shrike as a result of covered activities have already been analyzed within the context of the MSHCP and no further survey activities are required for the loggerhead shrike. However, both species are also protected under the federal MBTA and the California Fish and Game Code as nesting bird species. If construction activities for Phase 1 occur during the nesting bird season, ground-disturbing construction activities could directly affect these species and their nests through the removal of approximately habitat and indirectly through increased noise, ground vibrations, and human activity. Impacts to this species would be less than significant with the implementation of Mitigation Measures BIO-1 and BIO-2.

Four special-status wildlife species (southern California legless lizard, coast horned lizard, coastal whiptail, and San Diego black-tailed jackrabbit) have a high potential to occur in and/or adjacent to the proposed Bundy Canyon Basin. All species are California SSC and all but the southern California legless lizard are covered species under the MSHCP. Impacts to the species covered under the MSHCP (coast horned lizard, coastal whiptail, and San Diego black-tailed jackrabbit) as a result of covered activities have already been analyzed within the context of the MSHCP and no further survey activities are required for these species. Direct impacts to southern California legless lizard may occur through ground disturbance, vegetation removal, habitat loss, and mortality and indirect impacts from construction noise and vibrations may occur. This species is known to be locally abundant where they occur and based on the recently documented occurrence of this species less than one mile from the Phase 1 area, impacts to the southern

California silvery legless lizard have the potential to be significant. Impacts to these species would be less than significant with the implementation of Mitigation Measure BIO-3.

An additional 21 species have a moderate to low potential to occur. Of these 21 species, 14 (Quino checkerspot butterfly, coast range newt, western spadefoot, red-diamond rattlesnake, burrowing owl, golden eagle, least Bell's vireo, Swainson's hawk, white-tailed kite, coastal cactus wren, yellow-breasted chat, Los Angeles pocket mouse, northwestern San Diego pocket mouse, and Stephens' kangaroo rat) are covered by the MSHCP. Low quality or marginal habitat for these species is present within the Phase 1 area; however, Phase 1 is not located within a MSHCP-designated survey area for these species. With the exception of burrowing owl, least Bell's vireo, and Stephens' kangaroo rat, impacts to the covered species under the MSHCP as a result of covered activities have already been analyzed within the context of the MSHCP and no further survey activities are required for these species. Burrowing owl, least Bell's vireo, and Stephens' kangaroo rat do have additional requirements under the MSHCP and these are discussed below.

Although Phase 1 is not located within a MSHCP-designated survey area for burrowing owl, suitable foraging habitat is present in the disturbed/nonnative grassland community within the proposed Bundy Canyon Basin and MSHCP-designated survey areas for burrowing owl are located immediately adjacent to Phase 1 (to the south in the disturbed California buckwheat scrub; however, this area contains a steep slope and does not provide suitable habitat for burrowing owl). As such, direct impacts to burrowing owl through ground disturbance and loss of ±15.99 acres of disturbed/nonnative grassland habitat and indirect impacts from construction noise, vibrations, and increased human activity may occur. Impacts to burrowing owl would be less than significant with the implementation of Mitigation Measure BIO-4.

Two areas of riparian habitat are present on the boundaries of the proposed Bundy Canyon Basin, southern willow scrub along the western boundary (adjacent to Monte Vista Drive) and disturbed mulefat thickets along the southern boundary in Bundy Canyon Wash. Neither of these riparian areas are suitable for least Bell's nesting activities due to their small size and presence of disturbances; however, they could be used by the species as migratory stopovers. Indirect impacts to least Bell's vireo during the migratory season may occur in the form of increased noise, ground disturbance, and human activity. Impacts to least Bell's vireo would be less than significant with the implementation of Mitigation Measures BIO-1 and BIO-3.

Marginally suitable habitat is present for Stephens' kangaroo rat (SKR) within Phase 1, which is located within the Stephens' kangaroo rat fee assessment area (Riverside County Habitat Conservation Agency [RCHCA] 1995; Wildomar Municipal Code 3.43.060). The District is not subject to this mitigation fee; therefore, no additional mitigation for SKR is required.

The remaining seven special-status wildlife species with a low potential to occur (California glossy snake, coast patch-nosed snake, pallid bat, western yellow bat, pocketed free-tailed bat, Dulzura pocket mouse, and southern grasshopper mouse) are not covered by the MSHCP. Direct impacts to these species may occur through ground disturbance, vegetation and tree removal, and habitat loss. However, the removal of low-quality habitat in the proposed Bundy Canyon Basin would not be expected to contribute substantially to the overall decline of these species because this habitat is not expected to support dense populations of these species. Therefore, impacts to these species are not expected to be significant.

The majority of wildlife detected during the reconnaissance survey included birds that are commonly found in disturbed and urban areas. In addition, birds and raptors protected by the MBTA may utilize the area for foraging and nest on the site and surrounding trees. Vegetation communities within Phase 1 that provide habitat for nesting birds and raptors include all those mapped except developed areas. If construction activities for Phase 1 occur during the nesting bird season, ground-disturbing construction activities could directly affect birds protected by the MBTA and their nests through the removal of habitat and indirectly through increased noise, ground vibrations, and human activity. Impacts to nesting birds would be less than significant with the implementation of Mitigation Measures BIO-1 and BIO-2.

5.1.2 Sensitive Natural Communities

Sensitive vegetation communities did not appear in the literature search. Disturbed Riversidean alluvial fan sage scrub, a community with a State Rarity Ranking of S1 (critically imperiled and susceptible to extirpation), was mapped within and adjacent to the southwestern corner of the proposed Bundy Canyon Basin. This community also provides habitat for special-status wildlife species and nesting birds. Two riparian areas are present within the proposed Bundy Canyon Basin (southern willow scrub along the northwestern boundary and disturbed mulefat thickets along the southern boundary) that provide habitat for special-status wildlife species and nesting birds. Neither of these have a State Rarity Ranking in California but are considered sensitive biological resources.

The Project will result in the permanent loss of riparian and streambed-dependent vegetation communities. Direct impacts in the form of vegetation removal will occur to 0.13 acre of southern willow scrub, 0.44 acre of disturbed mulefat thickets, and 0.11 acre of disturbed Riversidean alluvial fan sage scrub. Indirect impacts in the form of altering the water source (dewatering) that sustains the southern willow scrub will result in the permanent loss of an additional 0.14 acre of southern willow scrub. In total, the Project will result in the permanent loss of 0.27 acre of southern willow scrub.

Although impacts will occur to a portion of the natural-bottomed drainage that which the disturbed mule fat thickets and Riversidean alluvial fan sage scrub are associated, these communities are likely to persist in the areas not directly affected by the Project because they are currently composed of sparse, xeric vegetation that does not require substantial hydrology in order to be sustained. Riversidean alluvial fan sage scrub is known to persist within upper terraces of broad floodplains of larger streams, even without being exposed to frequent or regular flood events, although the vegetative composition of the habitat may change over time. The disturbed mule fat thickets will likely persist post-Project, although the natural-bottomed drainage will eventually become vegetated due to scouring events that are no longer happening. It is anticipated that the natural-bottomed drainage will eventually be replaced by Riversidean sage scrub-type vegetation over time.

Permitting conditions to offset these impacts will be identified during coordination through the regulatory permitting process with the regulatory agencies (USACE, CDFW, SWRCB) and may include compensatory mitigation, avoidance, or nonnative plant removal within the communities. Additionally, preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP) will be necessary to satisfy MSHCP requirements.

5.1.3 State and Federally Protected Wetlands and Waters

Phase 1 of the Project would involve excavation of the proposed Bundy Canyon Basin, which would include vegetation removal. Acreages of impacts are presented in the Aquatic Resources Delineation Report (ECORP 2020). Within Phase 1, direct Project-related impacts would occur to portions of the natural-bottomed drainage along the southern boundary of the proposed Bundy Canyon Basin including the concrete-lined channel west and south of the proposed basin (existing Lateral C). Indirect impacts will occur to the remaining area of the natural-bottomed drainage, which is located outside of the direct area of impact. Although this portion of the drainage will not be directly affected, the flows from Lateral A which feed these areas will no longer persist in the remaining area of the natural-bottomed drainage as a result of basin construction. All of these features are potentially jurisdictional to the USACE under Section 404 of the CWA and SWRCB under Section 401 of the CWA.

Disturbed mulefat thickets occur along the south side of the undeveloped parcel along Bundy Canyon Wash. One Fremont's cottonwood is located near the eastern end of the wash and is included in the disturbed mulefat thicket mapping category. There is also a patch of disturbed Riversidean alluvial fan sage scrub associated with Bundy Canyon Wash, which is considered a CDFW sensitive habitat due to its unique association with streambed habitat. These habitats, along with their associated streambeds are potentially jurisdictional to the CDFW under the California Fish and Game Code. Additionally, preparation of a DBESP will be required to satisfy MSHCP requirements for impacts to the riparian and riverine areas along Bundy Canyon Wash.

It should be noted that an area of riparian habitat (southern willow scrub) is present along the western boundary of the proposed Bundy Canyon Basin; however, this habitat does not appear to be associated with a drainage and is likely not jurisdictional to USACE, SWRCB, or CDFW.

5.1.4 Wildlife Corridors and Nursery Sites

The proposed Bundy Canyon Basin is bordered by Bundy Canyon Road and residential development to the north, residential development to the east, Monte Vista Drive and disturbed open space to the west, and a small drainage and disturbed native habitat to the south. The Bundy Canyon Landfill, which had slopes vegetated with disturbed California buckwheat scrub. The Phase 1 Project components are heavily disturbed and contain very little cover that would only allow for limited movement of smaller, resident populations of wildlife. No migratory wildlife corridors or native wildlife nursery sites were identified within the Project site. Furthermore, no MSHCP-designated corridors or linkages are present on or adjacent to the Project site. The two riparian areas adjacent to the proposed Bundy Canyon Basin may be conducive to wildlife movement; however, these areas are not considered substantial corridors and they do not connect two large, undeveloped blocks of land that wildlife may need to move between. Therefore, no impact to wildlife corridors or nursery sites would occur.

Trees (native and nonnative), power poles, and other structures (e.g., abandoned buildings and cellular towers) on and adjacent to the Project site provide suitable nesting substrates for raptor and songbirds Shrubby vegetation was present mostly adjacent to the Project site, which provides suitable nesting habitat for songbirds. Direct impacts to nesting raptor and songbird species could occur in the form of habitat loss through vegetation removal and mortality or injury due to habitat loss or nest abandonment.

Indirect impacts may occur through increased human and vehicular activity, noise, dust, and ground vibrations. Implementation of Mitigation Measure BIO-1 would reduce these impacts to a level that is less than significant.

5.1.5 HCPs and NCCPs: Western Riverside MSHCP

Phase 1 components of the Project are located within the planning area for the Western Riverside MSHCP. As discussed in Section 4.6, Phase 1 Project components are not located within or adjacent to any MSHCP-designated Conservation Areas, Criteria Cells, or other specially-designated areas. Habitat for vernal pools and fairy shrimp is not present within the Phase 1 components. Phase 1 is not located within or adjacent to a Conservation Area and the Urban/Wildland Interface guidelines are not pertinent.

Three areas of riparian/riverine vegetation are present within Phase 1 (southern willow scrub, disturbed mule fat thickets, and Riversidean alluvial fan sage scrub), all of which are narrow in width, subject to disturbances, and contain large amounts of nonnative plant species. While these areas do not provide suitable nesting habitat for special-status wildlife species, they may be utilized by special-status wildlife species and bird and raptor species protected under the MBTA. Direct impacts in the form of habitat loss, mortality, injury, or nest failure could occur if construction activities are performed during the nesting season. Indirect impacts in the form of habitat degradation, increased human activity, noise, and ground vibrations may also occur. If impacts to these areas are unavoidable, consultation with the agencies regarding regulatory permitting will be required. Preparation of a DBESP will also be required to satisfy MSHCP requirements. Note that a DBESP is required under the MSHCP regardless of agency jurisdiction of aquatic resources and vegetation because the DBESP also addresses the vegetation as habitat for special-status species. If Project-related impacts to the riparian/riverine areas will occur, implementation of Mitigation Measures BIO-1 and BIO-2 would reduce these impacts to a level that is less than significant.

Phase 1 is not located within the NEPSSA. No additional surveys for NEPSS will be required.

While the majority of Phase 1 is located immediately adjacent to the burrowing owl survey area, a very small area in the extreme southeast portion of the proposed Bundy Canyon Basin overlaps with the burrowing owl survey area. During the reconnaissance survey, no burrowing owls or burrows of suitable size and shape were identified within the Phase 1 Project components. If burrowing owls are found to be using areas immediately adjacent to Phase 1, indirect impacts could occur in the form of noise, ground vibrations, and increased human activities. Implementation of Mitigation Measure BIO-4 will reduce impacts to a level that is less than significant.

5.2 Phase 2 (Lateral C Mainline, Lateral C-2, and Lateral C-3)

Construction of the Lateral C Mainline, Lateral C-2 and Lateral C-3 is not expected to have impacts to the hydrology to Bundy Canyon Wash or to the water source that sustains the disturbed red willow thickets along Baxter Road. Currently, Bundy Canyon Wash receives approximately 1,080 cubic feet per second (cfs) of runoff during storm events. Post-Project conditions will result in the same flow amounts, approximately 1,080 cfs, entering Bundy Canyon Wash. Potential Project-related impacts to biological resources as part of Phase 2 are described in more detail in the subsections below.

5.2.1 Special-Status Species

Phase 2 of the Project would involve construction of the Lateral C Mainline, Lateral C-2, and C-3 facilities. As such, the construction of Phase 2 would have the potential to have a substantial adverse effect, either directly or through habitat modifications, on special-status species identified by CDFW, and/or USFWS. Impacts to each special-status species identified as having a potential to occur are described below.

Of the 56 special status plants identified in the literature search, 18 species were determined to have a moderate to low potential to occur in the Phase 2 areas, particularly within the undeveloped areas within the Project area. Of these 18 species, 14 are considered adequately conserved by the MSHCP (smooth tarplant, Parry's spineflower, long-spined spineflower, Munz's onion, San Diego ambrosia, Jaeger's milk-vetch, thread-leaved brodiaea, round-leaved filaree, intermediate mariposa lily, San Miguel savory, slender-horned spineflower, many-stemmed dudleya, Palmer's grappling hook, and Hall's monardella) and impacts to these species do not require additional surveys or mitigation because Phase 2 is not located within a NEPSSA or Criteria Area.

The remaining four species are not covered by the MSHCP (Douglas' fiddleneck, paniculate tarplant, white rabbit-tobacco, and California screw moss) and have a low potential to occur within Phase 2. The lack of high-quality habitat on and adjacent to the Phase 2 Project areas, existing level of disturbances, and mechanically disturbed soils within the undeveloped areas within Phase 2 likely preclude these species from occurring. The removal of marginally suitable habitat for these plant species would not be expected to contribute substantially to the overall decline of these species. As such, any Project-related impacts to Douglas' fiddleneck, paniculate tarplant, white rabbit-tobacco, and California screw moss would be less than significant.

Of the 42 special status wildlife species identified in the literature search, five species (southern California legless lizard, coast horned lizard, coastal whiptail, loggerhead shrike, and San Diego black-tailed jackrabbit) have a high potential to occur in and/or adjacent to the undeveloped areas around Baxter Road and Pasadena Street. All species are California SSC and all but the southern California legless lizard are covered species under the MSHCP. Impacts to the species covered under the MSHCP (coast horned lizard, coastal whiptail, loggerhead shrike, and San Diego black-tailed jackrabbit) as a result of covered activities have already been analyzed within the context of the MSHCP and no further survey activities are required for these species. Direct impacts to southern California legless lizard may occur through ground disturbance, vegetation removal, habitat loss, and mortality and indirect impacts from construction noise and vibrations may occur. This species is known to be locally abundant where they occur and based on the recently documented occurrence of this species less than one mile from the Project area, impacts to the southern California silvery legless lizard have the potential to be significant. Impacts to this species would be less than significant with the implementation of Mitigation Measure BIO-3.

A total of 20 special-status wildlife species have a moderate to low potential to occur in the Phase 2 work areas. Impacts to these species through habitat loss and ground disturbance may occur. Of these, 13 species (western spadefoot, coast range newt, red-diamond rattlesnake, golden eagle, Swainson's hawk, burrowing owl, white-tailed kite, least Bell's vireo, coastal California gnatcatcher, yellow-breasted chat, northwestern San Diego pocket mouse, Stephens' kangaroo rat, and Los Angeles pocket mouse) are covered species under the MSHCP. Low quality or marginal habitat for these species is present within the Phase 2 area. The MSHCP-designated burrowing owl survey area overlaps with portions of Phase 2 (this is

addressed in more detail below), but no other MSHCP-designated survey areas are located within or adjacent to the Phase 2 areas. With the exception of burrowing owl, least Bell's vireo, and Stephens' kangaroo rat, impacts to the covered species under the MSHCP as a result of covered activities have already been analyzed within the context of the MSHCP and no further survey activities are required for these species. Burrowing owl, least Bell's vireo, and Stephens' kangaroo rat do have additional requirements under the MSHCP and these are discussed below.

While burrowing owl is considered an adequately conserved species, the MSHCP still requires that projects within designated burrowing owl survey areas conduct a burrowing owl habitat assessment. As mentioned above, portions of Phase 2 are located within an MSHCP-designated survey area for burrowing owl. Burrowing owl was determined to have a moderate potential to occur due to the presence of suitable breeding and wintering habitat in the disturbed open areas including the undeveloped areas around Baxter Road and Pasadena Street. As such, direct impacts to burrowing owl through ground disturbance and habitat loss and indirect impacts from construction noise and vibrations may occur. Impacts to burrowing owl would be less than significant with the implementation of Mitigation Measure BIO-4.

One area of riparian habitat is present north of Lateral C-2 and north of Baxter Road (disturbed red willow thickets). This riparian area is not suitable for least Bell's nesting activities due to its small size and presence of disturbances; however, it could be used by the species as a migratory stopover. Indirect impacts to least Bell's vireo during the migratory season may occur in the form of increased noise, ground disturbance, and human activity. Impacts to least Bell's vireo would be less than significant with the implementation of Mitigation Measures BIO-1 and BIO-3.

Marginally suitable habitat is present for Stephens' kangaroo rat within Phase 2, which is located within the Stephens' kangaroo rat fee assessment area (RCHCA 1995; Wildomar Municipal Code 3.43.060). The District is not subject to this mitigation fee; therefore, no additional mitigation for SKR is required.

The remaining seven special-status wildlife species with a low potential to occur (California glossy snake, coast patch-nosed snake, pallid bat, western yellow bat, pocketed free-tailed bat, Dulzura pocket mouse, and southern grasshopper mouse) are not covered by the MSHCP. Direct impacts to the bat species may occur through ground disturbance and habitat loss. However, the removal of low-quality habitat in the undeveloped areas surrounding Baxter Road and Pasadena Street would not be expected to contribute substantially to the overall decline of these species because these areas are not expected to support dense populations of these species. Therefore, impacts to these species are not expected to be significant.

The majority of wildlife detected during the reconnaissance survey included birds that are commonly found in disturbed and urban areas. In addition, birds and raptors protected by the MBTA may utilize the area for foraging and nest on the site and surrounding trees. If construction activities for Phase 2 occur during the bird breeding season, ground-disturbing construction activities could directly affect birds protected by the MBTA and their nests through the removal of habitat and indirectly through increased noise, ground vibrations, and human activity.

5.2.2 Sensitive Natural Communities

Sensitive vegetation communities did not appear in the literature search; however, there is one riparian area located adjacent to Lateral C-2 on the northern side of Baxter Road that provides habitat for special-

status wildlife species and nesting birds, disturbed red willow thickets. This community is considered a state-sensitive vegetation community and has a State Rarity Rank of S3. This area potentially provides habitat for special-status wildlife species and nesting birds. Project-related impacts to this community may include removal, loss of habitat, and habitat degradation. It is recommended that this area be completely avoided to prevent Project-related impacts to the riparian vegetation. If impacts to this area are unavoidable, regulatory permitting will be required and preparation of a DBESP will be necessary to satisfy MSHCP requirements.

5.2.3 State and Federally Protected Wetlands and Waters

Phase 2 of the Project would involve construction of the Lateral C Mainline, Lateral C-2, and Lateral C-3 facilities. There were constraints to analyzing these impacts, because the information needed for surrounding potential development projects next to these laterals have not yet been finalized.

Three ephemeral drainages were mapped within the Phase 2 area, all of which are potentially jurisdictional to USACE, CDFW, and SWRCB. A small patch of disturbed red willow thickets is located north of the proposed Lateral C-2, along the northern boundary of Baxter Road. This patch of riparian habitat was heavily disturbed from nonnative plants and previous agricultural activities from an old olive grove. This riparian habitat is protected under the MSHCP, and any impacts to this area would require preparation of a DBESP to satisfy MSHCP requirements. However, all of the drainage features and associated habitat to the north of Baxter Road are anticipated to be affected as part of an existing development proposal. These flood control facilities are dependent on approval and implementation of development within the immediate vicinity. Likewise, features to the south of Baxter Road are not anticipated to be affected by this Project because a development project is planned for the empty parcel south of Baxter Road and east of Central Avenue. The development plans for this parcel, however, have not yet been finalized and a CEQA document for the project has not yet been adopted. Permitting and analysis of impacts to these features are likely to arise from coordination with regulatory agencies regarding development projects planned to the north and south of Baxter Road.

No impacts to Bundy Canyon Wash are expected as a result of the Project. Currently, Bundy Canyon Wash receives approximately 1,080 cubic feet per second (cfs) of runoff during storm events. The same level of cfs is expected to persist post-Project due to the construction of a low-flow outlet. In other words, the purpose of the Bundy Canyon Basin and revision of Lateral C is primarily to alleviate excess storm flows, rather than eliminate normal flows.

5.2.4 Wildlife Corridors and Nursery Sites

Phase 2 Project components are located within and adjacent to areas containing existing disturbances (e.g., paved and dirt roads, old agricultural areas, and residential and commercial development). The Phase 2 Project components are heavily disturbed and contain very little cover that would only allow for limited movement of smaller, resident populations of wildlife. No migratory wildlife corridors or native wildlife nursery sites were identified within the Project site. Furthermore, no MSHCP-designated corridors or linkages are present on or adjacent to the Project site. The riparian area adjacent to Lateral C-2 is likely not conducive to wildlife movement because of its small size and the fact that it lacks a linear shape

connecting two large, undeveloped blocks of land that wildlife may need to move between. Therefore, no impact to wildlife corridors or nursery sites would occur.

Trees (native and nonnative), power poles, and other structures (e.g., abandoned buildings and cellular towers) on and adjacent to the Project site provide suitable nesting substrates for raptor and songbirds Shrubby vegetation was present mostly adjacent to the Project site, which provides suitable nesting habitat for songbirds. Direct impacts to nesting raptor and songbird species could occur in the form of habitat loss through vegetation removal and mortality or injury due to habitat loss or nest abandonment. Indirect impacts may occur through increased human and vehicular activity, noise, dust, and ground vibrations.

5.2.5 HCPs and NCCPs

Western Riverside MSHCP

Phase 2 components of the Project are located within the planning area for the Western Riverside MSHCP. As discussed in Section 4.6, Phase 2 Project components are not located within or adjacent to any MSHCP-designated Conservation Areas, Criteria Cells, or other specially-designated areas. Habitat for vernal pools and fairy shrimp is not present within the Phase 2 components. Additionally, because Phase 2 is not located within or adjacent to a Conservation Area, the Urban/Wildland Interface guidelines are not pertinent.

One area of riparian vegetation is present in Phase 2 (disturbed red willow thickets) and is disturbed in nature due to historical adjacent agricultural activities and presence of nonnative plants. This riparian area may be used as nesting habitat for raptor and songbird species and as a migratory stopover by special-status wildlife species. It is recommended that this area be completely avoided to prevent Project-related impacts. If this area is avoided during Phase 2 construction, direct impacts to special-status wildlife and nesting birds are not expected and indirect impacts to wildlife using this area may occur in the form of increased human activity, noise, and ground vibrations. If impacts to this riparian area cannot be avoided, direct impacts in the form of habitat loss and nest failure could occur if construction activities are performed during the nesting season. If impacts to this area are unavoidable, preparation of a DBESP will be necessary in order to satisfy MSHCP requirements. If Project-related impacts to the riparian areas will occur, implementation of Mitigation Measures BIO-1 and BIO-2 would reduce these impacts to a level that is less than significant.

Phase 2 is not located within other specially identified survey area for sensitive biological resources, such as the NEPSSA. Rare plant surveys are not necessary for Phase 2 of the Project.

Portions of Phase 2 are located within the burrowing owl survey area (Lateral C-2, Lateral C-3, portions of the Lateral C mainline along Central Avenue and the extreme southern end). The majority of Phase 2 is located immediately adjacent to the burrowing owl survey area. During the reconnaissance survey, no burrowing owls or burrows of suitable size and shape were identified within the Phase 2 Project components. Although no potential burrows were identified in the areas adjacent to Phase 2, the surrounding areas provide suitable foraging and migratory stopover habitat for burrowing owls. If burrowing owls are found to be using areas immediately adjacent to Phase 2, indirect impacts could occur

in the form of noise, ground vibrations, and increased human activities. Implementation of Mitigation Measure BIO-4 will reduce impacts to a level that is less than significant.

6.0 MITIGATION MEASURES

The following mitigation measures would reduce impacts to sensitive biological resources to a less than significant level.

BIO-1 Preconstruction Surveys for Nesting Birds: Project activities shall be conducted in compliance with the Riverside County Flood Control (RCFC) Nesting Bird Management Plan. When possible, development activities shall be conducted during the non-breeding season for birds to avoid violations of the MBTA and California Fish and Game Code Sections 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season pre-construction nesting bird survey(s) shall be conducted by a qualified biologist. The nest surveys shall include the Project site and adjacent areas where Project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, the appropriate avoidance and minimization measures outlined in the RCFC Nesting Bird Management Plan shall be implemented. Measures may include establishment of an avoidance buffer until nesting has been completed or monitoring of the nest until it is deemed inactive by a qualified biologist.

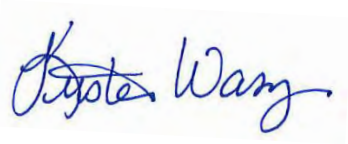
BIO-2 Biological Monitoring: In accordance with the RCFC Nesting Bird Management Plan, a biologist shall be present to monitor all vegetation clearing activities during the nesting bird season. The monitor will be responsible for ensuring that impacts to nesting birds and active nests will be avoided to the fullest extent possible. Biological monitoring shall take place until the Project site has been completely cleared of any vegetation. If an active nest is identified, the biological monitor shall implement appropriate avoidance and minimization measures outlined in the RCFC Nesting Bird Management Plan. Avoidance and minimization measures may include establishing an avoidance buffer around the nest or monitoring of the nest until it is deemed inactive by a qualified biologist.

BIO-3 Preconstruction Special-Status Wildlife Surveys: Preconstruction surveys shall be conducted for special-status wildlife species within all areas of potential permanent and temporary disturbance. Pre-construction surveys shall take place no more than 14 days prior to the start of ground disturbing activities. The pre-construction surveys shall take place regardless of breeding season timing and shall focus on identifying the presence of special-status wildlife species present on the Project site or that were identified as having a high or moderate potential to occur on the Project site. These species include: coast range newt, western spadefoot, southern California legless lizard, coast horned lizard, coastal whiptail, red diamond rattlesnake, loggerhead shrike, burrowing owl, and coastal California gnatcatcher, San Diego black-tailed jackrabbit. Should any special-status species be identified during pre-construction surveys, consultation to develop suitable avoidance and minimization measures with the appropriate agency (USFWS, CDFW) may need to be undertaken.

BIO-4 Preconstruction Burrowing Owl Survey: A pre-construction survey for burrowing owls should be completed no more than 30 days prior to construction activities in accordance with the Western Riverside MSHCP burrowing owl survey guidelines (County of Riverside 2006). If burrowing owls are observed during the preconstruction survey, a specific mitigation methodology for the owl shall be determined in order to reduce impacts to a level that is less than significant. Mitigation measures for any owls present could include avoidance of the owl burrows during their nesting season and/or passive relocation of burrowing owls.

7.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the Project applicant or the applicant's representative and that I have no financial interest in the Project.

Signed:  Date: May 20, 2020

Kristen Wasz
Senior Biologist

8.0 LITERATURE CITED

AOU. 2016. Check-list of North American Birds, 7th Edition. www.aou.org

Bradley, R.D., L.K. Ammerman, R.J. Baker, L.C. Bradley, J.A Cook, R.C. Dowler, C. Jones, D.J Schmidly, F.B. Stangl, Jr., R.A. Van Den Bussche, B. Wursig. 2014. Revised Checklist of North American Mammals North of Mexico. Museum of Texas Tech University.

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley, California. 1400 pp.

CalFlora: Information on California plants for education, research and conservation. [Web application]. 2019. Berkeley, California: The CalFlora Database [a non-profit organization]. Available from: http://www.calflora.org.

CDFW. 2019a. California Native Diversity Database. Rarefind 5 [computer program]. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife. Accessed on June 27, 2019.

CDFW. 2019c. California Natural Diversity Database Special Vascular Plants, Bryophytes and Lichens List. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife.

CNPS. 2019. California Native Plant Society. Inventory of Rare and Endangered Plants (online edition, v7-08c). Rare Plant Scientific Advisory Committee. California Native Plant Society. Sacramento, CA. Available at: http://www.cnps.org/inventory.

County of Riverside. 2019. Regional Conservation Authority MSHCP Information Map. Available from: http://wrcrca.maps.arcgis.com/apps/webappviewer/index.html?id=a73e69d2a64d41c29ebd3acd67467abd.

County of Riverside. 2006. Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area. edited by Environmental Programs Department. Riverside, CA: County of Riverside.

ECORP Consulting, Inc. 2020. Aquatic Resources Delineation Report for Wildomar Master Drainage Plan Lateral C Revision Project, Riverside County, California. Prepared for Riverside County Flood Control and Water Conservation District. January.

RCHCA. 1995. Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County, California. Available at: http://www.wrcog.cog.ca.us/151/SKR-Habitat-Conservation-Plan

Rosenberg, D. K., J. A. Gervais, H. Ober, and D. F. DeSante. 1998. An adaptive management plan for the burrowing owl population at Naval Air Station Lemoore, California, USA. Publication 95, Institute for Bird Populations, P.O. Box 1346, Pt. Reyes Station, CA 94956.

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A Manual of California Vegetation, 2nd ed. California Native Plant Society, Sacramento, CA.

SSAR. 2019. Scientific and Standard English Names of Amphibians and Reptiles of North American North of Mexico, With Comments Regarding Confidence in our Understanding. Eighth Edition. Committee on Standard English and Scientific Names.

NRCS. 2019. Natural Resources Conservation Service. Natural Resources Conservation Service Online Web Soil Survey. Accessed on September 8, 2017, from http://websoilsurvey.nrcs.usda.gov.

USFWS. 2010. Coastal California Gnatcatcher (*Polioptila californica californica*), 5-year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. Available From https://www.fws.gov/carlsbad/SpeciesStatusList/5YR/20100929_5YR_CAGN.pdf

USFWS. 1918. Migratory Bird Treaty Act of 1918. Section 16 of the U.S. Code (703-712), as amended 1989.

Wildomar Municipal Code. 2019. Section 3.43.060 Mitigation Fees. Available at: http://qcode.us/codes/wildomar/view.php?topic=3-3_43-3_43_060&frames=on.

Zeiner D.C., W.F. Laudenslayer Jr., K.E. Mayer, and M. White, editors (California Department of Fish and Wildlife). 1990a. California's Wildlife. Volume II, Birds. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife.

Zeiner D.C., W.F. Laudenslayer Jr., K.E. Mayer, and M. White, editors. 1990b. California's Wildlife. Volume I, Amphibians and Reptiles. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife.

Zeiner D.C., W.F. Laudenslayer Jr., K.E. Mayer, and M. White, editors (California Department of Fish and Wildlife). 1990c. California's Wildlife. Volume III, Mammals. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife.

APPENDIX A

Representative Site Photographs

Appendix A
Representative Site Photographs

Photo 1. Proposed Bundy Canyon Basin overview, looking east

Photo 2. Southern willow scrub along Monte Vista Drive

Photo 3. Mulefat thickets and one Fremont's cottonwood tree along the southern boundary of the proposed Bundy Canyon Basin

Photo 4. Riversidean alluvial fan sage scrub southwest of the proposed Bundy Canyon Basin

Photo 5. California buckwheat scrub on hillsides in MSHCP-designated burrowing owl survey area south of the proposed Bundy Canyon Basin

Photo 6. Existing concrete-lined drainage along Monte Vista Road, south of the proposed Bundy Canyon Basin; northern portion of proposed Lateral C Main Line

Photo 7. Existing ephemeral drainage, south of I-15

Photo 8. Habitat in existing ephemeral drainage, south of Walnut Street

Photo 9. White Street looking north, central portion of proposed Lateral C Main Line

Photo 10. Vegetation and disturbed areas surrounding private drive looking northeast (no access was granted at time of surveys), arrow points in direction of proposed Lateral C-3

Photo 11. Red willow thickets – disturbed along Baxter Road

Photo 12. Disturbed/Nonnative Grassland north of Baxter Road

Photo 13. Baxter Road looking east, proposed Lateral C-2

Photo 14. Central Avenue looking south, southern portion of the proposed Lateral C Main Line

Photo 15. Existing ephemeral drainage crossing at Central Avenue

Photo 16. Existing ephemeral drainage at the terminus of Como Road

APPENDIX B

Plant Species Observed

Plant Species Observed

Scientific Name	Common Name
VASCULAR PLANTS	
ANGIOSPERMS (DICOTYLEDONS)	
Anacardiaceae	**Cashew Family**
*Schinus mole**	Peruvian peppertree
*Schinus terebinthifolia**	Brazilian peppertree
Asteraceae	**Sunflower Family**
Artemisia tridentata	sagebrush
Baccharis salicifolia	mulefat
*Centaurea melitensis**	tocalote
Encelia farinosa	brittle bush
Lepidospartum squamatum	scalebroom
Washingtonia filifera	California fan palm
Boraginaceae	**Borage Family**
Amsinckia menziesii	common fiddleneck
Brassicaceae	**Mustard Family**
*Brassica nigra**	black mustard
Hirschfeldia incana	shortpod mustard
Cactaceae	**Cactus Family**
Cylindropuntia sp.	cholla sp.
Chenopodiaceae	**Goosefoot Family**
*Salsola tragus**	Russian thistle
Crassulaceae	**Stonecrop Family**
Dudleya lanceolate	Southern California dudleya
Cucurbitaceae	**Gourd Family**
Cucurbita palmata	coyote melon
Euphorbiaceae	**Spurge Family**
Croton setigerus	doveweed
Parkinsonia florida	blue palo verde
Fagaceae	**Beech Family**
Quercus agrifolia	Coast live oak
Lamiaceae	**Mint Family**
Salvia apiana	white sage
Myrtaceae	**Myrtle Family**
*Eucalyptus globus**	blue gum
Oleaceae	**Olive Family**
*Olea europaea**	olive tree
Platanaceae	**Sycamore Family**
Platanus racemosa	western sycamore
Polygonaceae	**Knotweed Family**
Eriogonum fasciculatum	California buckwheat
*Rumex crispus**	curly dock
Salicaceae	**Willow Family**
Populus fremontii	Fremont's cottonwood

Salix laevigata	red willow
Salix nigra	black willow
Simaroubaceae	**Quassia Family**
*Ailanthus altissima**	tree-of-heaven
Solanaceae	**Nightshade Family**
Datura wrightii	Jimsonweed
*Nicotiana glauca**	tree tobacco
Solanum elaeagnifolium	silverleaf nightshade
Tamaricaceae	**Tamarisk Family**
Tamarix sp.*	tamarisk sp.
ANGIOSPERMS (MONOCOTYLEDONS)	
Poaceae	**Grass Family**
*Avena fatua**	wild oat
Bromus diandrus	ripgut brome

*Nonnative species

APPENDIX C

Wildlife Species Observed

Appendix C
Wildlife Species Observed

Scientific Name	Common Name
REPTILES	
Phrynosomatidae	**Spiny Lizards**
Sceloporus occidentalis	western fence lizard
Scincidae	**Skinks**
Plestiodon skiltonianus	western skink
Teiidae	**Whiptails and Racerunners**
Aspidoscelis tigris munda	western whiptail
BIRDS	
Accipitridae	**Hawks**
Buteo lineatus	red-shouldered hawk
Aegithalidae	**Bushtits**
Psaltriparus minimus	bushtit
Alaudidae	**Larks**
Eremophila alpestris	horned lark
Cathartidae	**New World Vultures**
Cathartes aura	turkey vulture
Charadriidae	**Plovers, Dotterels, and Lapwings**
Charadrius vociferus	killdeer
Columbidae	**Pigeons and Doves**
*Columba livia**	rock pigeon
*Streptopelia decaocto**	Eurasian collared dove
Zenaida macroura	mourning dove
Corvidae	**Jays and Crows**
Aphelocoma californica	California scrub-jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Falconidae	**Falcons**
Falco sparverius	American kestrel
Fringillidae	**Finches**
Haemorhous mexicanus	house finch
Icteridae	**Blackbirds and Allies**
Sturnella neglecta	western meadowlark
Laniidae	**Shrikes**
*Lanius ludovicianus***	loggerhead shrike
Mimidae	**Mockingbirds and Thrashers**
Mimus polyglottos	northern mockingbird
Passerellidae (previously Emberizidae)	**Sparrows and Towhees**
Melospiza melodia	song sparrow
Melozone crissalis	California towhee
Pipilo maculatus	spotted towhee

Scientific Name	Common Name
Phasianidae	**Pheasants and Fowl**
*Gallus gallus domesticus**	domestic chicken
Picidae	**Woodpeckers**
Picoides nuttallii	Nuttall's woodpecker
Poplioptilidae (previously Silviidae)	**Gnatcatchers**
*Polioptila californica californica***+	California gnatcatcher
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Tyrannidae	**Tyrant Flycatchers**
Tyrannus verticalis	western kingbird
Tyrannus vociferans	Cassin's kingbird
MAMMALS	
Geomyidae	**Gophers**
Thomomys bottae	Botta's pocket gopher (burrow)
Muridae	**Old World Rats and Mice**
*Mus musculus**	house mouse
Sciuridae	**Squirrels**
Otospermophilus beecheyi	California ground squirrel

*Nonnative species

**CDFW Species of Special Concern

+ Federally Threatened

APPENDIX D

Special-Status Plant Species Potential for Occurrence

Appendix D
Special-Status Plant Species Potential for Occurrence

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
Abronia villosa* var. *aurita chaparral sand-verbena	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	January-September <1600	Occurs in sandy places in coastal-sage scrub and chaparral habitats.	**Presumed Absent:** No chaparral or coastal sage scrub habitat present.	**Presumed Absent:** No chaparral or coastal sage scrub habitat present.
Allium munzii Munz's onion	Fed: Ca: CNPS: MSHCP:	**END** **THR** 1B.1 Covered	March-May 297 - 1070	Occurs in chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley and foothill grassland habitats with clay soils.	**Low:** Marginally suitable habitat is present within Bundy Canyon Basin; however frequent disturbances likely preclude this species from occurring. Closest documented occurrence was 4 miles west in 2008.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. Closest documented occurrence was 4 miles west in 2008.
Almutaster pauciflorus alkali marsh aster	Fed: Ca: CNPS: MSHCP:	none none 2B.2 none	June-October 200-700	Occurs usually in wetlands, occasionally in non-wetlands.	**Presumed Absent:** No ephemeral wetlands or vernal pools are present.	**Presumed Absent:** No ephemeral wetlands or vernal pools are present.
Ambrosia pumila San Diego ambrosia	Fed: Ca: CNPS: MSHCP:	**END** none 1B.1 Covered	April-October 20-415	Found in chaparral, coastal scrub, vernal pool, and valley and foothill grassland habitats with sandy loam or clay soils. Often found in disturbed areas.	**Low:** Marginally suitable habitat is present within Bundy Canyon Basin; however frequent disturbances likely preclude this species from occurring. There were no recorded occurrences within 5 miles.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. There were no recorded occurrences within 5 miles.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
Amsinckia douglasiana Douglas' fiddleneck	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	March-May 0-1950	Occurs in valley and foothill grassland and cismontane woodland habitat in dry soils.	**Low:** Suitable habitat is present within Bundy Canyon Basin, but there were no recorded occurrences within 5 miles.	**Low:** Suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street, but there were no recorded occurrences within 5 miles.
Arctostaphylos rainbowensis rainbow manzanita	Fed: Ca: CNPS: MSHCP:	none none 1B.1 Covered	December - March 205 - 670	Occurs in chaparral habitats.	**Presumed Absent:** No chaparral habitat is present.	**Presumed Absent:** No chaparral habitat is present.
Astragalus pachypus* var. *jaegeri *Jaeger's milk-vetch*	Fed: Ca: CNPS: MSHCP:	none none 1B.1 Covered	December – June 450-1200	Occurs in chaparral, valley grassland, and foothill woodland habitats.	**Low:** Suitable habitat is present within Bundy Canyon Basin, but there were no recorded occurrences within 5 miles.	**Low:** Suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street, but there were no recorded occurrences within 5 miles.
Atriplex coronata* var. *notatior San Jacinto Valley crownscale	Fed: Ca: CNPS: MSHCP:	**END** none 1B.1 Covered	April – August 400-500	Occurs usually in wetlands, playas and vernal pool habitats.	**Presumed Absent:** No ephemeral wetlands, playas, or vernal pools are present.	**Presumed Absent:** No ephemeral wetlands, playas, or vernal pools are present.
Ayenia compacta California ayenia	Fed: Ca: CNPS: MSHCP:	none none 2B.3 none	March-April 150-1095	Occurs in Mojavean and Sonoran desert scrub habitats with rocky soils.	**Presumed Absent:** No desert scrub with rocky soils is present.	**Presumed Absent:** No desert scrub with rocky soils is present.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
Baccharis vanessae Encinitas baccharis	Fed: Ca: CNPS: MSHCP:	**THR END** 1B.1 Covered	August – November 60-300	Occurs in chaparral habitats.	**Presumed Absent:** No chaparral habitat is present.	**Presumed Absent:** No chaparral habitat is present.
Brodiaea filifolia thread-leaved brodiaea	Fed: Ca: CNPS: MSHCP:	**THR END** 1B.1 Covered	March-June 25-1120	Occurs in chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pool habitats; often found in clay soils.	**Low:** Marginally suitable habitat is present within Bundy Canyon Basin; however frequent disturbances likely preclude this species from occurring. Closest documented occurrence was 5 miles west in 2012.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. Closest documented occurrence was 5 miles west in 2012.
Brodiaea orcuttii Orcutt's brodiaea	Fed: Ca: CNPS: MSHCP:	none none 1B.1 Covered	May-July <1600	Occurs in grassland habitat near streams and vernal pools.	**Presumed Absent:** No streams or vernal pools are present.	**Presumed Absent:** No streams or vernal pools are present.
Brodiaea santarosae Santa Rosa Basalt brodiaea	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	May-June 565-1045	Occurs in valley and foothill grassland habitats on Santa Rosa basalt formations.	**Presumed Absent:** No Santa Rosa basalt formations are present.	**Presumed Absent:** No Santa Rosa basalt formations are present.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
California macrophylla round-leaved filaree	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Covered	March-May 15-1200	Occurs in cismontane woodland and valley and foothill grassland habitats with clay soils.	**Low:** Marginally suitable habitat is present within Bundy Canyon Basin; however frequent disturbances likely preclude this species from occurring. Closest documented occurrence was 5 miles east in 2006.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. Closest documented occurrence was 5 miles east in 2006.
Calochortus weedii* var. *intermedius intermediate mariposa lily	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Covered	May-July 105-855	Found in rocky soils in coastal scrub, chaparral, and valley and foothill grassland habitats.	**Low:** Marginally suitable habitat is present within Bundy Canyon Basin; however frequent disturbances likely preclude this species from occurring. Closest documented occurrence was 5 miles east in 2006.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. Closest documented occurrence was 5 miles east in 2006.
Caulanthus simulans Payson's jewelflower	Fed: Ca: CNPS: MSHCP:	none none 4.2 Covered	March-May 400-2200	Occurs in chaparral, coastal sage scrub and pinyon/juniper woodland habitats.	**Presumed Absent:** No chaparral or coastal sage scrub or pinyon/juniper woodland are present.	**Presumed Absent:** No chaparral or coastal sage scrub or pinyon/juniper woodland are present within the Phase 2 project area.
Ceanothus pendletonensis Pendleton ceanothus	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	March-July 110-870	Occurs in chaparral and cismontane woodland habitats.	**Presumed Absent:** No chaparral or cismontane woodland habitat are present.	**Presumed Absent:** No chaparral or cismontane woodland habitat are present.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
Centromadia pungens* ssp. *laevis smooth tarplant	Fed: none Ca: none CNPS: 1B.1 MSHCP: Covered		April-September 0-640	Occurs in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland habitats with alkaline soils.	**Moderate:** Marginally suitable habitat is present within the riparian areas of Bundy Canyon Basin. Closest documented occurrence was 2 miles west in 2017 and several occurrences are located within 5 miles.	**Moderate:** Marginally suitable habitat is present in the riparian area north of Baxter Road and around Pasadena Street. Closest documented occurrence was 2 miles west in 2017 and several occurrences are located within 5 miles.
Chaenactis glabriuscula* var. *orcuttiana Orcutt's pincushion	Fed: none Ca: none CNPS: 1B.1 MSHCP: none		January-August <100	Occurs in coastal dunes and bluffs.	**Presumed Absent:** No coastal dunes or bluffs are present.	**Presumed Absent:** No coastal dunes or bluffs are present.
Chorizanthe parryi* var. *parryi Parry's Spineflower	Fed: none Ca: none CNPS: 1B.1 MSHCP: Covered		April-June 275-1220	Occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats with sandy or rocky openings.	**Moderate:** Marginally suitable habitat is present within Bundy Canyon Basin. One documented occurrence from 2006 is less than 1 mile east, and one occurrence was documented in 2011 less than 1 mile northeast.	**Moderate:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. One documented occurrence from 2006 is less than 1 mile east, and one occurrence was documented in 2011 less than 1 mile northeast.
Chorizanthe polygonoides* var. *longispina long-spined spineflower	Fed: none Ca: none CNPS: 1B.2 MSHCP: Covered		April-July 30-1530	Occurs in chaparral, coastal scrub, meadows and seeps, valley and foothill	**Moderate:** Marginally suitable habitat is present within Bundy Canyon Basin. Closest	**Moderate:** Marginally suitable habitat is present within the undeveloped properties north

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
				grassland, and vernal pool habitats with clay soils.	documented occurrence was less than 1 mile east in 2011.	and south of Baxter Road and around Pasadena Street. Closest documented occurrence was less than 1 mile east in 2011.
Clinopodium chandleri San Miguel savory	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Covered	March-July 120-1075	Occurs in valley and foothill grassland, chaparral, coastal scrub, cismontane woodland, and riparian habitats with rocky soils.	**Low:** Marginally suitable habitat is present within Bundy Canyon Basin; however, no recently documented occurrences occur within 5 miles. The closest occurrence was documented 5 miles south in 1965.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street; however, no recently documented occurrences occur within 5 miles. The closest occurrence was documented 5 miles south in 1965.
Comarostaphylis diversifolia* ssp. *diversifolia summer holly	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	April-June 100-550	Occurs in chaparral habitat.	**Presumed Absent:** No chaparral habitat is present.	**Presumed Absent:** No chaparral habitat is present.
Deinandra paniculata paniculate tarplant	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	April-November 25-940	Found in vernal pool, valley and foothill grassland, and coastal scrub habitats in vernally mesic, sometimes sandy, soils.	**Low:** Potentially suitable habitat is present within Bundy Canyon Basin, but there were no recorded occurrences within 5 miles.	**Low:** Potentially suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. No recorded occurrences within 5 miles.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
Dodecahema leptoceras Slender-horned spineflower	Fed: **END** Ca: **END** CNPS: 1B.1 MSHCP: Covered		April-June 200-760	Occurs in chaparral, coastal scrub, and cismontane woodland habitats with sandy soils.	**Low:** Marginally suitable habitat is present within the riparian areas in Bundy Canyon Basin; however, no recently documented occurrences occur within 5 miles. The closest occurrence was documented 4 miles northwest in 1901.	**Low:** Marginally suitable habitat is present within the riparian areas south of I-15 and around Pasadena Street; however, no recently documented occurrences occur within 5 miles. The closest occurrence was documented 4 miles northwest in 1901.
Dudleya multicaulis many-stemmed dudleya	Fed: none Ca: none CNPS: 1B.2 MSHCP: Covered		April-July 15-790	Occurs in chaparral, valley grassland, and coastal sage scrub habitats.	**Low:** Marginally suitable habitat is present within Bundy Canyon Basin; however, no recently documented occurrences occur within 5 miles.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street; however, no recently documented occurrences occur within 5 miles.
Dudleya viscida sticky dudleya	Fed: none Ca: none CNPS: 1B.2 MSHCP: Covered		May-June <450	Occurs in chaparral and coastal sage scrub habitats.	**Presumed Absent:** No chaparral or coastal sage scrub habitat present.	**Presumed Absent:** No chaparral or coastal sage scrub habitat present.
Eryngium aristulatum var. parishii San Diego button-celery	Fed: **END** Ca: **END** CNPS: 1B.1 MSHCP: Covered		April-July <705	Occurs in vernal pools and marshes.	**Presumed Absent:** No vernal pool or marsh habitat present.	**Presumed Absent:** No vernal pool or marsh habitat present.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
Geothallus tuberosus Campbell's liverwort	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	none 10-600	Occurs in coastal scrub and vernal pools.	**Presumed Absent:** No coastal scrub or vernal pool habitat present.	**Presumed Absent:** No coastal scrub or vernal pool habitat present.
Harpagonella palmeri Palmer's grapplinghook	Fed: Ca: CNPS: MSHCP:	none none 4.2 Covered	March-May 20-955	Found in valley and foothill grassland, chaparral, and coastal scrub habitats with clay soils. Prefers open, grassy areas within shrubland.	**Low:** Suitable habitat is present within Bundy Canyon Basin, but there were no recorded occurrences within 5 miles.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street, but there were no recorded occurrences within 5 miles.
Hesperocyparis forbesii Tecate cypress	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	evergreen 60-1650	Occurs in chaparral and closed-cone coniferous forests with clay or gabbro soils.	**Presumed Absent:** No closed-cone coniferous or chaparral habitat is present.	**Presumed Absent:** No closed-cone coniferous or chaparral habitat is present.
Horkelia cuneata* var. *puberula mesa horkelia	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	February-July 70-870	Occurs in dry, sandy, coastal chaparral habitats.	**Presumed Absent:** No habitat is present.	**Presumed Absent:** No habitat is present.
Horkelia truncata Ramona horkelia	Fed: Ca: CNPS: MSHCP:	none none 1B.3 none	May-June 400-1300	Occurs in chaparral and foothill woodland habitats.	**Presumed Absent:** No chaparral and foothill woodland habitat is present.	**Presumed Absent:** No chaparral and foothill woodland habitat is present.
Isocoma menziesii* var. *decumbens decumbent goldenbush	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	April-November <200	Occurs in disturbed sandy soil, chaparral, coastal scrub habitats.	**Presumed Absent:** No habitat present.	**Presumed Absent:** No habitat present.
Juncus luciensis Santa Lucia dwarf rush	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	April-July 300-2040	Occurs in vernal pools, wet meadows, and	**Presumed Absent:** No vernal pool or wet meadow	**Presumed Absent:** No vernal pool or wet meadow

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
				ephemeral drainages.	habitat is present.	habitat is present.
Lasthenia glabrata* ssp. *coulteri Coulter's goldfields	Fed: none Ca: none CNPS: 1B.1 MSHCP: Covered		February-June 1-1220	Occurs in marshes and swamps (coastal saltwater), playas, valley and foothill grassland, and vernal pools habitats.	**Presumed Absent:** No vernal pool, marsh, swamp, or playa habitat is present.	**Presumed Absent:** No vernal pool, marsh, swamp, or playa habitat is present.
Lepechinia cardiophylla heart-leaved pitcher sage	Fed: none Ca: none CNPS: 1B.2 MSHCP: Covered		April-July 520-1370	Occurs in chaparral, foothill woodland, and closed-cone pine forest habitats.	**Presumed Absent:** No chaparral, foothill woodland, and closed-cone pine forest habitats.	**Presumed Absent:** No chaparral, foothill woodland, and closed-cone pine forest habitats.
Lilium parryi *lemon lily*	Fed: none Ca: none CNPS: 1B.2 MSHCP: Covered		July-August 1300-2600	Occurs in meadows and riparian habitat of pine forests.	**Presumed Absent:** No meadows or riparian habitat of pine forests present.	**Presumed Absent:** No meadows or riparian habitat of pine forests present.
Limnanthes alba* ssp. *parishii Parish's meadowfoam	Fed: none Ca: END CNPS: 1B.2 MSHCP: Covered		April-May 600-2000	Occurs in lower montane coniferous forest, meadows and seeps, and vernal pools.	**Presumed Absent:** No habitat present.	**Presumed Absent:** No habitat present.
Mielichhoferia shevockii Shevock's copper moss	Fed: none Ca: none CNPS: 1B.2 MSHCP: none		none 750-1400	Occurs in cismontane woodland.	**Presumed Absent:** No cismontane woodland habitat present.	**Presumed Absent:** No cismontane woodland habitat present.
Monardella hypoleuca* ssp. *intermedia intermediate monardella	Fed: none Ca: none CNPS: 1B.3 MSHCP: none		June-August 200-1250	Occurs in chaparral and oak woodland habitats.	**Presumed Absent:** No chaparral and oak woodland habitats present.	**Presumed Absent:** No chaparral and oak woodland habitats present.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
Monardella macrantha* ssp. *hallii Hall's monardella	Fed: Ca: CNPS: MSHCP:	none none 1B.3 Covered	June-October 600-2000	Occurs in chaparral, foothill woodland, yellow pine forest, mixed evergreen forest, and valley grassland habitats.	**Low:** Marginally suitable habitat is present within Bundy Canyon Basin.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street.
Myosurus minimus* ssp. *apus little mousetail	Fed: Ca: CNPS: MSHCP:	none none 3.1 Covered	March-June 20-640	Occurs in valley and foothill grassland and vernal pool habitats.	**Presumed Absent:** No vernal pool habitat is present.	**Presumed Absent:** No vernal pool habitat is present.
Navarretia fossalis spreading navarretia	Fed: Ca: CNPS: MSHCP:	**THR** none 1B.1 none	April-June 30-655	Occurs in vernal pool, chenopod scrub, marshes and swamps (assorted shallow freshwater), and playas.	**Presumed Absent:** No vernal pool habitat is present.	**Presumed Absent:** No vernal pool habitat is present.
Navarretia prostrata prostrate vernal pool navarretia	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	April-July <700	Occurs in vernal pool habitats and wetlands.	**Presumed Absent:** No wetlands or vernal pools are present.	**Presumed Absent:** No wetlands or vernal pools are present.
Nolina cismontana chaparral nolina	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	May-July 200-1300	Occurs in dry chaparral of coastal mountains.	**Presumed Absent:** No chaparral habitat is present within the project site.	**Presumed Absent:** No chaparral habitat is present within the project site.
Orcuttia californica California orcutt grass	Fed: Ca: CNPS: MSHCP:	**END END** 1B.1 Covered	April-August 15-660	Occupies vernal pool habitats.	**Presumed Absent:** No vernal pool habitat is present.	**Presumed Absent:** No vernal pool habitat is present.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
Pseudognaphalium leucocephalum white rabbit-tobacco	Fed: Ca: CNPS: MSHCP:	none none 2B.2 none	August-November 35-515	Found in chaparral, coastal scrub, riparian, and woodland habitats with sandy and gravelly soils.	**Low:** Marginally suitable habitat is present within Bundy Canyon Basin; however, no recently documented occurrences occur within 5 miles. The closest occurrence was documented 4 miles south in 1995.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street; however, no recently documented occurrences occur within 5 miles. The closest occurrence was documented 4 miles south in 1995.
Quercus dumosa Nuttall's scrub oak	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	February-March <200	Occurs in chaparral and coastal scrub habitats.	**Presumed Absent:** No chaparral or coastal scrub habitat is present within the project site.	**Presumed Absent:** No chaparral or coastal scrub habitat is present within the project site.
Scutellaria bolanderi* ssp. *austromontana southern skullcap	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	June-August 425-2000	Occurs in chaparral, cismontane woodland, and lower montane coniferous forest habitats.	**Presumed Absent:** No chaparral, woodland, or coniferous forest habitats are present.	**Presumed Absent:** No chaparral, woodland, or coniferous forest habitats are present.
Sibaropsis hammittii Hammitt's clay-cress	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Covered	March-April 720-1065	Occurs in valley and foothill grassland and chaparral habitats with clay soils.	**Presumed Absent:** No Santa Rosa basalt formations are present.	**Presumed Absent:** No Santa Rosa basalt formations are present.
Sphaerocarpos drewei bottle liverwort	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	N/A 90-600	Occurs in chaparral and coastal scrub habitats.	**Presumed Absent:** No chaparral or coastal scrub habitat is	**Presumed Absent:** No chaparral or coastal scrub habitat is

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
					present within the project site.	present within the project site.
Symphyotrichum defoliatum San Bernardino aster	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	July-November 2-2040	Inhabits meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, valley and foothill grassland (vernally mesic).	**Presumed Absent:** Suitable habitats with vernally mesic soils not present within the project site.	**Presumed Absent:** Suitable habitats with vernally mesic soils not present within the project site.
Tetracoccus dioicus Parry's tetracoccus	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	April-May <1000	Occurs in chaparral and coastal sage scrub habitat.	**Presumed Absent:** No chaparral or coastal sage scrub habitat is present.	**Presumed Absent:** No chaparral or coastal sage scrub habitat is present.
Tortula californica California screw moss	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	None 10-1460	Occurs in chenopod scrub and valley and foothill grassland.	**Low:** Marginally suitable habitat is present within Bundy Canyon Basin.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street.
Viguiera purisimae La Purisima viguiera	Fed: Ca: CNPS: MSHCP:	none none 2B.3 none	April-September <750	Occurs in coastal sage scrub habitat.	**Presumed Absent:** No coastal sage scrub habitat is present.	**Presumed Absent:** No coastal sage scrub habitat is present.

Scientific Name Common Name	**Status**	**Flowering Period Elevation (meters)**	**Habitat**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
Federal Designations: (Federal Endangered Species Act, USFWS) **END**: federally listed, endangered **THR**: federally listed, threatened		**State designations**: (California Endangered Species Act, CDFW) **END**: state-listed, endangered **THR**: state-listed, threatened			

California Native Plant Society (CNPS) Designations:

1A: Plants presumed extirpated in California and either rare or extinct elsewhere
1B: Plants rare, threatened, or endangered in CA and elsewhere
2A: Plants presumed extirpated in California but common elsewhere
2B: Plants rare, threatened, or endangered in CA but more common elsewhere
3: Plants about which need more information; a review list
4: Plants of limited distribution; a watch list

Threat Ranks:

0.1 Seriously endangered in CA (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
0.3 Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or current threats known)

APPENDIX E

Special-Status Wildlife Species Potential for Occurrence

Appendix E
Special-Status Wildlife Species Potential for Occurrence

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
INVERTEBRATES					
CRUSTACEA					
Branchinecta lynchi vernal pool fairy shrimp	Fed: Ca: MSHCP:	**THR** none Covered	Vernal pools and ephemeral wetlands. Typically in small and shallow pools with mud or grassy bottoms.	**Presumed Absent:** No ephemeral wetlands or vernal pools are present.	**Presumed Absent:** No ephemeral wetlands or vernal pools are present.
Branchinecta sandiegonensis San Diego fairy shrimp	Fed: Ca:	**END** none	Vernal pools and ephemeral wetlands in San Diego and Orange Counties.	**Presumed Absent:** No ephemeral wetlands or vernal pools are present.	**Presumed Absent:** No ephemeral wetlands or vernal pools are present.
Streptocephalus woottoni Riverside fairy shrimp	Fed: Ca: MSHCP:	**END** none Covered	Occurs in vernal pools, tectonic swales, and earth slump basins in Riverside County.	**Presumed Absent:** No ephemeral wetlands or vernal pools are present.	**Presumed Absent:** No ephemeral wetlands or vernal pools are present.
INSECTA					
Euphydryas editha quino Quino checkerspot butterfly	Fed: Ca: MSHCP:	**END** none Covered	Chaparral and coastal sage scrublands in Riverside and San Diego counties.	**Low:** Marginally suitable habitat is present adjacent to the proposed Bundy Canyon Basin. The closest documented occurrence was in 1998 approximately 2 miles southeast.	**Presumed Absent:** No chaparral or coastal sage scrublands are present within the Phase 2 project area.
FISH					
CYPRINIDAE (minnows & carp)					
Gila orcutti arroyo chub	Fed: Ca: MSHCP:	none SSC Covered	Creeks, streams, and rivers with areas of slow moving water with sand or mud bottoms. Ranges from San Diego to San Luis Obispo county.	**Presumed Absent:** No creeks, streams, or rivers are present.	**Presumed Absent:** No creeks, streams, or rivers are present.
SALMONIDAE (trout & salmon)					
***Oncoryhnchus mykiss irideus* pop 10** steelhead - southern California DPS	Fed: Ca:	**END** none	Rivers with sufficient flows occurring between the Santa Maria River south to the San Mateo Creek in San Diego County.	**Presumed Absent:** No rivers are present.	**Presumed Absent:** No rivers are present.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
AMPHIBIANS					
BUFONIDAE (true toads)					
Anaxyrus californicus arroyo toad	Fed: Ca: MSHCP:	**END** SSC Covered	Sandy banks of rivers, arroyos, and streams with shallow sandy pools. Also found in riparian woodlands or uplands adjacent to arroyos.	**Presumed Absent:** No rivers, arroyos, or streams with shallow pools are present.	**Presumed Absent:** No rivers, arroyos, or streams with shallow pools are present.
RANIDAE (frogs)					
Rana draytonii California red-legged frog	Fed: Ca: MSHCP:	**THR** SSC Covered	Found near water features such as ponds or streams in humid forests, grasslands, coastal scrub, and woodlands.	**Presumed Absent:** No suitable water features are present.	**Presumed Absent:** No suitable water features are present.
SALAMANDRIDAE (newts)					
Taricha torosa coast range newt	Fed: Ca: MSHCP:	none SSC Covered	Upland areas including grasslands, forests, and woodlands. Burrows in soil or wood debris.	**Low:** Marginally suitable habitat is present within the proposed Bundy Canyon Basin. The closest documented occurrence was in 2001 approximately 3 miles south.	**Low:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. The closest documented occurrence was in 2001 approximately 2 miles south.
SCAPHIOPODIDAE (spadefoot toads)					
Spea hammondii Western spadefoot	Fed: Ca: MSHCP:	none SSC Covered	Open areas with sandy soils in a wide range of habitats including lowlands to foothills, coastal sage scrub, chaparral, mixed woodlands, alluvial fans, and grasslands.	**Moderate:** Marginally suitable habitat is present within and adjacent to the proposed Bundy Canyon Basin. The closest documented occurrence was in 2005 approximately 2 miles east.	**Moderate:** Marginally suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. The closest documented occurrence was in 2005 approximately 2 miles east.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
REPTILES					
ANNEILLIDAE (North American legless lizards)					
Anniella stebbinsi southern California legless lizard	Fed: Ca:	none SSC	Occurs in moist and loose or sandy soils under vegetation in a variety of habitats.	**High:** Suitable habitat is present in and adjacent to the proposed Bundy Canyon Basin. The closest documented occurrence was in a residential backyard in 2011 less than 1 mile east.	**High:** Suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. The closest documented occurrence was in a residential backyard in 2011 less than 1 mile north.
COLUBRIDAE (egg-laying snakes)					
Arizona elegans occidentalis California glossy snake	Fed: Ca:	none SSC	Found in sandy or loose soils in a variety of habitats, including scrub and grassland types.	**Low:** Suitable habitat is present in and adjacent to the proposed Bundy Canyon Basin. All documented occurrences are historic (>20 years old). This species has not been recently documented within 5 miles.	**Low:** Suitable habitat is present within the undeveloped properties north and south of Baxter Road and around Pasadena Street. All documented occurrences are historic (>20 years old). This species has not been recently documented within 5 miles.
Salvadora hexalepis virgultea coast patch-nosed snake	Fed: Ca:	none SSC	Shrubby and brushy vegetation along coastal portions of southern California containing small mammal burrows, which are used for shelter.	**Low:** Habitat is present adjacent to the proposed Bundy Canyon Basin; however, this species has not been documented within 5 miles.	**Low:** Habitat is present in the undeveloped properties north and south of Baxter Road and around Pasadena Street; however, this species has not been documented within 5 miles.
EMYDIDAE (box and water turtles)					
Emys marmorata western pond turtle	Fed: Ca: MSHCP:	none SSC Covered	Ponds, lakes, rivers, streams, marshes, and other water sources with rocky or muddy substrate. Basks on logs, rocks, and exposed banks.	**Presumed Absent:** No perennial water sources are present adjacent to or within the Project boundaries.	**Presumed Absent:** No perennial water sources are present adjacent to or within the Project boundaries.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
GEKKONIDAE (geckos)					
Coleonyx variegatus abbotti San Diego banded gecko	Fed: Ca: MSHCP:	none SSC Covered	Rocky areas in coastal sage scrub and chaparral.	**Presumed Absent:** No rocky areas within coastal sage scrub or chaparral habitats occur.	**Presumed Absent:** No rocky areas within coastal sage scrub or chaparral habitats occur.
NATRICIDAE (live-bearing snakes)					
Thamnophis hammondii two-striped gartersnake	Fed: Ca:	none SSC	Occurs along aquatic habitats such as creeks and pools with rocky areas in chaparral, brushland, oak woodlands, and conifer forests. Hunts in water.	**Presumed Absent:** No aquatic habitats occur.	**Presumed Absent:** No aquatic habitats occur.
PHRYNOSOMATIDAE (spiny lizards)					
Phrynosoma blainvillii coast horned lizard	Fed: Ca: MSHCP:	none SSC Covered	Open areas of valleys, foothills, and semiarid mountains with sandy soil and low vegetation including chaparral, woodlands, and grasslands.	**High:** Suitable habitat is present within and adjacent to the proposed Bundy Canyon Basin. The closest documented occurrence was in 2001 approximately 2 miles northeast.	**High:** Suitable habitat is present the undeveloped properties north and south of Baxter Road and around Pasadena Street. The closest documented occurrence was in 2001 approximately 2 miles northeast.
TEIIDAE (whiptails and relatives)					
Aspidoscelis tigris stejnegeri coastal whiptail	Fed: Ca: MSHCP:	none SSC Covered	Arid habitats including chaparral, woodlands, and dry riparian areas.	**High:** Suitable habitat is present within and adjacent to the proposed Bundy Canyon Basin. The closest documented occurrence was in 2001 approximately 3 miles northeast.	**High:** Suitable habitat is present the undeveloped properties north and south of Baxter Road and around Pasadena Street. The closest documented occurrence was in 2001 approximately 3 miles northeast.
VIPERIIDAE (vipers)					
Crotalus ruber red-diamond rattlesnake	Fed: Ca: MSHCP:	none SSC Covered	Found in coastal chaparral, arid scrub, rocky grassland, oak and pine woodlands, desert mountain slopes and rocky desert flats.	**Moderate:** Suitable habitat is present within and adjacent to the proposed Bundy Canyon Basin. The closest documented occurrence was in 2001 approximately 2 miles northeast.	**Low:** Marginally suitable habitat is present the undeveloped properties north and south of Baxter Road; however, this area does not contain any native scrub vegetation. The closest

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
					documented occurrence was in 2001 approximately 2 miles northeast.
BIRDS					
ACCIPITRIDAE (hawks, kites, harriers, and eagles)					
Aquila chrysaetos golden eagle (nesting & wintering)	Fed: Ca: MSHCP:	none FP Covered	Open country including prairies, sagebrush, savannah or sparse woodlands, and barren hills or mountainous areas. Nests on rocky cliff edges or in large trees such as eucalyptus or oak.	**Low:** Marginally suitable nesting substrates are present in the large trees throughout the project site. This species has potential to forage within the project site. The closest documented occurrence was in 1990 approximately 6 miles south.	**Low:** Marginally suitable nesting substrates are present in the large trees throughout the project site. This species has potential to forage within the project site. The closest documented occurrence was in 1990 approximately 6 miles south.
Buteo swainsoni Swainson's hawk (nesting)	Fed: Ca: MSHCP:	none **THR** Covered	Open pine-oak woodland, savannah, and agricultural fields with scattered trees. Nests in solitary bush or tree, or in small groves.	**Low:** Foraging habitat is present throughout the undeveloped areas of the Project. Marginally suitable nesting habitat is present in the large eucalyptus and ornamental trees throughout the project site; however, this species has not been documented within 5 miles.	**Low:** Foraging habitat is present throughout the undeveloped areas of the Project. Marginally suitable nesting habitat is present in the large eucalyptus and ornamental trees throughout the project site; however, this species has not been documented within 5 miles.
Elanus leucurus white-tailed kite (nesting)	Fed: Ca: MSHCP:	none FP Covered	Open habitat in lowlands including savanna, open woodlands, marshes, and agricultural fields. Nests in tall trees within or on the edge of forested areas, or on isolated trees.	**Low:** Foraging habitat is present in the proposed Bundy Canyon Basin and in the ruderal/old agricultural areas surrounding the project site. Suitable nesting habitat occurs in the tall eucalyptus and ornamental trees throughout the project site. This	**Low:** Foraging habitat is present in the ruderal/old agricultural areas surrounding the project site. Suitable nesting habitat occurs in the tall eucalyptus and ornamental trees throughout the project site. This species has not been documented within 5 miles.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
				species has not been documented within 5 miles.	
CHARADRIIDAE (plovers and relatives)					
Charadrius alexandrinus nivosus western snowy plover	Fed: Ca:	**THR** SSC	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	**Presumed Absent:** No sandy, gravelly, or friable soils adjacent to water features are present.	**Presumed Absent:** No sandy, gravelly, or friable soils adjacent to water features are present.
CUCULIDAE (cuckoos and relatives)					
Coccyzus americanus occidentalis western yellow-billed cuckoo (nesting)	Fed: Ca: MSHCP:	**THR** **END** Covered	Open woodland habitat, near water, especially with dense willow and cottonwood understory.	**Presumed Absent:** Riparian habitat within the project site is not located near a permanent water source, and the patches are too small to support nesting activities.	**Presumed Absent:** Riparian habitat within the project site is not located near a permanent water source, and the patches are too small to support nesting activities.
STRIGIDAE (owls)					
Athene cunicularia burrowing owl (burrow & some wintering sites)	Fed: Ca: MSHCP:	none SSC Covered	Open grasslands including prairies, plains, and savannah, or vacant lots and airports. Nests in abandoned dirt burrows.	**Moderate:** Suitable foraging habitat is present throughout portions of the project site, including the proposed Bundy Canyon Basin, but potential burrows were not identified. Project site may be used for foraging or during migratory stopovers. The closest recently documented occurrence was recorded in 2007 approximately 4 miles northeast.	**Moderate:** Suitable foraging habitat is present throughout portions of the project site, including undeveloped lands north and south of Baxter Road and in the areas at the extreme southern end of the existing Lateral C, around Pasadena Street, but potential burrows were not identified. Project site may be used for foraging or during migratory stopovers. The closest recently documented occurrence was recorded in 2007 approximately 4 miles northeast.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
LANIIDAE (shrikes)					
Lanius ludovicianus loggerhead shrike (nesting)	Fed: Ca: MSHCP:	none SSC Covered	Open country, with scattered shrubs and trees or other perches for hunting; includes agricultural fields, deserts, grasslands, savanna, and chaparral.	**Present:** This species was detected during the 2019 reconnaissance survey.	**High:** Suitable habitat is present in the undeveloped properties north and south of Baxter Road and in the areas at the extreme southern end of the existing Lateral C, around Pasadena Street. The closest documented occurrence was recorded in 2001 approximately 3 miles west.
VIREONIDAE (vireos)					
Vireo bellii pusillus least Bell's vireo (nesting)	Fed: Ca: MSHCP:	**END** **END** Covered	Riparian woodlands and willow-cottonwood forests particularly with streamside thickets and dense brush.	**Low:** The disturbed riparian habitat within the project site are not large enough to support nesting activities; however, they could be used for foraging and/or as migratory stopover points. The closest documented occurrences were recorded in 2010 approximately 2 miles north and west.	**Low:** The disturbed riparian habitat within the project site are not large enough to support nesting activities; however, they could be used for foraging and/or as migratory stopover points. The closest documented occurrences were recorded in 2010 approximately 2 miles north and west.
TROGLODYTIDAE (wrens)					
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	Fed: Ca: MSHCP:	none SSC Covered	Coastal sage scrub with tall opuntia cacti. Nests in opuntia cactus.	**Low:** Coastal sage scrub with opuntia cacti is present adjacent to the proposed Bundy Canyon Basin; however, there is no suitable habitat for this species within the project boundaries.	**Presumed Absent:** No coastal sage scrub with opuntia cacti is present within the Phase 2 area.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
SYLVIIDAE (gnatcatchers)					
Polioptila californica californica coastal California gnatcatcher	Fed: Ca: MSHCP:	**THR** SSC Covered	Dry coastal slopes, washes, and mesas with areas of low vegetation and coastal sage scrub.	**Present:** This species was detected adjacent to the proposed Bundy Canyon Basin during the 2019 reconnaissance survey. While no suitable habitat is present within the project site, suitable habitat is located immediately adjacent to the proposed Bundy Canyon Basin. Three occurrences were documented in 2001 less than one mile east.	**Low:** This species was detected adjacent to the proposed Bundy Canyon Basin during the 2019 reconnaissance survey, north of I-15 from Phase 2. However, no suitable habitat is present within Phase 2 or surrounding areas. Three occurrences were documented in 2001 less than one mile east.
PARULIDAE (wood-warblers)					
Icteria virens yellow-breasted chat (nesting)	Fed: Ca: MSHCP:	none SSC Covered	Riparian and upland thickets, and dry overgrown pastures. Prefers to nest in dense scrub along streams or at the edges of ponds or swamps.	**Low:** Suitable riparian habitat is present in patches throughout the project site but is not dense or large enough for nesting activities. This species has not been documented within 5 miles.	**Low:** Suitable riparian habitat is present in patches throughout the project site but is not dense or large enough for nesting activities. This species has not been documented within 5 miles.
ICTERIDAE (blackbirds)					
Agelaius tricolor tricolored blackbird (nesting colony)	Fed: Ca: MSHCP:	none **THR** Covered	Freshwater marshes with dense cattails, bulrushes, sedges, and tule. Forages in open habitat such as cultivated fields and pastures.	**Presumed Absent:** No freshwater marshes are present.	**Presumed Absent:** No freshwater marshes are present.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
MAMMALS					
VESPERTILIONIDAE (evening bats)					
Antrozous pallidus pallid bat	Fed: Ca:	none SSC	Roosts in rock crevices, caves, mines, buildings, bridges, and in trees. Generally in mountainous areas, lowland desert scrub, arid grasslands near water and rocky outcrops, and open woodlands.	**Low:** Suitable rocky roosting habitat is not present within or adjacent to the project site, but concrete box culverts that may provide artificial roosting habitat and foraging habitat are present. This species has not been documented within 5 miles.	**Low:** Suitable rocky roosting habitat is not present within or adjacent to the project site, but concrete box culverts that may provide artificial roosting habitat and foraging habitat are present. This species has not been documented within 5 miles.
Lasiurus xanthinus western yellow bat	Fed: Ca:	none SSC	Roosts in trees, particularly palms, in desert wash, desert riparian, valley foothill riparian, and palm oasis habitats.	**Low:** Suitable roosting habitat is present within and adjacent to the project site in the eucalyptus and ornamental trees. Marginally suitable foraging habitat is present in the proposed Bundy Canyon Basin and the ruderal/old agricultural areas surrounding the project site. This species has not been documented within 5 miles.	**Low:** Suitable roosting habitat is present within and adjacent to the project site in the eucalyptus and ornamental trees. Marginally suitable foraging habitat is present in the ruderal/old agricultural areas surrounding the project site. This species has not been documented within 5 miles.
MOLOSSIDAE (free-tailed bats)					
Eumops perotis californicus western mastiff bat	Fed: Ca:	none SSC	Roosts high above ground in rock and cliff crevices, shallow caves, and rarely in buildings. Occurs in arid and semiarid regions including rocky canyon habitats.	**Presumed Absent:** The project site does not have suitable roosting habitat.	**Presumed Absent:** The project site does not have suitable roosting habitat
Nyctinomops femorosaccus pocketed free-tailed bat	Fed: Ca:	none SSC	Roosts in crevices of outcrops and cliffs, shallow caves, and buildings. Found along rugged canyons, high cliffs,	**Low:** Suitable rocky roosting habitat is not present within or adjacent to the project site, but foraging habitat is present in the	**Low:** Suitable rocky roosting habitat is not present within or adjacent to the project site, but foraging habitat is present in the

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
			and semiarid rock outcroppings.	undeveloped areas of the project site. This species has not been documented within 5 miles.	undeveloped areas of the project site. This species has not been documented within 5 miles.
LEPORIDAE (rabbits and hares)					
Lepus californicus bennettii San Diego black-tailed jackrabbit	Fed: Ca: MSHCP:	none SSC Covered	Variety of open or semi-open country including grasslands, croplands, and sparse coastal scrub.	**High:** Suitable habitat is present in the proposed Bundy Canyon Basin. Two documented occurrences were recorded in 1998 approximately 2 miles southeast and 2 miles east.	**High:** Suitable habitat is present in the in the undeveloped areas of the project site. Two documented occurrences were recorded in 1998 approximately 2 miles southeast and 2 miles east.
HETEROMYIDAE (kangaroo rats, pocket mice and kangaroo mice)					
Chaetodipus californicus femoralis Dulzura pocket mouse	Fed: Ca:	none SSC	Chaparral, coastal scrub, and desert grasslands.	**Low:** Marginally suitable habitat is present within the proposed Bundy Canyon Basin; however, suitably-sized small mammal burrows were not identified during the site visit. This species has not been documented within 5 miles.	**Low:** Marginally suitable habitat is present in the undeveloped properties north and south of Baxter Road and in the areas at the extreme southern end of the existing Lateral C, around Pasadena Street. This species has not been documented within 5 miles.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	Fed: Ca: MSHCP:	none SSC Covered	Coastal scrub, chaparral, sagebrush, and grasslands.	**Low:** Marginally suitable habitat is present within the proposed Bundy Canyon Basin; however, suitably-sized small mammal burrows were not identified during the site visit. The closest occurrence is from 1994 approximately 3 miles north.	**Low:** Marginally suitable habitat is present in the undeveloped properties north and south of Baxter Road and in the areas at the extreme southern end of the existing Lateral C, around Pasadena Street. The closest occurrence is from 1994 approximately 3 miles north.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
Dipodomys merriami parvus San Bernardino kangaroo rat	Fed: Ca: MSHCP:	**END** SSC Covered	Early to intermediate seral stages of alluvial fan sage scrub habitats containing sandy loam substrates in the Santa Ana and San Jacinto Rivers systems.	**Presumed Absent:** The project site is located outside the known range of this species.	**Presumed Absent:** The project site is located outside the known range of this species.
Dipodomys stephensi Stephens' kangaroo rat	Fed: Ca: MSHCP:	**END** **THR** Covered	Annual grasslands, coastal sage scrub with sparsely spaced vegetation, loose friable soils, and flat or slightly rolling terrain.	**Low:** Marginally suitable habitat is present within the proposed Bundy Canyon Basin; however, suitably-sized small mammal burrows were not identified during the site visit. Three occurrences were documented between 1988 and 1998 two miles north, east, and northwest.	**Low:** Marginally suitable habitat is present in the undeveloped properties north and south of Baxter Road and in the areas at the extreme southern end of the existing Lateral C, around Pasadena Street. Three occurrences were documented between 1988 and 1998 two miles north, east, and northwest.
Perognathus longimembris brevinasus Los Angeles pocket mouse	Fed: Ca: MSHCP:	none SSC Covered	Habitats with sandy and fine soils, including grasslands, coastal sage scrub, and alluvial sage scrub.	**Low:** Marginally suitable habitat is present within the proposed Bundy Canyon Basin; however, suitably-sized small mammal burrows were not identified during the site visit. This species has not been documented within 5 miles.	**Low:** Marginally suitable habitat is present in the undeveloped properties north and south of Baxter Road and in the areas at the extreme southern end of the existing Lateral C, around Pasadena Street. This species has not been documented within 5 miles.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Phase 1 Potential for Occurrence**	**Phase 2 Potential for Occurrence**
MURIDAE (mice, rats, and voles)					
Onychomys torridus ramona southern grasshopper mouse	Fed: Ca:	none SSC	Low, semi-open, and open scrub habitats with flat, sandy valley floors. Habitats include coastal and mixed chaparral, coastal sage scrub, riparian scrub, low sagebrush, and grasslands with interspaced shrubs.	**Low:** Marginally suitable habitat is present within the proposed Bundy Canyon Basin; however, suitably-sized small mammal burrows were not identified during the site visit. This species has not been documented within 5 miles.	**Low:** Marginally suitable habitat is present in the undeveloped properties north and south of Baxter Road and in the areas at the extreme southern end of the existing Lateral C, around Pasadena Street. This species has not been documented within 5 miles.
Federal Designations: (Federal Endangered Species Act, USFWS) **END**: Federally-listed, Endangered **THR**: Federally-listed, Threatened FC: Federal Candidate Species FSC: Federal Species of Concern FPD: Federal Proposed for Delisting DL: Federally-delisted			**State designations**: (California Endangered Species Act, CDFW) **END**: State-listed, Endangered **THR**: State-listed, Threatened SSC: California Species of Special Concern FP: Fully Protected Species		
Source: California Natural Diversity Data Base (CNDDB) Alberhill, Fallbrook, Lake Elsinore, Margarita Peak, Murrieta, Romoland, Sitton Peak, Temecula, and Wildomar 7.5 minute quads.					