Appendix B

Biological Technical Report and Multiple Species Habitat Conservation Plan Consistency Analysis for the Collier Commercial Properties

Biological Technical Report and Multiple Species Habitat Conservation Plan Consistency Analysis for the Collier Commercial Properties

Riverside County, California

Assessor's Parcel Numbers 377-190-002, -003, & -004

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
CASSA	Criteria Area Species Survey Area
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNPSEI	California Native Plant Society's Electronic Inventory
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESA	Endangered Species Act
GPS	Global Positioning System
HCP	Habitat Conservation Plan
IA	Implementing Agreement
MBTA	Migratory Bird Treaty Act
MSHCP	Multiple Species Habitat Conservation Plan
NEPA	National Environmental Policy Act
NEPSSA	Narrow Endemic Plant Species Survey Area
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
RCA	Regional Conservation Authority
RCTLMA	Riverside County Transportation and Land Management Agency
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SSAR	Society for the Study of Amphibians and Reptiles
SSC	Species of Special Concern
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 INTRODUCTION

ECORP Consulting, Inc. was retained by Collier Commercial Properties, LLC to provide California Environmental Quality Act (CEQA) services for the proposed Collier Commercial Properties (Project) located in the city of Lake Elsinore, Riverside County, California. A reconnaissance-level biological survey of the Project site was 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 Project-related impacts would occur to sensitive biological resources, as required under CEQA. A burrowing owl (*Athene cunicularia*) habitat assessment of the Project site was conducted concurrently with the biological reconnaissance survey to determine if any suitable burrowing owl habitat or suitable burrowing owl burrows were present. The surveys were conducted in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP provides information on plant and wildlife species of concern to the County of Riverside (referred to as Planning Species) and outlines goals for their conservation. Information on the MSHCP can be found at www.rctlma.org (Riverside County Transportation and Land Management Agency [RCTLMA] 2022). The purpose of the study is to comply with the requirements of the MSHCP and identify any biological resources that may require mitigation prior to impacts from development.

1.1 Project Location

The Project site consists of an approximately 2.8-acre area composed of Assessor's Parcel Numbers 377-190-002, 377-190-003, and 377-190-004. The Project is located within the city of Lake Elsinore, south of Collier Avenue and east of Chaney Street in Riverside County (Figures 1 and 2). The Project site is west of industrial development, east of a Riverside County Flood Control and Water Conservation District drainage and detention basin, and north of West Minthorn Street. The Project is depicted on the U.S. Geological Survey (USGS) Lake Elsinore 7.5-minute topographic quadrangle. Elevation at the Project site is approximately 1,280 feet above mean sea level.

1.2 Project Description

The Project proposes the construction of two buildings which include an office, conference room, storage, and an electrical room. Two driveways, parking spaces, a sidewalk, gravel fill, landscaping, and a block wall along the western boundary will also be installed with this Project. It is assumed that the entire 2.8-acre Project site will be developed.

2.0 SPECIAL-STATUS SPECIES REGULATIONS

The biological reconnaissance survey was conducted to identify potential constraints to Project development and ensure compliance with state and federal regulations regarding listed, protected, and sensitive species. The regulations are detailed below.



Location: N:\2022\2022-020 Collier CommercialMAPS\Location_Vicinity\Collier_Vicinity_V1.mxd (MAG)-mguidry 1/25/2022

Map Date: 1/25/2022

Service Layer Credits: Sources: Esri, USGS, NOAA

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Figure 1. Project Vicinity

2022-020 Collier Commercial



Location: N:\2022\2022-020 Collier Commercial\MAPS\Location_Vicinity\Collier_Location_V2.mxd (MAG)-trotellini 2/1/2022

Map Date: 2/1/2022
Base Source: Esri World Streetmap
Photo Source: NAIP (2020)

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Figure 2. Project Location

2022-020 Collier Commercial

2.1 Federal Regulations

2.1.1 The Federal Endangered Species Act

The federal Endangered Species Act (ESA) protects plants and animals that are listed as endangered or threatened by the U.S. 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 knowing violation of state law (16 U.S. Code [USC]1538). Under Section 7 of the 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 the ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a Habitat Conservation Plan (HCP) is developed.

2.1.2 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. 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 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 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) also has authority over wetlands and may override a USACE permit.

Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

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. For commercial development projects, permitting through Section 404 should qualify under the Nationwide Permit Project and specifically Nationwide Permit 39: Commercial and Institutional Developments which has an acreage limit of greater than 0.5 acre to non-tidal Waters of the U.S.

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 Santa Ana Regional Water Quality Control Board (RWQCB).

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California ESA generally parallels the main provisions of the 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 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 (California Fish and Game Code § 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 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb 1 or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Under the Porter-Cologne Water Quality Act, the RWQCB also regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code 13260(a)). Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

2.2.5 California Fish and Game Code

2.2.5.1 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 (SAA). Often, projects that require an SAA 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 SAA may overlap.

2.2.5.2 Migratory Birds

The CDFW enforces the protection of nongame native birds in §§ 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 nongame 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 § 3503.5 and are also protected at the federal level by the MBTA of 1918 (USFWS 1918).

2.2.6 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP is a comprehensive, multi-jurisdictional HCP focusing on conservation of species and their associated habitats in western Riverside County. It is also a Natural Communities Protection Plan (NCCP) under the NCCP Act of 2001. The MSHCP identifies 146 species, referred to as "Covered Species," for which the federal and California ESAs "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 an efficient way.

The approval of the MSHCP and execution of the Implementing Agreement (IA) by the wildlife agencies (CDFW and USFWS) 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. The City of Lake Elsinore is signatory to the MSHCP. 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), the California ESA, and the ESA will be granted. The Development Mitigation Fee 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 California and federal 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.

2.2.7 CEQA Significance Criteria

The CEQA lead agency, in this case the City of Lake Elsinore, ensures compliance with CEQA requirements. 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 HCP, Natural Community Conservation Plan, or other approved local, regional or state HCP.

An evaluation of whether 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 Review

Prior to conducting the biological reconnaissance survey, ECORP biologists performed a literature review using the CDFW's California Natural Diversity Database (CNDDB; CDFW 2022a, 2022b) and the California Native Plant Society's (CNPS) Electronic Inventory (CNPSEI; CNPS 2022a) to determine the special-status plant and wildlife species that have been documented in the vicinity of the Project site. ECORP searched CNDDB and CNPSEI records within the Project site boundaries as depicted on USGS 7.5-minute Lake Elsinore topographic quadrangle, plus the surrounding eight topographic quadrangles, including Lake Mathews, Steele Peak, Perris, Romoland, Murrieta, Wildomar, Sitton Peak, and Alberhill. The CNDDB and CNPSEI contain records of reported occurrences of federally or state-listed endangered, threatened, proposed endangered or threatened species, California Species of Special Concern (SSC), and/or other special-status species or habitat that may occur within or in the vicinity of the Project. Additional information was gathered from the following sources and includes, but is not limited to:

- *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2022b);
- *Special Animals List* (CDFW 2022c);
- *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012);
- *A Manual of California Vegetation*, 2nd Edition (Sawyer et al. 2009);

- *A Manual of California Vegetation*, Online Edition (CNPS 2022b); and
- various online websites (e.g., CalFlora 2022).

Using this information and observations in the field, a list of special-status plant and animal species that have 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:

- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, and/or are protected under either the federal or California ESAs;
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code, §§ 3511, 4700, 5050, or 5515;
- are of expressed concern to resource and regulatory agencies or local jurisdictions; and/or
- are covered species or special-status species under the MSHCP.

Special-status species reported for the region in the literature review or for which suitable habitat occurs on the site were assessed for their potential to occur within the Project site based on the following guidelines:

Present: The species was observed on the 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 of the area.

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 of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles of the Project site; or a recently documented observation occurs within 5 miles 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 of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles of the Project site; or suitable habitat strongly associated with the species occurs on 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 site; or the known geographic range of the species does not include the Project site.

Note that location information on some special-status species may be of questionable accuracy or unavailable. Therefore, for survey purposes, the environmental factors associated with a species' occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence. In addition, just because a record of a species does not exist in the databases does not

mean it does not occur. In many cases, records may not be present in the databases because an area has not been surveyed for that species.

A review of the Natural Resources Conservation Service (NRCS 2022) Web Soil Survey, National Wetlands Inventory (USFWS 2022), and the corresponding USGS topographic maps was also conducted to determine if there were any blue line streams or drainages present on the Project site that potentially fall under the jurisdiction of either federal or state agencies.

3.1.1 Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis

Data regarding the Project site were reviewed to determine consistency with the MSHCP. The Western Riverside County Regional Conservation Authority (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 (RCA 2022).

Section 6.0 of the MSHCP also requires that an assessment of the Project site be completed to identify any potential Project-related effects on biological resources, including burrowing owl, riparian/riverine areas, vernal pool habitats, riparian/riverine species, fairy shrimp, narrow endemic plant species or criteria area plant and wildlife species, and other special-status species, if applicable. In addition, the MSHCP requires that an Urban/Wildlands Interface analysis be conducted to address the indirect effects associated with locating proposed development in the proximity of MSHCP Conservation Areas.

3.2 Field Survey

3.2.1 Biological Reconnaissance Survey

A biological reconnaissance survey was conducted by walking the northern and southern perimeters of the Project site and surrounding areas to identify the vegetation communities and wildlife habitats on the Project site. During the survey, the Project site was not accessible due safety issues with the site currently being used for construction and equipment storage; therefore, the Project site was surveyed from the perimeter with binoculars. A second biological site visit was coordinated with the property representative and then performed to walk the Project site. The biologist documented the plant and wildlife species present on the Project site, and the location and condition of the Project site were assessed for the potential to provide habitat for special-status plant and wildlife species. Data were recorded on a Global Positioning System (GPS) unit, field notebooks, and/or maps. Photographs were also taken during the surveys to provide visual representation of the various vegetation communities and site conditions within and adjacent to the Project site. The Project site was also examined to assess its potential to facilitate wildlife movement or function as a movement corridor for wildlife moving throughout the region. In addition, the biologist mapped the vegetation communities present on the Project site.

Plant and wildlife species, including any special-status species that were observed during the survey, were recorded. Plant nomenclature follows that of *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012). Wildlife nomenclature follows Society for the Study of Amphibians and Reptiles

(SSAR 2017), *Check-list of North American Birds* (Chesser et al. 2020, as updated), and the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014).

In instances where a special-status species was observed, the date, species, location and habitat, and GPS coordinates were recorded. The locations of special-status species observations were recorded using a handheld GPS in NAD83, Universal Transverse Mercator coordinates, Zone 11S.

3.2.2 Burrowing Owl Habitat Assessment

The Project site is not located within a MSHCP burrowing owl survey area, however burrowing owls are to be avoided and under the MSHCP and so a habitat assessment was undertaken. In order to determine if suitable habitat is present, a burrowing owl habitat assessment was conducted concurrently with the biological reconnaissance survey and biological site visit. The Project site was walked as well as a 500-foot buffer to identify the presence of owl habitat and search for presence of potential burrows (i.e., of suitable size and shape for burrowing owl use). Areas that were not accessible by foot were scanned using binoculars for suitable habitat, including presence of burrows. Areas on private property, behind fencing, and north of the I-15 were not surveyed due to safety issues and inaccessibility.

4.0 RESULTS

Summarized below are the results of the literature review and field surveys, including site characteristics, vegetation communities, plants, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors).

4.1 Literature Review

4.1.1 Special-Status Plants and Wildlife

The CNDDB and CNPSEI searches were conducted on January 21, 2022. The database searches identified 35 special-status plant species and 44 special-status wildlife species that could occur on and/or near the Project site. A list was generated from the results of the literature review and the Project site was evaluated for suitable habitat that could support any of the special-status plant or wildlife species on the list. Appendix A contains a list of the special-status plant species with potential to occur on and/or near the Project site and Appendix B contains a list of the special-status wildlife species with potential to occur on and/or near the Project site.

4.1.2 U.S. Fish and Wildlife Service Designated Critical Habitat

The Project site is not located within any USFWS-designated critical habitat. The nearest designated critical habitat is located approximately 2 miles northeast for coastal California gnatcatcher (*Polioptila californica californica*).

4.1.3 State or Federally Protected Wetlands and Waters of the United States

Based on the results of the literature review, the Project site does not contain any state or federally protected wetlands or waters of the United States (USFWS 2022). The National Wetlands Inventory

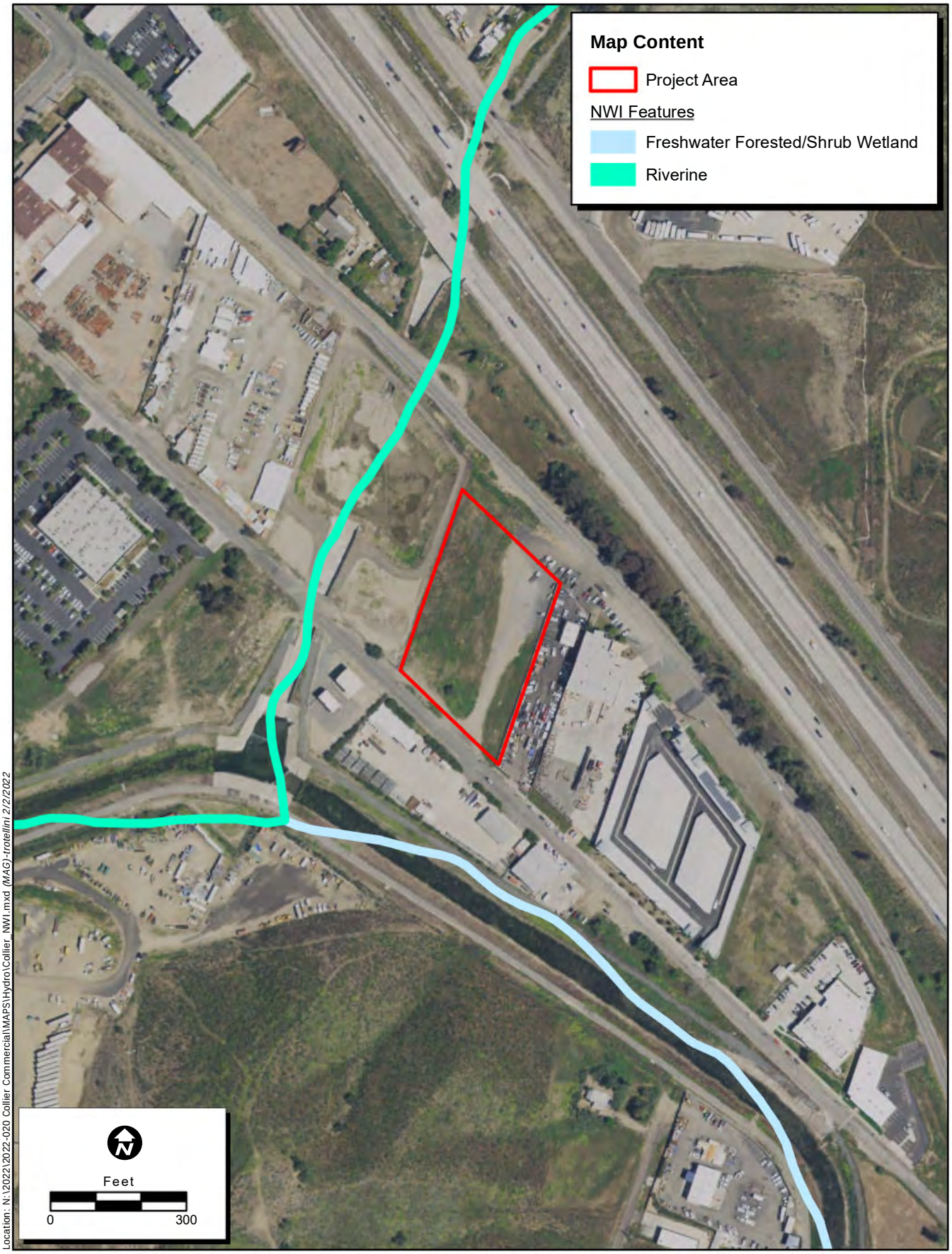
(NWI) shows three blue line features outside of the Project site in the surrounding area: an intermittent riverine (R4SBA) that is temporarily flooded occurs west of the site and travels from the northeast to the southwest; a freshwater forested/shrub wetland (PFOC) that is seasonally flooded occurs south of the Project site; and an intermittent riverine (R4SBC) that is seasonally flooded exists southwest of the Project site (USFWS 2022). These three NWI mapped blue line features are shown on Figure 3.

4.2 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted on January 28, 2022, and the biological site visit was performed on February 4, 2022, by ECORP biologist Chelsie Brown. Summarized below are the results of the biological reconnaissance survey and site visit, including site characteristics, plants and plant communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors). Weather conditions during the surveys 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
1/28/2022	0950	1250	59	64	90	50	8-10	8-10
2/4/2022	0920	1020	57	61	0	0	5-8	8-10



Location: N:\2022\2022-020 Collier Commercial\MAPS\Hydro\Collier_NWI.mxd *(MAG)-troiellini 2/2/2022*

Map Date: 2/2/2022
Base Source: Esri World Streetmap
Photo Source: NAIP (2020)

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Figure 3. National Wetlands Inventory

2022-020 Collier Commercial

4.2.1 Property Characteristics

The Project site consists of an occupied construction storage lot containing ruderal vegetation that is heavily disturbed. Gravel and fill are spread over a majority of the Project site for heavy equipment and vehicles to drive over. Vehicle tracks are present throughout the site. At the time of the initial survey, semi-trucks were observed moving around inside the Project site. Heavy construction equipment, construction materials, semi-trucks, tow trucks, vehicles, two travel trailers, a porta john, and a covered storage area are currently being stored on the Project site. Additionally, there is evidence of recent mechanical ground disturbance such as discing and/or mowing, likely done for weed abatement purposes, present on the northern and western sides of the site. The perimeter of the Project site is fenced, and a gate is located on the northeast side. Botta's pocket gopher (*Thomomys bottae*) burrows are present in the southwest corner and western side of the Project site. A few small mammal burrows are present on the western portion of the Project site. Soil types within the Project site consist of Arbuckle gravelly loam, 15 to 25 percent slopes (AIE), Cortina gravelly coarse sandy loam, 2 to 8 percent slopes (CnC), and Waukena loamy fine sand, saline-alkali (Wa; NRCS 2022). The Project site is bounded by a Riverside County Flood Control and Water Conservation District drainage and detention basin to the west, Collier Avenue to the north, an industrial towing business to the east, and W Minthorn Street to the south. There is industrial development to the east and south, vacant land to the north, and flood control structures to the west. Two drainage culverts, one of which is fully filled in with concrete, are present outside of the Project site in the surrounding area to the northeast, between Collier Avenue and I-15. One area with standing water was present outside of the Project site, in vacant land west of the site and immediately adjacent to W Minthorn Street, at the time of the surveys. The water in this area was approximately 2 inches deep at the time of the survey and riparian vegetation species were identified at this location. One small drainage was identified during the survey outside of the Project site in the surrounding area to the southwest. The drainage was dry at the time of the survey and appeared to flow southwest to where it connects to the seasonally flooded intermittent riverine (R4SBC) mapped by NWI; however, the drainage did not connect to any water or wetland features within the Project site. The small drainage may be fed by the area of pooling observed northwest of it due to the proximity of the two features and the slight downward slope in land elevation between them. The two drainage culverts, area of standing water, and small drainage are shown on Figure 4. Representative site photographs are included in Appendix C.

4.2.2 Vegetation Communities

No vegetation communities are present on the Project site; the entire site is disturbed. However, some native vegetation communities are present in adjacent areas within the 500-foot buffer. The Project site is within an urban environment that is generally subjected to repeated and ongoing disturbance from human activities. The dominant plant species observed on the Project site during the survey are nonnative and/or invasive weedy species. The northern and western portions of the Project site appeared recently disced at the time of the survey. Vehicle tracks are present throughout much of the Project site.

Areas surrounding the Project site are largely devoid of native vegetation; however, some native species are present within the 500-foot buffer. A small area of disturbed California buckwheat (*Eriogonum*



Location: N:\2022\2022-020 Collier Commercial\MAPS\Biological_Resources\Collier_BioRecon_Results.mxd (MAG)-trotellini 2/2/2022

Map Date: 2/1/2022
Base Source: Esri World Streetmap
Photo Source: NAIP (2020)

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Figure 4. Biological Reconnaissance Survey Results

2022-020 Collier Commercial

fasciculatum) scrub is present north of the site between Collier Avenue and I-15. California buckwheat scrub is present south of the Project site on hillsides. Ornamental trees are present northeast and south of the Project site. In addition, cattail (*Typha* sp.) marshes occur south and southwest of the Project site. Each of these vegetation communities and land cover types is described below and depicted in Figure 5.

4.2.2.1 Disturbed

Disturbed is not a vegetation classification, but rather a land cover type. The entire Project site is classified as disturbed because it is subject to repeated disturbances (e.g., vehicle and equipment use, discing), largely devoid of native vegetation, and is dominated by open areas or non-native weedy and ruderal vegetation. The disturbed designation indicates a location that has experienced disturbances, typically associated with human activities. Disturbed areas may be actively maintained to be free of vegetation or have been compacted or disced to such a degree that native vegetation is very sparse. Nonnative plant species are present on the northern and western portions of the site. Within the Project site, plants present in this land cover type include non-native weedy species such as coastal heron's bill (*Erodium cicutarium*), short-podded mustard (*Hirschfeldia incana*), and sweetclover (*Melilotus* sp.). A pile of cut down vegetation is present in the southern portion of the site. At the time of the survey, the southern and eastern portions of the Project site appeared the most disturbed based on the large areas of gravel and bare ground. Outside of the Project site, disturbed areas are present scattered throughout the surrounding area and consist of open areas and human disturbed areas.

4.2.2.2 California buckwheat scrub (Eriogonum fasciculatum Shrubland Alliance)

The hillsides south of the Project site contain California buckwheat scrub; this vegetation community is not present on the Project site. California buckwheat scrub is dominated or co-dominated by California buckwheat and consists primarily of shrubs less than 7 feet in height with a continuous to intermittent canopy. The herbaceous layer is variable and may be grassy. Habitats suitable for California buckwheat scrub include upland slopes, intermittently flooded arroyos, and channels and washes. The area mapped as disturbed California buckwheat scrub south of the Project site contains an intermittent shrub canopy and has a variable herbaceous layer, mostly covered in grass. Habitat observed during the survey within this community consists of upland slopes.

The shrubs observed within this community at the time of the survey range from approximately 0.5 feet to 5 feet in height. Species present within this community at the time of the survey include California buckwheat, California cholla *(Cylindropuntia californica)*, and brittlebush (*Encelia farinosa)*.

A small area north of the Project site is mapped as disturbed California buckwheat scrub. This area lays adjacent to the I-15 and disturbances observed include heavy amounts of trash, a chain-link fence, and ruderal nonnative plant species. Species present within this community at the time of the survey include California buckwheat, brittlebush, and short-podded mustard.

Figure 5. Vegetation Communities and Land Cover Types

Map Content

- Project Area
- 500-ft Buffer

Vegetation Communities and Land Cover Types

- Cattail marshes (*Typha* Herbaceous Alliance)
- California buckwheat scrub (*Eriogonum fasciculatum* Shrubland Alliance)
- Disturbed – California buckwheat scrub (*Eriogonum fasciculatum* Shrubland Alliance)
- Ornamental Trees
- Disturbed
- Urban/Developed

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Location: N:\2022\2022-020 Collier Commercial\MAPS\Vegetation_and_LandCover\Collier_Vegetation_v1.mxd (MAG/TR)-trotellini 2/2/2022

2022-020 Collier Commercial

Scale in Feet
0 200

Photo (or Base) Source: NAIP (2020)

Map Date: 2/2/2022

4.2.2.3 Cattail marshes (Typha Herbaceous Alliance)

The NWI mapped seasonally flooded freshwater forested/shrub wetland south of the Project site and the NWI mapped riverine southwest of the site contain cattail marshes. Cattail marshes are dominated or co-dominated by narrow leaf cattail (*Typha angustifolia*), cattail (*Typha domingensis*), or broadleaf cattail (*Typha latifolia*). The community consists primarily of herbs less than 5 feet in height with a continuous to intermittent canopy. The habitats suitable for cattail marshes consist of semi-permanently flooded freshwater or brackish marshes. The area mapped as cattail marshes contains cattails and a continuous to intermittent canopy was observed during the biological survey. Standing water was present throughout the majority of this community to the south of the Project site at the time of the biological survey; however, no water was present within this community southwest of the site. Cattails present within this community south of the site at the time of the survey were approximately 3 feet to 5 feet above the water line. At the time of the survey, cattails southwest of the Project site were approximately 1 foot to 2 feet in height.

4.2.2.4 Ornamental Trees

Areas designated as ornamental trees include areas where ornamental species have been planted and native vegetation is either sparse or non-existent. Ornamental trees are not a vegetation classification, but rather a land cover type where nonnative vegetation has been purposely planted and is not restricted to a known elevation. Ornamental trees occur northeast of the Project site in the form of a stand of eucalyptus (*Eucalyptus* sp.), Mexican palo verde (Parkinsonia aculeata), and Peruvian pepper trees (*Schinus mole*) behind a chain-link fence, along Collier Avenue. South of the Project site, ornamental trees are present along W Minthorn Street in the form of a few stands of oleander (*Nerium oleander)*.

4.2.2.5 Urban/Developed

Urban/Developed areas do not constitute a vegetation classification, but rather a land cover type. Areas outside of the Project site are mapped as developed and have been constructed upon or otherwise physically altered to an extent that natural vegetation communities are no longer supported. Outside of the Project site, portions of the developed areas contain small strips of landscaped vegetation; however, areas mapped with urban/developed land cover type consist primarily of paved roads, buildings, and the Riverside County Flood Control and Water Conservation District drainage and detention basin.

4.2.3 Plants Observed

The majority of the Project site lacks vegetation due to the high level of disturbance. Plant species observed on the Project site were generally characteristic of disturbed urban areas: coastal heron's bill, short-podded mustard, and sweetclover. Other plant species observed during the biological survey include mulefat (*Baccharis salicifolia*), foxtail chess (*Bromus madritensis*), brittlebush, California buckwheat, eucalyptus, oleander, olive (*Olea Europaea*), Mexican palo verde, annual beard grass (*Polypogon monspeliensis*), Peruvian pepper tree, common sowthistle (*Sonchus oleraceus*), wirelettuce (*Stephanomeria* sp.). and tamarisk (*Tamarix* sp.). Note that the native species observed were not found

onsite, but within adjacent areas. A full list of plant species observed on and immediately adjacent to the Project site is included in Appendix D.

4.2.4 Wildlife Observed

The Project site provides habitat only for species adapted to disturbances and urban environments, while adjacent areas are more native and may support a richer species diversity. One insect species was observed during the biological reconnaissance survey: seven-spot lady beetle (*Coccinella septempunctata*). Five bird species were observed during the biological survey: American pipit (*Anthus rubescens*), Anna's hummingbird (*Calypte anna*), killdeer (*Charadrius vociferus*), American crow (*Corvus brachyrhynchos*), and yellow-rumped warbler (*Setophaga coronata*). Three mammal species were also observed during the survey: California ground squirrel (*Otospermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), and Botta's pocket gopher. A complete list of wildlife species observed on or immediately adjacent to the Project site is included in Appendix E.

4.2.5 Potential for Special-Status Plant to Occur on the Project Site

The literature review and database searches identified 35 special-status plant species and 44 special-status wildlife species that occur on or near the Project site. However, due to the high level of disturbance at the Project site and the current lack of suitable habitat for the special-status plant and wildlife species, many of the species are presumed absent from the Project site.

4.2.5.1 Special-Status Plants

There were 35 special-status plant species (of those, eight are federally and/or state listed and 20 are covered by the MSHCP) that appeared in the literature review and database searches for the Project site (CDFW 2022a, CNPS 2022a). A list was generated from the results of the literature review and the Project was evaluated for suitable habitat that could support any of the special-status plant species on the list. For the purposes of this study, the results of the literature review were limited to plant species occurring within a nine-quadrangle search of the Project site. Plant species with a known elevation range outside of the Project site's elevation were eliminated from the analysis. Plant species with a California Rare Plant Rank (CRPR) of 1A species were eliminated from the analysis because they are presumed to be extirpated from California. Additionally, CRPR 3 or 4 species were eliminated from the analysis because these rankings are considered a review list and a watch list, respectively. Descriptions of the CRPR designations are found in Table 2. A Potential for Occurrence table outlining each species and their designations can be found in Appendix A. A complete list of the special status plant species that appeared in the CNPS literature search, including CRPR rank 3 and 4 species, is included as Appendix F.

Table 2. CRPR Status Designations	
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 more information is needed; a review list
4	Plants of limited distribution; a watch list
List .1, .2 and .3 extension meanings:	
.1	Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)
.2	Moderately threatened in California (20 to 80 percent occurrences threatened / moderate degree and immediacy of threat)
.3	Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

Note: According to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10, of the California Fish and Game Code (California Department of Fish and Game 1984). This interpretation is inconsistent with other definitions.

4.2.5.2 Plant Species with a Moderate Potential

One plant species of higher sensitivity than List 3 or 4 was found to have a moderate potential to occur on the Project site. The site provides marginal or limited amounts of habitat (including soils and elevation factors) onsite in the disturbed land cover and recently documented observations occur within 5 miles of the Project site; or a historic documented observation (more than 20 years old) was recorded within 5 miles of the Project site. The special-status plant species with a moderate potential is listed below and also detailed in Appendix A.

- San Diego ambrosia (Ambrosia pumila), federally listed (endangered), CRPR 1B.1, MSHCP Covered

4.2.5.3 Plant Species Presumed Absent

The following 34 species of higher sensitivity than List 3 or 4 are presumed absent from the Project site due to the lack of suitable habitat, soil type, and/or elevation range at the Project site:

- Chaparral sand-verbena (Abronia villosa var. aurita), CRPR 1B.1;
- Munz's onion (*Allium munzii*), federally listed (endangered), state listed (threatened), CRPR 1B.1, MSHCP Covered;
- Alkali marsh aster (Almutaster pauciflorus), CRPR 1B.2;

- Rainbow manzanita (*Arctostaphylos rainbowensis*), CRPR 1B.1, MSHCP Covered;
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*), federally listed (endangered), CRPR 1B.1, MSHCP Covered;
- Parish's brittlescale (*Atriplex parishii*), CRPR 1B.1, MSHCP Covered;
- California ayenia (*Ayenia compacta*), CRPR 2B.3;
- Thread-leaved brodiaea (*Brodiaea filifolia*), federally listed (threatened), state listed (endangered), CRPR 1B.1, MSHCP Covered;
- Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), CRPR 1B.2, MSHCP Covered;
- Smooth tarplant (*Centromadia pungens* ssp. *laevis*), CRPR 1B.1, MSHCP Covered;
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*), CRPR 1B.1, MSHCP Covered;
- Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), CRPR 1B.2, MSHCP Covered;
- San Miguel savory (Clinopodium chandleri), CRPR 1B.2, MSHCP Covered;
- Summer holly (Comarostaphylis diversifolia ssp. Diversifolia), CRPR 1B.2;
- Slender-horned spineflower (Dodecahema leptoceras), federally listed (endangered), state listed (endangered), CRPR 1B.1, MSHCP Covered;
- Many-stemmed dudleya (Dudleya multicaulis), CRPR 1B.2, MSHCP Covered;
- Sticky dudleya (Dudleya viscida), CRPR 1B.2, MSHCP Covered;
- San Diego button-celery (*Eryngium aristulatum* var. *parishii*), federally listed (endangered), state listed (endangered), CRPR 1B.1, MSHCP Covered;
- Campbell's liverwort (*Geothallus tuberosus*), CRPR 1B.1;
- Tecate cypress (*Hesperocyparis forbesii*), CRPR 1B.1;
- Mesa horkelia (Horkelia cuneata var. puberula), CRPR 1B.1;
- Santa Lucia dwarf rush (Juncus luciensis), CRPR 1B.2;
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), CRPR 1B.1, MSHCP Covered;
- Spreading navarretia (Navarretia fossalis), federally listed (threatened), CRPR 1B.1, MSHCP Covered;
- Prostrate vernal pool Navarretia (*Navarretia prostrata*), CRPR 1B.2, MSHCP Covered;
- Chaparral Nolina (*Nolina cismontana*), CRPR 1B.2;
- California Orcutt grass (*Orcuttia californica*), federally listed (endangered), state listed (endangered), CRPR 1B.1, MSHCP Covered;

- White rabbit-tobacco (*Pseudognaphalium leucocephalum*), CRPR 2B.2;
- Bottle liverwort (*Sphaerocarpos drewiae*), CRPR 1B.1;
- San Bernardino aster (*Symphyotrichum defoliatum*), CRPR 1B.2;
- Parry's Tetracoccus (*Tetracoccus dioicus*), CRPR 1B.2;
- California screw moss (*Tortula californica*), CRPR 1B.2;
- Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*), CRPR 2B.1, MSHCP Covered; and
- La Purisima viguiera (*Viguiera purisimae*), CRPR 2B.3.

4.2.6 Potential for Special-Status Wildlife to Occur on the Project Site

There were 44 special-status wildlife species (of those, 15 are federally and/or state listed and 28 are covered by the MSHCP) that appeared in the literature review and database searches for the Project site. Recent mechanical disturbances on the site, gravel added as a cover over the majority of the site, the current active status of the site with construction equipment and vehicle movement, proximity to industrial development, the presence of anthropogenic influences on the site, as well as the lack of suitable habitat likely preclude many of these species from occurring. A complete list of the 44 special-status wildlife species with details on habitat requirements and potential for occurrence designations is included as Appendix B.

4.2.6.1 Wildlife Species with a Low Potential to Occur

The following species has a low potential to occur on the Project site because limited habitat for the species occurs onsite and a known occurrence has been reported in the database, but not within 5 miles of the site; or a historic documented observation (more than 20 years old) was recorded within 5 miles of the project site; or suitable habitat strongly associated with the species occurs on site, but no records were found in the database search.

Crotch Bumble Bee

The Crotch bumble bee (*Bombus crotchii*) was petitioned for listing under the California ESA in October 2018 (Hatfield et al. 2018), advanced to candidacy in June 2019, was challenged in courts and the candidacy was temporarily stayed beginning in February 2021, and candidacy was recently reinstated in September 2022 (CDFW 2023). This species is associated with open grassland and scrub habitats and occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California (Williams et al. 2014). Crotch bumble bees primarily nest underground, and may occupy cavities in a variety of substrates including: thatched grasses, abandoned rodent burrows or bird nests, brush piles, rock piles, and fallen logs (Alford 1975; Free and Colin Gasking Alford 1959; Fussell and Corbet 1992; Lye et al. 2012; Sladen 1912; Williams et al. 2014) and have also been found nesting in manmade structures such as walls, rubble or abandoned furniture (Fussell and Corbet 1992; Williams et al. 2014). Bumble bee nests are annual and conclude with deaths of the queen, workers, and drones at the end of the season with only the mated

gyne (future queen) surviving the winter (overwintering) in order to emerge the following spring to start the next year's colony. Similar to other bumble bee species, Crotch bumble bee is a generalist forager and reportedly visits a variety of flowering plants, including *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia,* and *Salvia*.

The Project site contains marginally suitable foraging for this species within and adjacent to the Project site and marginally suitable nesting habitat for the species within the Project site. At the time of the biological survey, approximately half of the Project site contained flowering non-native plant species such as coastal heron's bill and sweetclover, although most of the plants were not in bloom at the time of the survey. In addition, ornamental trees consisting of stands of oleander occur adjacent to the Project site in the 500-foot buffer. These plants could provide nectar sources and foraging opportunities for Crotch bumble bee. Gopher burrows and tufts of grass are present within the western half of the Project site which could provide nesting and overwintering habitat for the Crotch bumble bee. However, the western half of the Project site that contains gopher burrows and tufts of grass appears to be regularly disturbed by regular mechanical ground disturbance such as discing and/or mowing and by being actively used as a staging area where large equipment is driven and stored. These disturbances would reduce the likelihood that the species would nest on the Project site.

Two historic occurrences of the species were documented in CNDDB within 5 miles of the Project site (CDFW 2024). The most recent and nearest occurrence was documented in 2001 approximately 3 miles southeast of the Project site (Occurrence # 212; CDFW 2024). This species has a low potential to occur due to the presence marginally suitable foraging, nesting, and overwintering habitat, and CNDDB records within 5 miles of the Project site.

Burrowing owl

Burrowing owl is a MSHCP Covered Species and a CDFW SSC. Burrowing owls historically occurred throughout much of California and the western United States; however, many former California populations have been extirpated. The burrowing owl inhabits open habitats, primarily grasslands and deserts. Burrowing owls require burrows for roosting and nesting cover. Although they often use abandoned California ground squirrel burrows, they will also use other small mammal burrows, pipes, culverts, and nest boxes, particularly where burrows are scarce (Zeiner et al. 1990). One recent record (Occurrence # 974) and one historic record (Occurrence # 632) occur within 5 miles of the Project site (CDFW 2022a). Occurrence # 974 was recorded approximately 4 miles from the site in 2007 (CDFW 2022a). During the biological survey, no potential burrowing owl burrows were observed on the Project site. Although California ground squirrels were observed during the biological survey in the surrounding area, no California ground squirrels were observed on or immediately adjacent to the Project site. The Project site lacks loose, friable soils suitable for burrowing, especially in the areas covered by gravel. The site exhibits high levels of disturbance with the presence of construction and equipment storage activities as well as the evidence of previous mechanical disturbances of the soils, which lowers the suitability of the habitat for burrowing owl. Although marginal amounts of low-quality foraging habitat are present in the areas lacking gravel cover, the presence of high levels of human and vehicular activity and associated disturbances likely preclude burrowing owls from using or occupying the small amounts of low-quality habitat present on the site.

Outside of the Project site and across a heavily trafficked road to the north, two burrows were identified that are suitably sized for burrowing owl use and have potential to be used by the species. No sign of burrowing owl use (e.g., whitewash, pellets, bones of prey items, feathers) were observed at these burrows. The locations of the potential burrowing owl burrows are depicted on Figure 4. Based on the lack of suitable burrows, marginal amounts of low-quality foraging habitat on the site, and the recent record of the species within 5 miles of the Project site, this species has a low potential to occur on the Project site, and would not be expected to use the area for nesting.

4.2.6.2 Wildlife Species Presumed Absent

These 42 species were not present at the site during the site visit and/or habitat was not present or suitable. For some species, there were historic or recent sightings; however, due to the lack of suitable habitat within the Project site, these species are presumed absent:

- Vernal pool fairy shrimp (*Branchinecta lynchi*), federally listed (threatened), MSHCP Covered;
- San Diego fairy shrimp (*Branchinecta sandiegonensis*), federally listed (endangered);
- Quino checkerspot butterfly (*Euphydryas editha quino*), federally listed (endangered), MSHCP Covered;
- Riverside fairy shrimp (*Streptocephalus woottoni*), federally listed (endangered), MSHCP Covered;
- Arroyo chub (*Gila orcutti*), CDFW SSC, MSHCP Covered;
- Steelhead - southern California Distinct Population Segment (*Oncorhynchus mykiss irideus* pop. *10*), federally listed (endangered);
- Arroyo toad (*Anaxyrus californicus*), federally listed (endangered), CDFW SSC, MSHCP Covered;
- California red-legged frog (*Rana draytonii*), federally listed (threatened), CDFW SSC, MSHCP Covered;
- Western spadefoot (*Spea hammondii*), CDFW SSC, MSHCP Covered;
- Coast Range newt (*Taricha torosa*), CDFW SSC, MSHCP Covered;
- Southern California legless lizard (*Anniella stebbinsi*), CDFW SSC;
- California glossy snake (*Arizona elegans occidentalis*), CDFW SSC;
- Red-diamond rattlesnake (*Crotalus ruber*), CDFW SSC, MSHCP Covered;
- Western pond turtle (*Emys marmorata*), CDFW SSC, MSHCP Covered;
- Coast horned lizard (*Phrynosoma blainvillii*), CDFW SSC, MSHCP Covered;
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*), CDFW SSC;
- Two-striped gartersnake (*Thamnophis hammondii*), CDFW SSC;

- Tricolored blackbird (*Agelaius tricolor*), state listed (threatened), CDFW SSC, MSHCP Covered;
- Long-eared owl (*Asio otus*), CDFW SSC, MSHCP Covered;
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*), CDFW SSC, MSHCP Covered;
- Golden eagle (*Aquila chrysaetos*), CDFW Fully Protected, MSHCP Covered;
- Swainson's hawk (*Buteo swainsoni*), state listed (threatened), MSHCP Covered;
- Western snowy plover (*Charadrius alexandrinus nivosus*), federally listed (threatened), CDFW SSC;
- Yellow rail (*Coturnicops noveboracensis*), CDFW SSC;
- White-tailed kite (*Elanus leucurus*), CDFW Fully Protected, MSHCP Covered;
- Bald eagle (*Haliaeetus leucocephalus*), federally delisted, state listed (endangered), CDFW Fully Protected, MSHCP Covered;
- Yellow-breasted chat (*Icteria virens*), CDFW SSC, MSHCP Covered;
- Loggerhead shrike (*Lanius ludovicianus*), CDFW SSC, MSHCP Covered;
- Coastal California gnatcatcher (*Polioptila californica californica*), federally listed (threatened), CDFW SSC, MSHCP Covered;
- Least Bell's vireo (*Vireo bellii pusillus*), federally listed (endangered), state listed (endangered), MSHCP Covered;
- Dulzura pocket mouse (*Chaetodipus californicus femoralis*), CDFW SSC;
- Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), CDFW SSC, MSHCP Covered;
- San Bernardino kangaroo rat (*Dipodomys merriami parvus*), federally listed (endangered), candidate for state listing, CDFW SSC, MSHCP Covered;
- Stephens' kangaroo rat (*Dipodomys stephensi*), federally listed (endangered), state listed (threatened), MSHCP Covered;
- Western mastiff bat (*Eumops perotis californicus*), CDFW SSC;
- Western yellow bat (*Lasiurus xanthinus*), CDFW SSC;
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), CDFW SSC, MSHCP Covered;
- San Diego desert woodrat (*Neotoma lepida intermedia*), CDFW SSC, MSHCP Covered;
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*), CDFW SSC;
- Southern grasshopper mouse (*Onychomys torridus ramona*), CDFW SSC;
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), CDFW SSC, MSHCP Covered; and

- American badger (*Taxidea taxus*), CDFW SSC.

4.2.7 Burrowing Owl Habitat Assessment

The burrowing owl habitat assessment was conducted concurrently with the January 28 and the February 4, 2022 surveys conducted by ECORP biologist Chelsie Brown. Weather conditions during the assessment are summarized in Table 1 (Section 4.2). The Project site contains disturbed soils with gravel and fill material spread over the majority of the property. Very little vegetation is present on the Project site and the non-gravel areas showed signs of being recently disced. The soils throughout the Project site were compact and vehicle tracks were observed throughout the site. A few small mammal burrows were identified within the Project site on the western portion of the site; however, none of the burrows were of suitable size for burrowing owl occupation. The Project site offers small amounts of low-quality foraging habitat for the species; however, the current human and vehicular activity on the Project site likely deter burrowing owls from using the site. Two potential burrowing owl burrows lacking sign of owl use (e.g., whitewash, pellets, feathers) were present outside of the Project site and across a busy road, Collier Avenue (Figure 4). Representative photos of the potential burrowing owl burrows identified outside of the Project site can be found in Appendix C.

Due to the presence of low-quality foraging habitat on the Project site and potential burrows located north of the Project site, preconstruction surveys are recommended no more than 30 days prior to site disturbance to maintain compliance with the MSHCP protection requirements for burrowing owl (RCTLMA 2022). Mitigation measures discussing additional survey requirements are described in Section 6.0.

4.3 Raptors and Migratory Birds

Potential nesting habitat for migratory birds and raptors protected by the MBTA and California Fish and Game Code is present on the Project site in the stored heavy construction equipment, construction materials, gravel areas and semi-trailers. Outside of the Project site, potential nesting habitat is present in the ornamental trees outside of the Project site; the eucalyptus, Mexican palo verde, and Peruvian pepper trees adjacent to the site in the northeast and the stands of oleander located adjacent to the Project site to the south present suitable nesting habitat. In addition, power and telephone lines run along both the north and southern boundaries of the Project site and their poles could provide suitable nesting habitat. Suitable nesting habitat for ground nesting bird species, such as mourning dove (*Zenaida macroura*) and killdeer, is present on many of the ground areas within the Project site. Raptors typically breed between February and August, and songbirds and other passerines generally nest between March and August.

4.4 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.

The Project site was assessed for its ability to function as a wildlife corridor. The Project site is disturbed, entirely fenced, and is generally surrounded by industrial development and paved roadways. Because of this, the Project site is isolated from large, contiguous blocks of native habitat. I-15 runs to the north and west of the Project site and is a large barrier to regional wildlife movement. The Project site is fenced with chain-link fencing with a gate located on the northeast side. Additionally, the current human and vehicle activity on the site, the lack of vegetative cover within the Project site, and the urban nature of the site would likely deter wildlife from using the Project site for movement opportunities. Therefore, the Project site is not considered a linkage or corridor between conserved natural habitat areas.

5.0 IMPACT ANALYSIS

All areas where Project construction activities are proposed to take place are dominated by nonnative vegetation, with the majority of the Project site being covered in gravel and used for heavy equipment as well as vehicle and material storage. The remaining area has undergone recent discing or similar mechanical disturbances. Potential impacts to sensitive biological resources resulting from Project activities are presented below.

5.1 Special-Status Species

The Project site consists of disturbed land and is devoid of native vegetation. No vegetation communities occur onsite. The literature review and database searches identified 35 special-status plant species that occur near the Project site. Of these 35 special-status plants, one was found to have a moderate potential to occur (San Diego ambrosia; federally listed (endangered), CRPR 1B.1, and MSHCP Covered Species) on the Project site due to the presence of disturbed land cover and records documented within 5 miles. The remaining 34 species were presumed absent. If rare, special-status, or narrow endemic plants occur on the Project site, direct impacts could occur to individuals in the form of ground disturbance, vegetation removal, habitat loss, and mortality and may be considered significant under CEQA. Within the Western Riverside MSHCP, San Diego ambrosia is a Narrow Endemic Plant Species. Impacts to this species has already been contemplated and addressed under the MSHCP. Furthermore, the Project site is neither located in a MSHCP-designated NEPSSA or Criteria Area Species Survey Area (CASSA). Therefore, additional focused surveys and implementation of mitigation for this species is not required for this particular Project, which is a covered activity under the MSHCP.

Of the 44 special-status wildlife species identified in the literature search, two were found to have a low potential for occurrence: Crotch bumble bee (CDFW candidate for state listing) and burrowing owl (CDFW SSC). The Project site has marginally suitable foraging, nesting, and overwintering habitat for Crotch bumble bee within the Project site. Marginally suitable foraging habitat for the species is present on the Project site where non-native flowering weeds occur and marginally suitable nesting and overwintering habitat is present in the gopher burrows and tufts of grass located on the western half of the Project site. However, the flowering resources are limited to a small patch and the potential nesting habitat is located in an area that is regularly disturbed in the form of mechanical disturbance and is used as a staging area for large equipment. Although it is unlikely, if Crotch bumble bee is found to be using or nesting on the Project site prior to the start of construction, impacts to Crotch bumble bee may occur in the form of direct mortality of individuals, direct mortality to an active nesting colony, direct mortality to an overwintering individual, conversion of foraging habitat, or permanent loss of foraging resources. Because this species is a generalist forager that chooses nest and overwintering locations on an annual basis, temporary and permanent loss of habitat resulting from the Project would not be expected to contribute substantially to the overall decline of this species unless direct impacts were to occur to an active nest or overwintering gyne (future queen). Impacts to Crotch bumble bee would be less than significant with the implementation of Mitigation Measure BIO-1. The Mitigation Measures for the proposed Project are discussed in Section 6.0.

The Project site is not located within a designated survey area under the MSHCP for burrowing owl (RCA 2022) and does not contain suitable burrows for burrowing owl use. Marginal amounts of low-quality foraging habitat for the species occurs on the site in the areas not covered by gravel; however, the high levels of disturbances present, and the lack of friable soils likely preclude burrowing owl from occurring on the Project site. Although a few small mammal burrows were identified on the Project site, none on the Project site were of suitable size and shape for burrowing owl use. The soils within the Project site appeared to have been recently mechanically disturbed (e.g., disced) and were compact at the time of the survey, which further reduces the site's suitability for burrowing owl. Two potential burrowing owl burrows were observed outside of the Project site to the northeast, but neither had sign of burrowing owl use. No burrowing owls or burrowing owl sign were observed within the Project site or adjacent areas during the survey. However, due to the mobile nature of the species, it is possible that burrowing owl could use the area prior to the start of Project activities. Although unlikely, if burrowing owl are found to be using or nesting on the Project site prior to the start of construction, direct impacts may occur in the form of mortality or injury in the form of ground disturbance, entombment, and vegetation removal. If burrowing owl are found to be using or nesting in the area surrounding the Project site prior to the start of construction, indirect impacts from construction noise, increased human and vehicular activity, dust, and ground vibrations may occur. In order to avoid potentially significant impacts to burrowing owl, it is recommended that Mitigation Measure BIO-2 be implemented.

The remaining 42 special-status wildlife species are presumed absent from occurring on or adjacent to the site due to the lack of suitable habitat, including the recent mechanical disturbances to the soils, gravel cover occurring over the majority of the Project site, proximity to I-15, the currently activity status of the site with stored construction equipment and vehicle movement, and the presence of anthropogenic disturbances associated with the industrial development surrounding the site. No

impacts to the 42 presumed absent special-status wildlife species are anticipated to result from the development of this Project.

The stored heavy construction equipment, construction materials, and semi-trailers present on the Project site could provide nesting habitat for nesting birds and raptors protected by the MBTA and California Fish and Game Code. In addition, the trees adjacent to the Project site as well as the power and telephone poles immediately adjacent to the site could provide nesting habitat. Furthermore, the Project site could provide nesting habitat for ground-nesting bird species. If construction of the proposed Project occurs during the bird breeding season (typically February 1 through August 31), ground-disturbing construction activities could directly affect birds protected by the MBTA and their nests through the removal of habitat on the Project site, and indirectly through increased noise, vibrations, and increased human activity. Impacts to nesting birds would be less than significant with the implementation of Mitigation Measure BIO-2.

Coastal California gnatcatcher (federally listed threatened, CDFW SSC, MSHCP Covered) was found to be presumed absent from the Project site. This bird occurs in coastal scrub habitats, especially those dominated by California sage, including dry coastal slopes, washes, and mesas; areas of low plant growth (Atwood 1992). This species generally avoids crossing even small areas of unsuitable habitat (Atwood 1992). The Project site and area within the 500-foot buffer are not within core habitat or any MSHCP-designated area targeted for coastal California gnatcatcher conservation. No suitable habitat for the species is present on the Project site or immediately adjacent to the site. Coastal California gnatcatcher are not expected to occur in the small, disturbed California buckwheat scrub area north of the Project site due to the poor quality of the scrub habitat consisting of sparse shrub growth, close proximity to I-15, and anthropogenic disturbances. Off the Project site, approximately 0.96 acre of suitable California buckwheat scrub habitat for California gnatcatcher is present south of the Project site within the 500-buffer. While suitable habitat for California gnatcatcher is present on the hillsides south of the Project site, the surrounding area is subjected to many disturbances associated with industrial and commercial development, land uses, and I-15 to the north. Furthermore, the Riverside County flood control channel south of the Project site that separates the suitable California buckwheat scrub from the site likely provides an additional barrier between Project activities and the suitable habitat. If California gnatcatcher are present within the California buckwheat scrub habitat south of the Project site, they are likely already used to high levels of human and vehicular activities and the construction of the Project likely will not result in impacts to the species (behavior alteration, nesting or reproduction activities, or habitat loss and degradation). Project-related impacts to California gnatcatcher are not expected due to the lack of habitat on the Project site, high levels of disturbance in the region, and the potentially suitable scrub habitat located approximately 400 feet away from the Project site. In addition, a busy road, W Minthorn Street, and the flood control channel between the Project site and the potential habitat act as a buffer between Project construction activities and the California buckwheat scrub habitat. The literature review revealed 21 records within 5 miles of the Project site. The most recent occurrence (Occurrence # 564) was observed in 2015 less than 1 mile east of the Project site (CDFW 2022a). All other occurrences recorded within 5 miles of the Project site are greater than 20 years old and considered historic. Based on the lack of suitable coastal sage scrub habitat on the Project site, the industrial and commercial development surrounding the site, barriers present between the Project site and the suitable California gnatcatcher habitat located on hillsides south of the Project

site, and high levels of human and vehicular activity, Project-related impacts to the species are not expected to occur.

5.2 Sensitive Natural Communities

The Project site does not support any sensitive natural communities; no vegetation communities were present on the site and only disturbed land cover is present. The California buckwheat scrub and cattail marsh vegetation communities identified outside of the Project site are not considered sensitive natural communities. No impacts to sensitive natural communities are anticipated as a result of this Project.

5.3 State or Federally Protected Wetlands and Waters of the United States

No state or federally protected wetlands or waters of the U.S. were identified on the Project site; therefore, no impacts to these resources are expected to occur. The three blue line features mapped by NWI outside of the Project site may be jurisdictional: a temporarily flooded intermittent riverine is present to the west of the site and flows southwest through the Riverside County Flood Control and Water Conservation District drainage and detention basin; a seasonally flooded freshwater forested/shrub wetland occurs south of the Project site; and a seasonally flooded intermittent riverine is present southwest of the Project site (Figure 3). One area of pooling water was identified outside of the Project site to the west (Figure 4) and one small drainage was identified outside of the Project site to the southwest (Figure 4) that may also be jurisdictional. However, an official aquatic resources delineation was not performed because the aquatic features observed during the surveys are outside the Project site and impacts to these features are not expected to occur. Two drainage culverts, one of which is fully filled in with concrete, were identified outside the boundaries of the Project site to the northeast (Figure 4); however, impacts to these culverts are also not expected as a result of the Project due to their location outside of the Project boundaries. If any offsite improvements are planned that could affect the aquatic features in the vicinity of the Project site, a formal aquatic resources delineation is recommended to identify exact impacts to these features.

5.4 Wildlife Corridors and Nursery Sites

The Project site is located within and adjacent to areas containing existing disturbances (e.g., paved roads and industrial developments). The Project site is disturbed and contains little to no vegetative cover that would facilitate wildlife movement. No migratory wildlife corridors or native wildlife nursery sites were identified within the Project site. No impacts to these resources are expected to occur during the development of the Project site.

5.5 Habitat Conservation Plans and Natural Community Conservation Plans

The Project site is located within the planning area for the Western Riverside MSHCP. The Project site is not located within any Conservation Areas, Criteria Cells, or Subunit designations according to the MSHCP.

5.5.1 Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis

The Project site is located within the planning area for the MSHCP, but outside of any Cell Groups, Criteria Cells, and Subunit designations. Section 6.0 of the MSHCP requires assessment of the potential effects from the Project on biological resources including riparian/riverine areas, vernal pools, fairy shrimp, burrowing owl, and Narrow Endemic Plant Species. There is no requirement to analyze the potential effects from the Project on other Section 6.0 species, such as mammals, fish or amphibian species due to lack of presence of habitat. 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 the proximity of MSHCP Conservation Areas. These resources were assessed during the reconnaissance survey and are discussed below in relation to the Project.

The Proposed Project consists of the construction of two buildings, two driveways, parking spaces, a sidewalk, a block wall along the western boundary, gravel fill, and landscaping on an approximately 2.8-acre Project site in the City of Lake Elsinore, California. Because development of the Project site is a covered activity within the MSHCP, it is an allowable use that has been contemplated within the MSHCP. However, projects that are covered still need to comply with MSHCP requirements.

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

In accordance with Section 6.1.2 of the MSHCP, a habitat assessment was performed for riparian and riverine communities, vernal pools, and fairy shrimp. The Project site, consisting of Arbuckle gravelly loam, 15 to 25 percent slopes (AIE), Cortina gravelly coarse sandy loam, 2 to 8 percent slopes (CnC), and Waukena loamy fine sand, saline-alkali lacks clay soils and does not contain vernal pool habitat or suitable habitat for fairy shrimp. No evidence of pools or standing water was observed on the Project site.

No riparian vegetation or riverine features are present on the Project site and impacts to these resources are not anticipated as a result of the Project. Off the Project site, riparian vegetation was observed in an area of pooling west of the Project boundaries (Figure 4). Although this area may provide vernal pool habitat potentially suitable for fairy shrimp, it is located outside the Project boundaries and will be avoided under the Proposed Project plan. Riparian vegetation and standing water were observed south of the Project site, within the NWI mapped freshwater forested/shrub wetland (Figure 3). Southwest of the site, a small drainage was identified that was dry at the time of the survey and lacked riparian vegetation and hydric soils (Figure 4). Two drainage culverts (Figure 4) were also recorded outside the Project boundaries during the survey; however, no hydric soils were observed in association with the culverts. These areas are located outside the Project boundaries and will be avoided by the Project. Therefore, no impacts to riparian and riverine habitat, vernal pools, or fairy shrimp habitat are anticipated as a result of the Project. If any offsite improvements are planned that could affect aquatic features present in the areas surrounding the Project site, a formal aquatic resources delineation is recommended to identify impacts to these features.

Additionally, Section 6.1.2 of the MSHCP lists 23 special-status plant species associated with riparian/riverine and vernal pool areas (RCTLMA 2022). There is no suitable habitat on the Project site for any of the 23 special-status plant species listed in Section 6.1.2 of the MSHCP.

5.5.1.2 Narrow Endemic Plant Species (MSHCP 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 MSHCP. The Project site is not located within a NEPSSA or a CASSA.

5.5.1.3 Burrowing Owl Habitat Assessment (MSHCP Section 6.3.2)

In accordance with Section 6.3.2 of the 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 Project site is not located within a MSHCP-designated burrowing owl survey area. No suitably sized burrows were present on the Project site during the burrowing owl habitat assessment that was performed in accordance with the MSHCP burrowing owl survey guidelines (County of Riverside 2006). Two burrows of suitable size for burrowing owl usage were identified outside of the Project site during the habitat assessment; however, these burrows were located across a busy street, Collier Avenue, and near I-15 (Figure 4).

Although no burrowing owls or burrowing owl sign were observed during the survey, marginal amounts of low-quality foraging habitat is present on the Project site and two potential burrows were observed adjacent to the site. Preconstruction surveys will need to be conducted prior to the start of Project construction in order to maintain compliance with the burrowing owl protection measures in the MSHCP. The preconstruction surveys shall follow the protocols set forth in the MSHCP burrowing owl survey guidelines (County of Riverside 2006) and the California Department of Fish and Game (CDFG) Staff Report on Burrowing Owl Mitigation (CDFG 2012). Implementation of Mitigation Measure BIO-1 would keep the Project in compliance with the MSHCP requirements in Section 6.3.2.

5.5.1.4 Urban/Wildlands Interface Guidelines (MSHCP Section 6.1.4)

The requirements for Urban/Wildlands Interface for the management of edge factors do not apply to the majority of the Project site where it is not situated adjacent to any wildlands or MSHCP-designated Conservation Areas. The Project site is isolated from larger, contiguous blocks of native habitat, and completely surrounded by industrial development, paved roads, and other anthropogenic land use. Public Quasi-Public Conserved Land, owned by Riverside County Flood Control and Water Conservation District, is present immediately west of the Project site that is managed for protection of flood related threats. This area does not provide habitat for special-status species and the construction of the Project would not result in impacts to any Public or Quasi-Public Conserved Land. However, use of invasive species within landscaping on the site should be prohibited due to the potential for seed to disperse into the adjacent areas and move further downstream. A net long-term increase of edge impacts is not expected as a result of this Project.

5.5.1.5 Additional Surveys (MSHCP Section 6.3.2)

The RCA MSHCP Information Map was reviewed to determine if the Project site is located within any MSHCP-designated survey areas. The Information Map revealed that the Project site is not located within the amphibian species, criteria area species, or mammalian species survey areas. Therefore, no further habitat assessments or surveys are required.

6.0 MITIGATION MEASURES

The following section provides recommendations and/or mitigation measures to address the potential impacts to biological resources identified in this report. Recommendations for avoiding impacts to sensitive biological resources are presented below:

BIO-1 Preconstruction Survey for Crotch bumble bee: If the Crotch bumble bee is no longer a Candidate or formally listed species under the California ESA at the time ground-disturbing activities occur, then no additional protection measures are proposed for the species.

If the Crotch bumble bee is legally protected under the California ESA as a Candidate or Listed species at the time ground-disturbing activities are scheduled to begin, a preconstruction survey shall be conducted in accordance with CDFW's Survey Considerations for California ESA Candidate Bumble Bee Species (CDFW 2023) during the Crotch's bumble bee flight season (February – October) no more than 48 hours prior to Project-related ground disturbing activities (including but not limited to vegetation clearing, fence installation, and grading) by a qualified Crotch's bumble bee biologist. The 48-hour preconstruction survey shall be repeated as necessary if the Project does not begin with 48 hours of completion of the preconstruction survey. If Crotch bumble bees are detected (alive or dead), CDFW shall be notified within 24 hours as further coordination may be required to avoid or mitigate certain impacts, and an incidental take permit may be required. If no Crotch bumble bees are detected, then the Project activities may commence.

BIO-2 Preconstruction Surveys for Burrowing Owl: Due to the presence of marginal amounts of low-quality foraging habitat on the Project site and potential burrows adjacent to the site in the surrounding area, preconstruction surveys for burrowing owl shall take place no more than 30 days prior to the start of ground-disturbing activities, regardless of whether Project activities are scheduled to occur during the burrowing owl breeding season (March 1 through August 31) or not. The surveys shall be performed in accordance with the Western Riverside MSHCP Burrowing Owl Survey Instructions (County of Riverside 2006) and the CDFG Staff Report on Burrowing Owl Mitigation (CDFG 2012). If preconstruction survey results are negative, no further action is required for protection of burrowing owls. If preconstruction survey results are positive and impacts to burrowing owls are unavoidable, then additional mitigation measures will need to be implemented to offset impacts to burrowing owl. Further, a burrowing owl avoidance and mitigation plan will prepared for review and approval by the wildlife agencies (CDFW and USFWS) if owls are

present. The plan will include measures developed in accordance with the CDFG Staff Report on Burrowing Owl Mitigation (2012) and may include seasonal work restriction, establishing a non-disturbance buffer around each burrow location, biological monitoring, or passive relocation. If passive relocation is found to be necessary, then coordination with CDFW will need to occur.

BIO-3 Preconstruction Survey for Nesting Birds: Wherever feasible, any ground-disturbing activities (including vegetation removal) shall be conducted during the non-breeding season for birds (approximately September 1 through January 31) in order to avoid violations of the MBTA and California Fish and Game Code §§ 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (February 1 through August 31), a preconstruction nesting bird survey shall be conducted by a qualified biologist who is experienced in surveying for and identification of avian species no more than three days prior to the start of ground-disturbing activities. The nesting bird survey 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, avoidance or minimization measures shall be implemented to avoid potential Project-related impacts. Avoidance and minimization measures shall be developed by the qualified biologist and may include non-disturbance buffers established around active nests until the biologist has determined that the nesting cycle is completed, seasonal work restrictions, or additional survey and monitoring requirements. The width of non-disturbance buffers established around active nests will be determined by the qualified biologist (300 feet is typically recommended for songbirds and 500 feet is typically recommended for raptors). Once nesting is deemed complete by the qualified biologist as determined through periodic nest monitoring, the non-disturbance buffer will be removed by the qualified biologist and Project work may resume in the area.

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: Chelsie Brown Date: March 1, 2022

Chelsie Brown
Associate Biologist/Assistant Project Manager

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Appendix B – Sensitive Wildlife Species Potential for Occurrence

Appendix C – Representative Site Photographs

Appendix D – Plant Species Observed

Appendix E – Wildlife Species Observed

Appendix F – CNPS Search Results

APPENDIX A

Sensitive Plant Species Potential for Occurrence

Scientific Name Common Name	Status		Bloom Period & Elevation (feet)	Habitat Requirements	Potential for Occurrence
Ambrosia pumila San Diego ambrosia	Fed: Ca: CRPR: MSHCP:	END none 1B.1 COV	Apr-Oct 65-1360	Occurs in chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Often found in sandy loam or clay, often in disturbed areas, sometimes found in alkaline soils.	Moderate Potential to Occur: Although no suitable chaparral, coastal scrub, grassland, or vernal pool habitat is present on the site, the Project site consists of disturbed land cover and four recent records (Occ # 44, 54, 58, 67) of the species occur within 5 miles of the site.
Abronia villosa var. *aurita* Chaparral sand-verbena	Fed: Ca: CRPR: MSHCP:	none none 1B.1 none	(Jan) Mar-Sept 245-5250	Occurs in chaparral, coastal scrub, and desert dune habitats. Often found in sandy soil.	Presumed Absent: No suitable chaparral, coastal scrub, or sandy desert habitat is present on the Project site and there are no records within 5 miles of the site.
Allium munzii Munz's onion	Fed: Ca: CRPR: MSHCP:	END THR 1B.1 COV	Mar-May 975-3510	Occurs in chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley and foothill grasslands. Often found in clay soils, growing in grasslands and openings within shrublands or woodlands.	Presumed Absent: Although four recent records occur within 5 miles of the Project site, the site lacks clay soils and does not contain suitable chaparral, woodland, coastal scrub, or grassland habitat.
Almutaster pauciflorus alkali marsh aster	Fed: Ca: CRPR: MSHCP:	none none 1B.2 none	Jun-Oct 785-2625	Occurs in meadows and seeps of alkaline soils.	Presumed Absent: No suitable meadow or seep habitat is present on the Project site and there are no records within 5 miles of the site.
Arctostaphylos rainbowensis rainbow manzanita	Fed: Ca: CRPR: MSHCP:	none none 1B.1 COV	Dec-Mar 675-2200	Occurs in chaparral.	Presumed Absent: No suitable chaparral habitat is present on the Project site and there are no records within 5 miles.
Atriplex coronata var. *notatior* San Jacinto Valley crownscale	Fed: Ca: CRPR: MSHCP:	END none 1B.1 COV	Apr-Aug 455-1640	Occurs in playas, valley and foothill grasslands, and vernal pools in alkaline soils.	Presumed Absent: Although the site contains alkaline soils in the southeast corner, this portion of the site is highly disturbed and covered in gravel currently. There has been one recent records (Occ # 16) within 5 miles of the Project site; however, the site lacks playa, grassland, and vernal pool habitat. only marginally suitable grassland habitat is present.
Atriplex parishii Parish's brittlescale	Fed: Ca: CRPR: MSHCP:	none none COV	Jun-Oct 80-6235	Occurs in chenopod scrub, playas, and vernal pools in alkaline soils.	Presumed Absent: No suitable chenopod scrub, playa, or vernal pool habitats are present on site and no records occur within 5 miles.
Ayenia compacta California ayenia	Fed: Ca: CRPR: MSHCP:	none none 2B.3 none	Mar-Apr 490-3595	Occurs in Mojavean desert scrub and Sonoran desert scrub often in rocky habitats.	Presumed Absent: Although one historic record (Occ # 52) occurs within 5 miles of the site, the record is from 1929 and no suitable rocky, desert habitat is present on the Project site.
Brodiaea filifolia thread-leaved brodiaea	Fed: Ca: CRPR: MSHCP:	THR END 1B.1 COV	Mar-Jun 80-3675	Occurs in cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools, and in openings of chaparral. Often found in clay soils.	Presumed Absent: The site lacks clay soils and suitable woodland, coastal scrub, playa, grassland, vernal pool, and chaparral opening habitat. In addition, there are no records of the species within 5 miles of the site.

Scientific Name Common Name	Status		Bloom Period & Elevation (feet)	Habitat Requirements	Potential for Occurrence
Calochortus weedii var. *intermedius* intermediate mariposa lily	Fed: Ca: CRPR: MSHCP:	none none 1B.2 COV	May-July 345-2805	Occurs in chaparral, coastal scrub, and valley and foothill grasslands, in rocky, calcareous soils.	Presumed Absent: The Project site lacks rocky, calcareous soils and no suitable chaparral, coastal scrub, or valley and foothill grassland habitat is present. In addition, there are no records within 5 miles.
Centromadia pungens ssp. *Laevis* smooth tarplant	Fed: Ca: CRPR: MSHCP:	none none 1B.1 COV	Apr-Sep 0-2100	Occurs in chenopod scrub, meadows and seeps, playas, riparian woodlands, and valley and foothill grassland habitats. Often found in alkaline soil.	Presumed Absent: Although the site contains alkaline soils in the southeast corner, this portion of the site is highly disturbed and covered in gravel currently. Seven recent records of the species occur within 5 miles of the Project site; however, the site lacks scrub, meadow and seep, playa, woodland, and grassland habitat.
Chorizanthe parryi var. *parryi* Parry's spineflower	Fed: Ca: CRPR: MSHCP:	none none 1B.1 COV	Apr-Jun 900-4005	Occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitat. Often found in sandy or rocky openings. Generally associated with larger alluvial plains.	Presumed Absent: Although three recent records of the species occur within 5 miles of the site, the Project site lacks chaparral, woodland, coastal scrub, and grassland habitat.
Chorizanthe polygonoides var. *longispina* long-spined spineflower	Fed: Ca: CRPR: MSHCP:	none none 1B.2 COV	Apr-Jul 100-5020	Occurs in chaparral, coastal scrub, meadows and seeps, valley and foothill grasslands, and vernal pool habitat. Often found in clay soil.	Presumed Absent: Although eight recent records of the species have been recorded within 5 miles of the site, the site lacks clay soils and does not contain suitable chaparral, coastal scrub, meadow and seep, grasslande, or vernal pool habitat.
Clinopodium chandleri San Miguel savory	Fed: Ca: CRPR: MSHCP:	none none 1B.2 COV	Mar-Jul 395-3525	Occurs in chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grasslands. Often found in rocky, gabbroic or metavolcanic soils.	Presumed Absent: The site lacks suitable chaparral, woodland, coastal scrub, and valley and foothill grassland habitat. In addition, there are no records within 5 miles.
Comarostaphylis diversifolia ssp. *Diversifolia* Summer Holly	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	April-June 100-2590	Occurs on shady dry slopes of chaparral or cismontane woodland often near creeks or runoffs.	Presumed Absent: The site lacks dry slopes of chaparral and cistomontane woodland. In addition, there are no records within 5 miles of the site.
Dodecahema leptoceras slender-horned spineflower	Fed: Ca: CNPS: MSHCP:	END END 1B.1 COV	Apr-Jun 655-2495	Occurs in chaparral, cismontane woodland, and alluvial fan coastal scrub in sandy soils. Generally only located in large alluvial systems.	Presumed Absent: No suitable chaparral, woodland, or alluvial fan coastal scrub habitat occurs on the Project site and no records occur within 5 miles of the site.
Dudleya multicaulis many-stemmed dudleya	Fed: Ca: CRPR: MSHCP:	none none 1B.2 COV	Apr-Jul 50-2590	Occurs in chaparral, coastal scrub, and valley and foothill grassland habitats. Often found in areas of clay soil.	Presumed Absent: Although one recent record (Occ # 6) occurs within 5 miles of the Project site, the site lacks clay soils and does not contain suitable chaparral, coastal scrub, or grassland habitat.
Dudleya viscida Sticky Dudleya	Fed: Ca: CNPS: MSHCP:	none none 1B.2 COV	May-June 35-1805	Occurs in coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub in rocky soils.	Presumed Absent: No suitable coastal scrub, chaparral, or woodland habitat occurs on the Project site and no records occur within 5 miles of the site.

Scientific Name Common Name	Status		Bloom Period & Elevation (feet)	Habitat Requirements	Potential for Occurrence
Eryngium aristulatum var. *parishii* San Diego button-celery	Fed: Ca: CRPR: MSHCP:	END END 1B.1 COV	Apr-Jun 65-2035	Occurs in mesic habitats of coastal scrub, valley and foothill grasslands, and vernal pools.	Presumed Absent: The site lacks vernal pools, coastal scrub, and suitable valley and foothill grassland habiat. In addition, there are no records within 5 miles of the site.
Geothallus tuberosus Campbell's liverwort	Fed: Ca: CRPR: MSHCP:	none none 1B.1 none	Ephemeral liverwort 35-1970	Occurs in soils of mesic coastal scrub habitats and vernal pools.	Presumed Absent: The Project site lacks coastal scrub and vernal pool habitat. In addition, there are no records within 5 miles.
Hesperocyparis forbesii Tecate cypress	Fed: Ca: CRPR: MSHCP:	none none 1B.1 none	Perennial evergreen tree 260-4920	Occurs in closed-cone coniferous forest, and chaparral habitat. Often found in areas with clay, gabbroic or metavolcanics soils.	Presumed Absent: No suitable forest or chaparral habitat is present on the Project site. In addition, there are no records within 5 miles of the site.
Horkelia cuneata var. *puberula* mesa horkelia	Fed: Ca: CRPR:	none none 1B.1 none	Feb-Jul (Sep) 230-2660	Occurs in cismontane woodland, coastal scrub, and maritime chaparral in sandy or gravelly soils.	Presumed Absent: No suitable cismontane woodland, coastal scrub, or maritime chaparral habitat was present on the Project site. There are no records within 5 miles.
Juncus luciensis Santa Lucia dwarf rush	Fed: Ca: CRPR: MSHCP:	none none 1B.2 none	Apr-Jul 985-6695	Occurs in chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, and vernal pools.	Presumed Absent: No suitable chaparral, forest, seep, or vernal pool habitat is present on the Project site and there are no records within 5 miles.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	Fed: Ca: CRPR: MSHCP:	none none 1B.1 COV	Feb-Jun 5-4005	Occurs in coastal salt marshes and swamps, playas, and vernal pools.	Presumed Absent: Although the literature review revealed one historic record (Occ # 21) and one recent record (Occ # 57) within 5 miles of the site, no suitable marsh, swamp, playa, or vernal pool habitat is present on the Project site.
Navarretia fossalis spreading navarretia	Fed: Ca: CRPR: MSHCP:	THR none 1B.1 COV	Apr-Jun 100-2150	Occurs in chenopod scrub, shallow freshwater marshes and swamps, playas, and vernal pools.	Presumed Absent: No suitable chenopod scrub, marsh, playa, or vernal pool habitat is present on the Project site and there are no records within 5 miles of the site.
Navarretia prostrata prostrate vernal pool Navarretia	Fed: Ca: CRPR: MSHCP:	none none 1B.2 COV	Apr-Jul 10-3970	Occurs in coastal scrub, meadows and seeps, alkaline valley and foothill grasslands, and vernal pools.	Presumed Absent: The site lacks seeps, vernal pools, coastal scrub, and suitable valley & foothill grassland habitat. In addition, there are no records within 5 miles of the site.
Nolina cismontana chaparral Nolina	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	(Mar) May-July 460-4185	Occurs in chaparral, coastal scrub, and areas with sandstone or gabbro.	Presumed Absent: No suitable chaparral and coastal scrub habitat is present on the Project site and there are no records within 5 miles of the site.
Orcuttia californica California Orcutt grass	Fed: Ca: CRPR: MSHCP:	END END 1B.1 COV	Apr-Aug 50-2165	Occurs in vernal pools.	Presumed Absent: Although one historic record (Occ # 42) of this species was observed within 5 miles of the site in 1998, no vernal pool habitat is present on the Project site.
Pseudognaphalium leucocephalum white rabbit-tobacco	Fed: Ca: CRPR: MSHCP:	none none 2B.2 none	(Jul)Aug-Nov(Dec) 0-6890	Occurs in chaparral, cismontane woodland, coastal scrub, and riparian woodland. Often found in sandy, gravelly soils.	Presumed Absent: The site lacks chaparral, woodland, coastal scrub, and riparian woodland habitat. In addition, there are no records within 5 miles of the site.

Scientific Name Common Name	Status		Bloom Period & Elevation (feet)	Habitat Requirements	Potential for Occurrence
Sphaerocarpos drewiae bottle liverwort	Fed: Ca: CRPR: MSHCP:	none none 1B.1 none	Ephemeral liverwort 295-1970	Occurs in soil openings of chaparral and coastal scrub.	Presumed Absent: The site lacks chaparral and coastal scrub habitat and there are no records within 5 miles.
Symphyotrichum defoliatum San Bernardino aster	Fed: Ca: CRPR: MSHCP:	none none 1B.2 none	Jul-Nov 5-6695	Occurs in meadows and seeps, marshes, and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, and vernally mesic valley and foothill grassland. Often found in disturbed areas and near ditches, streams, and springs.	Presumed Absent: No suitable habitat was present on the Project site. Species occurs in meadow and seep, marsh, swamp, coastal scrub, cismontane woodland, coniferous forest, and valley and foothill grassland communities. In addition, no records occur within 5 miles of the site.
Tetracoccus dioicus Parry's Tetracoccus	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	April-May 540-3280	Occurs in chaparral and coastal scrub.	Presumed Absent: There is no chaparral or coastal scrub habitat on the Project site and there are no records within 5 miles.
Tortula californica California screw moss	Fed: Ca: CRPR: MSHCP:	none none 1B.2 none	Moss 35-4790	Occurs in sandy soil of chenopod scrub and valley and foothill grassland.	Presumed Absent: The site lacks chenopod scrub and suitable valley and foothill grassland habitat. In addition, there are no records within 5 miles.
Trichocoronis wrightii var. *wrightii* Wright's trichocoronis	Fed: Ca: CRPR: MSHCP:	none none 2B.1 COV	May-Sep 15-1425	Occurs in meadows and seeps, marshes and swamps, riparian forest, and vernal pools. Often found in alkaline soils.	Presumed Absent: No suitable seep, marsh, riparian, or vernal pool habitat is present on the Project site and there are no records within 5 miles.
Viguiera purisimae La Purisima viguiera	Fed: Ca: CRPR: MSHCP:	none none 2B.3 none	April-Sept 1200-1395	Occurs in chaparral and coastal bluff scrub.	Presumed Absent: There is no chaparral or coastal scrub habitat on the Project site and there are no records within 5 miles.

Federal Designations:

(Federal Endangered Species Act, USFWS)

END: federally listed, endangered

THR: federally listed, threatened

State designations:

(California Endangered Species Act, CDFG)

END: state-listed, endangered

THR: state-listed, threatened

CAN: Candidate for state listing

FP: Fully Protected Species

SSC: Species of Special Concern

Other Designations

COV: Covered under the Western Riverside MSHCP

CRPR Ranking

1A: Presumed extinct

1B: Rare, threatened, or endangered in California and elsewhere

2B: Rare, threatened, or endangered in California, but more common elsewhere

3: Review list of plants requiring more study

4: Plants of limited distribution watch list

CRPR Threat Code

0.1: Seriously threatened in California

0.2: Fairly threatened in California

0.3: Not very threatened in California

Source: California Natural Diversity Data Base (CNDDB) & California Native Plant Society Electronic Inventory (CRPREI) Lake Elsinore, Lake Mathews, Steele Peak, Perris, Romoland, Murrieta, Wildomar, Sitton Peak, and Alberhill 7.5-minute quads.

APPENDIX B

Sensitive Wildlife Species Potential for Occurrence

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
Invertebrates				
Branchinecta lynchi vernal pool fairy shrimp	Fed: CA: MSHCP:	THR none COV	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 on the Project site and there are no records within 5 miles.
Branchinecta sandiegonensis San Diego fairy shrimp	Fed: CA: MSHCP:	END none none	Vernal pools and ephemeral wetlands in San Diego and Orange Counties.	Presumed Absent: No ephemeral wetlands or vernal pools are present on the Project site and there are no records within 5 miles.
Bombus crotchii Crotch bumble bee	Fed: CA: MSHCP:	none CAN none	Found in coastal California east to the Sierra-Cascade crest and south into Mexico. Occurs in open grassland and scrub habitats. Prefers a diet consisting of certain plant species including milkweeds, dusty maidens, lupines, medics, phacelias, sages, clarkias, poppies, and wild buckwheats. Nests are often located underground in abandoned rodent nests or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees.	Low Potential to occur: Marginally suitable forging habitat is present within and adjacent to the Project site and marginally suitable nesting habitat for the species is present within the Project site. At the time of the biological survey, approximately half of the Project site contained flowering non-native plant species such as coastal heron's bill and sweetclover, although most of the plants were not in bloom at the time of the survey. In addition, ornamental trees consisting of stands of oleander occur adjacent to the Project site in the 500-foot buffer. These plants could provide nectar sources and foraging opportunities for Crotch bumble bee. Gopher burrows and tufts of grass are present within the western half of the Project site which could provide nesting and overwintering habitat for the Crotch bumble bee. However, the western half of the Project site that contains gopher burrows and tufts of grass appears to be regularly disturbed by regular mechanical ground disturbance such as discing and/or mowing and by being actively used as a staging area where large equipment is driven and stored. These disturbances would reduce the likelihood that the species would nest on the Project site. There are two historic records of the species within five miles of the Project site. The nearest and most recent record was documented in 2001 approximately 3 miles southeast of the Project site (Occ # 212).
Euphydryas editha quino Quino checkerspot butterfly	Fed: CA: MSHCP:	END none COV	Chaparral and coastal sage scrublands in Riverside and San Diego counties.	Presumed Absent: Although one recent record (Occ # 83) occurs within 5 miles from 2002, the site lacks chaparral and coastal sage scrub habitat.
Streptocephalus woottoni Riverside fairy shrimp	Fed: CA: MSHCP:	END none COV	Occurs in vernal pools, tectonic swales, and earth slump basins in Riverside County.	Presumed Absent: Although one recent record (Occ # 11) occurs within 5 miles of the site from 2010, no ephemeral wetlands or vernal pools are present on the Project site.
Fishes				
Gila orcutti arroyo chub	Fed: CA: MSHCP:	none SSC COV	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 on the Project site and there are no records within 5 miles.
Oncorhynchus mykiss irideus pop. *10* steelhead - southern California DPS	Fed: CA: MSHCP:	END none none	Typically occurs in slow water steams or rivers.	Presumed Absent: No suitable water habitat for this species is present on the Project site. No records occur within five miles.
Amphibians				

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
Anaxyrus californicus arroyo toad	Fed: CA: MSHCP:	END SSC COV	Occurs in desert wash, riparian scrub, riparian woodland, south coast flowing waters, and south coast standing waters habitat. Found in semi-arid regions near washes or intermittent streams. Prefers rivers with sandy banks, willows, cottonwoods, and sycamores. Often found in loose, gravelly areas of streams.	Presumed Absent. No suitable habitat is present on the Project Site. Typically occurs near rivers with riparian scrub. There are no records within 5 miles.
Rana draytonii California red-legged frog	Fed: CA: MSHCP:	THR SSC COV	Occurs in aquatic, artificial flowing waters, artificial standing waters, freshwater marsh, marsh & swamp, riparian forest, riparian scrub, riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, south coast flowing waters, south coast standing waters, and wetland habitats. Requires 11-20 weeks of permanent water for larval development. Often found in lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	Presumed Absent. No suitable aquatic or riparian habitat is present on the Project site and no records exist within 5 miles.
Spea hammondii western spadefoot	Fed: CA: MSHCP:	none SSC COV	Open areas with sandy soils in a wide range of habitats including lowlands to foothills, coastal sage scrub, chaparral, mixed woodlands, sandy washes, river floodplains, alluvial fans, playas, and grasslands. Vernal pools are essential for breeding and egg-laying. The species is almost completely terrestrial, entering water only to breed.	Presumed Absent: Although 10 recent records occur within 5 miles of the Project site, gravel covers a large portion of the site and heavy equipment, vehicles, and construction materials are currently stored and operated on the site. The western and northwestern portions of the site, without gravel present, do not provide suitable sandy habitat for the species. In addition, suitable pooling habitat for breeding and egg-laying was not present. A pooling area was identified to the west of the Project site; however, this was located across a paved road and approximately 400 feet from the Project site.
Taricha torosa Coast Range newt	Fed: CA: MSHCP:	none SSC COV	Occurs in wet forests, oak forests, chaparral, and rolling grasslands. Burrows in moist soil or wood debris.	Presumed Absent: No chaparral, forest, rolling grassland, or moist soil habitat is present on the Project site and there are no records within 5 miles.
Reptiles				
Anniella stebbinsi southern California legless lizard	Fed: CA: MSHCP:	none SSC none	Coastal sand dunes, and variety of interior habitats including sandy washes and alluvial fans. Occurs in moist warm loose soil with plant cover and sparsely vegetated beach dunes, pine-oak woodlands, desert scrub, chaparral, and stream terraces with sycamores, cottonwoods, or oaks. Sometimes found in suburban gardens.	Presumed Absent: Although one recent record (Occ # 177) occurs within 5 miles from 2010, no suitable alluvial fan, sandy wash, dune, woodland, desert scrub, chaparral, or stream terrace habitat occurs on the Project site.
Arizona elegans occidentalis California glossy snake	Fed: CA: MSHCP:	none SSC none	Most common in desert habitats but also found in arid scrub, rocky washes, grasslands, low elevation coastal scrub, valley-foothill hardwood, and chaparral. Prefers washes and sandy areas with patchy brush and rocks. Perennial plants necessary in habitat for food source.	Presumed Absent: Three records of the species occur within 5 miles, however, they are more than 40 years old. In addition, the site lacks desert, scrub, wash, grassland, hardwood, and chaparral habitats.
Crotalus ruber red-diamond rattlesnake	Fed: CA: MSHCP:	none SSC COV	Found in coastal chaparral, arid scrub, rocky grassland, oak and pine woodlands, desert mountain slopes and rocky desert flats. Diet consists of birds, lizards, and small mammals including ground squirrels, wood rats, and rabbits.	Presumed Absent: Although four historic records occur within 5 miles of the site, the site lacks chaparral, scrub, grassland, woodland, desert mountain, and desert flat habitat.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
Emys marmorata western pond turtle	Fed: CA: MSHCP:	none SSC COV	Occurs in aquatic, artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, south coast flowing waters, south coast standing waters, and wetland habitats. Needs basking sites (logs, rocks, and exposed banks) and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Presumed Absent: Although the Riverside County flood control drainage and basin are present adjacent to the site, they are only temporarily flooded and do not provide suitable habitat for the species. One historic record (Occ # 828) occurs within 5 miles of the site; however, the site does not provide a suitable basking site or upland habitat for the species due to the current construction activities and disturbed nature of the site.
Phrynosoma blainvillii coast horned lizard	Fed: CA: MSHCP:	none SSC COV	Occurs in chaparral, cismontane woodland, coastal bluff scrub, coastal scrub, desert wash, pinon & juniper woodlands, riparian scrub, riparian woodland, and valley & foothill grassland habitats. Requires open areas for sunning, bushes to provide cover, and loose soil for burial. Diet consists mainly of ants and also small invertebrates. Most commonly found in lowlands along sandy washes with scattered low bushes.	Presumed Absent: Although three recent records of the species occur within 5 miles of the site, the site lacks suitable chaparral, woodland, scrub, wash, or grassland habitat for the species and does not provide bushes for cover.
Salvadora hexalepis virgultea coast patch-nosed snake	Fed: CA: MSHCP:	none SSC none	Coastal scrub and semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains. Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites. Diet consists mostly of lizards, along with small mammals.	Presumed Absent: Although one recent record (Occ # 13) occurs within 5 miles of the site, the Project site lacks coastal scrub, chaparral, rocky hillsides, and plains. Vegetation on the Project site was minimal and did not contain shrubs or brushy areas.
Thamnophis hammondii two-striped gartersnake	Fed: CA: MSHCP:	none SSC none	Occur along aquatic habitats such as pools and creeks usually near chaparral, rocky areas, brushland, oak woodland, and conifer forests. Found in coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Hunts in water.	Presumed Absent: Although the Riverside County flood control basin and drainage are present adjacent to the site, they are only temporarily flooded and the site lacks suitable chaparral, brushland, rocky areas, oak woodland, and forest habitat. In addition, there are no records within 5 miles of the site.
Birds				
Agelaius tricolor tricolored blackbird (nesting colony)	Fed: CA: MSHCP:	none THR/SSC COV	Occurs in freshwater marsh, swamp, and wetland habitats. Largely endemic to California. Highly colonial species, most numerous in Central Valley & vicinity. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony. Forages in open habitat such as cultivated fields and pastures.	Presumed Absent: Although the Project site is located approximately 1 mile from Lake Elsinore and one historic record (Occ # 364) from 1971 occurs approximately 5 miles from the Project site, the site does not provide suitable foraging or nesting habitat for the species.
Asio otus long-eared owl	Fed: CA: MSHCP:	none SSC none	Occurs in cismontane woodland, Great Basin scrub, riparian forest, riparian woodland, and upper montane coniferous forest habitats. Found in riparian bottomlands grown to tall willows and cottonwoods. Also found in belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	Presumed Absent: No suitable woodland, scrub, or forest habitat is present on the Project site. In addition, the site lacks suitable breeding habitat and there are no records within 5 miles.
Aspidoscelis tigris stejnegeri coastal whiptail	Fed: CA: MSHCP:	none SSC COV	Arid habitats including chaparral, woodlands, and dry riparian areas.	Presumed Absent: The site lacks suitable chaparral, woodland, or riparian habitats and no records occur within 5 miles.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
Athene cunicularia burrowing owl (burrow & some wintering sites)	Fed: CA: MSHCP:	none SSC COV	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Occurs in coastal prairie, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, and valley & foothill grassland habitats. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. Also found in vacant lots and airports.	Low Potential to occur: No burrows were observed during the biological survey on the Project site and the site lacked loose, friable soils preferred by the species. Low quality foraging habitat is present on the western and northwestern portions of the site. Two potential burrowing owl burrows were observed outside of the Project site, north of Collier Avenue. No sign of burrowing owl was observed at either of the burrows. No suitable burrows were observed during the biological survey. One recent record (Occ # 974) and one historical record (Occ # 632) occur within 5 miles of the Project site. Occ # 974 was recorded approximately 4 miles from the site in 2007.
Aquila chrysaetos golden eagle (nesting & wintering)	Fed: CA: MSHCP:	none FP COV	Occurs in broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, pinon & juniper woodlands, upper montane coniferous forest, and valley & foothill grassland habitats. Found in rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also large trees such as eucalyptus or oak in open areas.	Presumed Absent: No forest, woodland, prairie, grassland, & rolling foothill habitat occurs on the Project site. Although large trees including eucalyptus are present adjacent to the site to the northeast which could provide suitable nesting habitat, nesting activities are not expected on this site because no cliff-walled canyons are located on the Project site. There are no records within 5 miles.
Buteo swainsoni Swainson's hawk (nesting)	Fed: CA: MSHCP:	none THR COV	Occurs in Great Basin grassland, riparian forest, riparian woodland, and valley & foothill grassland habitats. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Nests in solitary bush or tree, or in small groves. Requires adjacent suitable foraging areas such as grasslands or alfalfa/grain fields supporting rodent populations.	Presumed Absent: No suitable grassland, forest, or riparian woodland habitat occurs on the Project Site and the site does not provide suitable foraging habitat for the species. In addition, there are no records within 5 miles.
Charadrius alexandrinus nivosus western snowy plover	Fed: CA: MSHCP:	THR SSC none	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Presumed Absent: Although one record (Occ # 92) was found approximately 1 mile away in 1974, no sandy beaches, levees, or lake shores are present on the Project site.
Coturnicops noveboracensis yellow rail	Fed: CA: MSHCP:	none SSC none	Occurs in freshwater marshlands.	Presumed Absent: No suitable marshland habitat is present on the Project Site. In addition, there are no records within 5 miles.
Elanus leucurus white-tailed kite (nesting)	Fed: CA: MSHCP:	none FP COV	Open habitat in lowlands including savanna, open woodlands, marshes, and agricultural fields. Nests in trees, riparian scrub areas, oak woodlands, and other similar habitats.	Presumed Absent: Although one occurrence (Occ # 112) from 2006 is within 5 miles, no suitable lowland habitat is present on the Project site.
Haliaeetus leucocephalus bald eagle (nesting & wintering)	Fed: CA: MSHCP:	DL END/FP COV	Breeding habitat most commonly includes areas close to coastal areas, bays, rivers, lakes, reservoirs, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, or seabirds. Nests in tall trees or on cliffs or pinnacles near open water.	Presumed Absent: No suitable tall trees, cliffs, or body of water nesting habitat occurs on the Project site and there are no records within 5 miles.
Icteria virens yellow-breasted chat	Fed: CA: MSHCP:	none SSC COV	Occurs in riparian forest, riparian scrub, and riparian woodland habitats. Nests in low, dense riparian, consisting of willow, blackberry, wild grape along streams or at the edges of ponds or swamps. Forages and nests within 10 ft of ground.	Presumed Absent: Although one record (Occ # 105) occurs within 5 miles of the site, no suitable riparian habitat is present on the Project site for the species.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
Lanius ludovicianus loggerhead shrike (nesting)	Fed: CA: MSHCP:	none SSC COV	Occurs in broadleaved upland forest, desert wash, Joshua tree woodland, Mojavean desert scrub, pinon & juniper woodlands, riparian woodland, chaparral, and Sonoran desert scrub habitats. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Presumed Absent: Although one historic record (Occ # 51) occurs within 5 miles of the Project site, the site lacks suitable forest, wash, woodland, scrub, and chaparral habitat. In addition, the site lacks shrubs and brush for nesting and does not provide suitable foraging habitat.
Polioptila californica californica coastal California gnatcatcher	Fed: CA: MSHCP:	THR SSC COV	Dry coastal slopes, washes, and mesas with areas of low vegetation and coastal sage scrub including California sagebrush, California buckwheat, salvia, and prickly pear cactus. Moves about actively in shrubs and low trees to forage. Generally found at elevations below 3,000 ft.	Presumed Absent: Although the literature review revealed one recent and 20 historic records of this species within 5 miles of the Project site, no suitable coastal sage scrub habitat is present on the Project site for the species. Suitable California buckwheat scrub habitat occurs approximately 400 feet south of the Project site.
Vireo bellii pusillus least Bell's vireo (nesting)	Fed: CA: MSHCP:	END END COV	Occurs in riparian forest, riparian scrub, and riparian woodland habitats. Summer resident of Southern California in low riparian vegetation in the vicinity of water or in dry river bottoms, below 2,000 ft msl. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, mulefat, and mesquite.	Presumed Absent: Mulefat was observed during the survey in the pooling area southwest of the Project site; however, it currently consists of a small stand and does not provide suitable nesting habitat. The cattail marshes within the NWI mapped freshwater forested/shrub wetland located outside of the Project site, approximately 0.1 mile south, could offer suitable habitat for the species and 14 recent records of the species occur within 5 miles of the Project site; however, the Project site does not contain suitable riparian or nesting habitat for the species.
Mammals				
Chaetodipus californicus femoralis *Dulzura pocket mouse*	Fed: CA: MSHCP:	none SSC none	Chaparral, coastal scrub, and desert grasslands in San Diego County along the U.S.-Mexico border.	Presumed Absent: The Project site lacks suitable chaparral, coastal scrub, and grassland habitat. In addition, there are no records within 5 miles of the site.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	Fed: CA: MSHCP:	none SSC COV	Sandy herbaceous areas, usually in association with rocks or coarse gravel in southwestern California. Primarily occurs in arid coastal and desert borders. Typical habitats include sandy desert fans and shrub communities such as coastal sage scrub, chaparral, sagebrush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper, and annual grassland.	Presumed Absent: Although one historic record (Occ # 1) occurs within 5 miles of the site, the Project site lacks sandy desert fan and shrub communities.
Dipodomys merriami parvus San Bernardino kangaroo rat	Fed: CA: MSHCP:	END CAN/SSC COV	Gentle slopes of alluvial fans, on flood plains, along washes, and on adjacent upland areas with soils containing sand, loam, and gravel deposited by rivers and streams. Can also be found in sandy soils that are wind deposited. Found in alluvial sage scrub, coastal sage scrub, and chaparral vegetation.	Presumed Absent: Although one historic record (Occ # 102) occurs close to 100 years ago, the Project site does not provide suitable alluvial scrub, coastal scrub, or chaparral vegetation habitat for this species.
Dipodomys stephensi Stephens' kangaroo rat	Fed: CA: MSHCP:	END THR COV	Annual grasslands, coastal sage scrub with sparsely spaced vegetation, loose friable soils, and flat or slightly rolling terrain. Prefer open habitats with less than 50% protective cover.	Presumed Absent: Although 17 historic records occur within 5 miles of the Project site, the site lacks suitable grassland and coastal scrub habitat for the species.
Eumops perotis californicus western mastiff bat	Fed: CA: MSHCP:	none SSC none	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: No suitable rock or cliff habitat is present on the Project site and there are no records within 5 miles.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
Lasiurus xanthinus western yellow bat	Fed: CA: MSHCP:	none SSC none	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats and human developed areas. Roosts in trees, particularly palms. Forages over water and among trees.	Presumed Absent: The site lacks suitable riparian, desert wash, and palm oasis habitat. No palm trees were observed during the biological survey. In addition, there are no records within 5 miles of the site.
Lepus californicus bennettii San Diego black-tailed jackrabbit	Fed: CA: MSHCP:	none SSC COV	Variety of open or semi-open country including grasslands, croplands, and sparse coastal scrub. Diet consists primarily of a variety of grasses during spring and summer seasons, with various shrubs and forbs during fall and winter seasons.	Presumed Absent: Although four historic records occur within 5 miles of the Project site, the site does not provide suitable open or semi-open country habitat. In addition, the site is bounded by two high traffic roads.
Neotoma lepida intermedia San Diego desert woodrat	Fed: CA: MSHCP:	none SSC COV	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Also found in coastal chaparral, sagebrush scrub, sandy desert, Joshua tree woodland, pinyon-juniper pine, and boulder habitats. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops & rocky cliffs & slopes.	Presumed Absent: The Project site does not contain suitable chaparral, scrub, desert, woodland, pine, or boulder habitats. In addition, there are no records within 5 miles.
Nyctinomops femorosaccus pocketed free-tailed bat	Fed: CA: MSHCP:	none SSC none	Roosts in crevices of outcrops and cliffs, shallow caves, and buildings. Found along rugged canyons, high cliffs, and semiarid rock outcroppings.	Presumed Absent: No suitable rugged canyon, cliff, or rock outcropping habitat is present on the Project site and no records occur within 5 miles.
Onychomys torridus ramona southern grasshopper mouse	Fed: CA: MSHCP:	none SSC none	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.	Presumed Absent: The Project site lacks suitable chaparral, coastal scrub, riparian scrub, sagebrush, and grassland habitat. In addition, there are no records within 5 miles of the site.
Perognathus longimembris brevinasus Los Angeles pocket mouse	Fed: CA: MSHCP:	none SSC COV	Lower elevation grasslands, alluvial sage scrub, and coastal sage communities in and around the Los Angeles Basin. Can be found in fine, sandy soils associated with washes or dunes. May hide under weeds and dead leaves in addition to digging burrows.	Presumed Absent: The Project site does not provide suitable grassland, alluvial scrub, or coastal sage habitat. In addition, there are no records within 5 miles.
Taxidea taxus American badger	Fed: CA: MSHCP:	none SSC none	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. Prefers open areas and may also frequent brushlands with little groundcover. When inactive, occupies underground burrow. Young are born in underground burrows.	Presumed Absent: The site lacks suitable chaparral, coastal scrub, riparian, sagebrush, and grassland habitat for the species. In addition, there are no records within 5 miles.

Federal Designations:	State designations:	Other Designations
(Federal Endangered Species Act, U.S. Fish and Wildlife Service)	(California Endangered Species Act, CDFW)	COV: Covered under the Western Riverside MSHCP
END: Federally-listed, Endangered	END: State-listed, Endangered	
THR: Federally-listed, Threatened	THR: State-listed, Threatened	
FC: Federal Candidate Species	CAN: Candidate for state listing	
DL: Federally-delisted	SSC: Species of Special Concern	
	FP: Fully Protected Species	
	WL: Watch List Species	

Source: California Natural Diversity Data Base (CNDDB) Lake Elsinore, Lake Mathews, Steele Peak, Perris, Romoland, Murrieta, Wildomar, Sitton Peak, and Alberhill 7.5-minute quads.

APPENDIX C

Representative Site Photographs



Photo 1. Project site from northeastern boundary at Collier Avenue with stored vehicles and heavy equipment present, facing south



Photo 2. Project site from southwestern boundary along W Minthorn Street showing pile of cut vegetation, gravel spread throughout the majority of the site, vehicle tracks, and construction materials storage, facing northeast



Photo 3. Rocky, disturbed soils and ruderal vegetation present on the northern and western portions of the Project site with evidence of recent mechanical disturbance, facing northeast



Photo 4. Representative photo of rocky, disturbed soils, ruderal vegetation, and vehicle tracks present on the northern portion of the Project site, facing north



Photo 5. Location of NWI mapped riverine which runs through a Riverside County Flood Control and Water Conservation District drainage and detention basin, adjacent to the Project site, facing southwest



Photo 6. Cattail marsh within the NWI mapped seasonally flooded freshwater forested/shrub wetland located and California buckwheat scrub south of the Project site, facing southwest



Photo 7. Two culverts, one of which is fully filled in with concrete, northeast of the Project site, facing north



Photo 8. Drainage located southwest of the Project site which appears to flow southwest to where it connects to a NWI mapped riverine, facing south



Photo 9. Oleanders and telephone and power poles located adjacent to the Project site along W Minthorn Street which provide suitable nesting habitat



Photo 10. Stand of eucalyptus, Peruvian pepper, and Mexican palo verde trees located northeast of the Project site along Collier Avenue, facing southeast



Photo 11. California buckwheat scrub located approximately 450 feet south of the Project site, facing southwest



Photo 12. Disturbed California buckwheat scrub located north of the site between Collier Avenue and I-15



Photo 13. Potential burrowing owl burrow observed outside of the Project site (no sign of burrowing owl use), facing northeast

APPENDIX D

Plant Species Observed

Scientific Name	Common Name
Baccharis salicifolia	mulefat
*Bromus madritensis**	foxtail chess
Croton setiger	turkey mullein
Cylindropuntia californica	California cholla
Encelia farinosa	brittlebush
Eriogonum fasciculatum	California buckwheat
*Erodium cicutarium** [+]	coastal heron's bill
Eucalyptus sp.*	eucalyptus
Helianthus annuus	common sunflower
Heterotheca grandiflora	telegraph weed
*Hirschfeldia incana** [+]	short-podded mustard
Melilotus sp.* [+]	sweetclover
*Nerium oleander**	oleander
*Nicotiana glauca**	tree tobacco
*Olea Europaea**	olive
*Parkinsonia aculeata**	Mexican palo verde
*Polypogon monspeliensis** [+]	annual beard grass
*Schinus mole**	Peruvian pepper tree
*Sonchus oleraceus** [+]	common sowthistle
Stephanomeria sp.	wirelettuce
Tamarix sp.	tamarisk
*Tribulus terrestris** [+]	goathead
Typha sp.	cattail

*Nonnative species

[+]Observed on the Project site

APPENDIX E

Wildlife Species Observed

Scientific Name	Common Name
INSECTA	INSECTS
*Coccinella septempunctata**+	seven-spotted lady beetle
AVES	BIRDS
Anthus rubescens+	American pipit
Calypte anna	Anna's hummingbird
Charadrius vociferus+	killdeer
Corvus brachyrhynchos	American crow
Setophaga coronata+	yellow-rumped warbler
MAMMALIA	MAMMALS
Otospermophilus beecheyi	California ground squirrel
Sylvilagus audubonii	desert cottontail
Thomomys bottae+	Botta's pocket gopher

*Nonnative species

+Observed on the Project site

APPENDIX F

CNPS Search Results

Inventory of Rare and Endangered Plants of California

California Native Plant Society

Search Results

72 matches found. Click on scientific name for details

Search Criteria: Quad is one of [**3311763:3311774:3311773:3311772:3311762:3311752:3311753:3311754:3311764**]

▲ SCIENTIFIC NAME	COMMON NAME	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	CA RARE PLANT RANK	GENERAL HABITATS	MICRO HABITATS	LOWEST ELEVATION (FT)	HIGHEST ELEVATION (FT)	CA ENDEMIC
Abronia villosa var. *aurita*	chaparral sand-verbena	annual herb	(Jan)Mar-Sep	None	None	1B.1	Chaparral, Coastal scrub, Desert dunes	Sandy	245	5250	
Allium marvinii	Yucaipa onion	perennial bulbiferous herb	Apr-May	None	None	1B.2	Chaparral		2495	3495	Yes
Allium munzii	Munz's onion	perennial bulbiferous herb	Mar-May	FE	CT	1B.1	Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland	Clay, Mesic	975	3510	Yes
Almutaster pauciflorus	alkali marsh aster	perennial herb	Jun-Oct	None	None	2B.2	Meadows and seeps	Alkaline	785	2625	
Ambrosia pumila	San Diego ambrosia	perennial rhizomatous herb	Apr-Oct	FE	None	1B.1	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools	Alkaline (sometimes), Clay (sometimes), Disturbed areas (often), Sandy (sometimes)	65	1360	
Amsinckia douglasiana	Douglas' fiddleneck	annual herb	Mar-May	None	None	4.2	Cismontane woodland, Valley and foothill grassland	Dry	0	6400	Yes
Arctostaphylos rainbowensis	Rainbow manzanita	perennial evergreen shrub	Dec-Mar	None	None	1B.1	Chaparral		675	2200	Yes

Asplenium vespertinum	western spleenwort	perennial rhizomatous herb	Feb-Jun	None	None	4.2	Chaparral, Cismontane woodland, Coastal scrub	Rocky	590	3280	
Atriplex coronata var. *notatior*	San Jacinto Valley crownscale	annual herb	Apr-Aug	FE	None	1B.1	Playas, Valley and foothill grassland, Vernal pools	Alkaline	455	1640	Yes
Atriplex parishii	Parish's brittlescale	annual herb	Jun-Oct	None	None	1B.1	Chenopod scrub, Playas, Vernal pools	Alkaline	80	6235	
Atriplex serenana var. *davidsonii*	Davidson's saltscale	annual herb	Apr-Oct	None	None	1B.2	Coastal bluff scrub, Coastal scrub	Alkaline	35	655	
Ayenia compacta	California ayenia	perennial herb	Mar-Apr	None	None	2B.3	Mojavean desert scrub, Sonoran desert scrub	Rocky	490	3595	
Brodiaea filifolia	thread-leaved brodiaea	perennial bulbiferous herb	Mar-Jun	FT	CE	1B.1	Chaparral, Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools	Clay (often)	80	3675	Yes
Brodiaea santarosae	Santa Rosa Basalt brodiaea	perennial bulbiferous herb	May-Jun	None	None	1B.2	Valley and foothill grassland		1855	3430	Yes
Calochortus catalinae	Catalina mariposa lily	perennial bulbiferous herb	(Feb)Mar-Jun	None	None	4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland		50	2295	Yes

Calochortus weedii var. *intermedius*	intermediate mariposa-lily	perennial bulbiferous herb	May-Jul	None	None	1B.2	Chaparral, Coastal scrub, Valley and foothill grassland	Rocky	345	2805	Yes
Carex buxbaumii	Buxbaum's sedge	perennial rhizomatous herb	Mar-Aug	None	None	4.2	Bogs and fens, Marshes and swamps, Meadows and seeps		10	10825	
Caulanthus simulans	Payson's jewelflower	annual herb	(Feb)Mar-May(Jun)	None	None	4.2	Chaparral, Coastal scrub	Granitic, Sandy	295	7220	Yes
Centromadia pungens ssp. *laevis*	smooth tarplant	annual herb	Apr-Sep	None	None	1B.1	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland	Alkaline	0	2100	Yes
Chorizanthe leptotheca	Peninsular spineflower	annual herb	May-Aug	None	None	4.2	Chaparral, Coastal scrub, Lower montane coniferous forest	Granitic	985	6235	
Chorizanthe parryi var. *parryi*	Parry's spineflower	annual herb	Apr-Jun	None	None	1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland	Openings, Rocky (sometimes), Sandy (sometimes)	900	4005	Yes
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	annual herb	Apr-Jul	None	None	1B.2	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools	Clay (often)	100	5020	

Clinopodium chandleri	San Miguel savory	perennial shrub	Mar-Jul	None	None	1B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland	Gabbroic (sometimes), Rocky (sometimes)	395	3525	
Collomia diversifolia	serpentine collomia	annual herb	May-Jun	None	None	4.3	Chaparral, Cismontane woodland	Gravelly (sometimes), Rocky (sometimes), Serpentinite (sometimes)	655	1970	Yes
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	perennial evergreen shrub	Apr-Jun	None	None	1B.2	Chaparral, Cismontane woodland		100	2590	
Convolvulus simulans	small-flowered morning-glory	annual herb	Mar-Jul	None	None	4.2	Chaparral, Coastal scrub, Valley and foothill grassland	Clay, Seeps, Serpentinite	100	2430	
Deinandra paniculata	paniculate tarplant	annual herb	(Mar)Apr-Nov	None	None	4.2	Coastal scrub, Valley and foothill grassland, Vernal pools	Sandy (sometimes), Vernally Mesic (usually)	80	3085	
Diplacus clevelandii	Cleveland's bush monkeyflower	perennial rhizomatous herb	Apr-Jul	None	None	4.2	Chaparral, Cismontane woodland, Lower montane coniferous forest	Disturbed areas (often), Gabbroic, Openings, Rocky	1475	6560	
Dodecahema leptoceras	slender-horned spineflower	annual herb	Apr-Jun	FE	CE	1B.1	Chaparral, Cismontane woodland, Coastal scrub	Sandy	655	2495	Yes
Dudleya multicaulis	many-stemmed dudleya	perennial herb	Apr-Jul	None	None	1B.2	Chaparral, Coastal scrub, Valley and foothill grassland	Clay (often)	50	2590	Yes

Dudleya viscida	sticky dudleya	perennial herb	May-Jun	None	None	1B.2	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub	Rocky	35	1805	Yes
Eryngium aristulatum var. *parishii*	San Diego button-celery	annual/perennial herb	Apr-Jun	FE	CE	1B.1	Coastal scrub, Valley and foothill grassland, Vernal pools	Mesic	65	2035	
Erythranthe diffusa	Palomar monkeyflower	annual herb	Apr-Jun	None	None	4.3	Chaparral, Lower montane coniferous forest	Gravelly (sometimes), Sandy (sometimes)	4005	6005	
Geothallus tuberosus	Campbell's liverwort	ephemeral liverwort		None	None	1B.1	Coastal scrub, Vernal pools		35	1970	Yes
Harpagonella palmeri	Palmer's grapplinghook	annual herb	Mar-May	None	None	4.2	Chaparral, Coastal scrub, Valley and foothill grassland	Clay, Openings	65	3135	
Hesperocyparis forbesii	Tecate cypress	perennial evergreen tree		None	None	1B.1	Chaparral, Closed-cone coniferous forest	Clay, Gabbroic (sometimes)	260	4920	
Holocarpha virgata ssp. *elongata*	graceful tarplant	annual herb	May-Nov	None	None	4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland		195	3610	Yes
Hordeum intercedens	vernal barley	annual herb	Mar-Jun	None	None	3.2	Coastal dunes, Coastal scrub, Valley and foothill grassland, Vernal pools		15	3280	

Horkelia cuneata var. *puberula*	mesa horkelia	perennial herb	Feb-Jul(Sep)	None	None	1B.1	Chaparral, Cismontane woodland, Coastal scrub	Gravelly (sometimes), Sandy (sometimes)	230	2660	Yes
Juglans californica	Southern California black walnut	perennial deciduous tree	Mar-Aug	None	None	4.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland		165	2955	Yes
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	perennial rhizomatous herb	(Mar)May-Jun	None	None	4.2	Coastal dunes, Marshes and swamps, Meadows and seeps		10	2955	
Juncus luciensis	Santa Lucia dwarf rush	annual herb	Apr-Jul	None	None	1B.2	Chaparral, Great Basin scrub, Lower montane coniferous forest, Meadows and seeps, Vernal pools		985	6695	Yes
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	annual herb	Feb-Jun	None	None	1B.1	Marshes and swamps, Playas, Vernal pools		5	4005	
Lathyrus splendens	pride-of-California	perennial herb	Mar-Jun	None	None	4.3	Chaparral		655	5005	
Lepechinia cardiophylla	heart-leaved pitcher sage	perennial shrub	Apr-Jul	None	None	1B.2	Chaparral, Cismontane woodland, Closed-cone coniferous forest		1705	4495	
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	annual herb	Jan-Jul	None	None	4.3	Chaparral, Coastal scrub		5	2905	

Lilium humboldtii ssp. *ocellatum*	ocellated Humboldt lily	perennial bulbiferous herb	Mar-Jul(Aug)	None	None	4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland	Openings	100	5905	Yes
Lilium parryi	lemon lily	perennial bulbiferous herb	Jul-Aug	None	None	1B.2	Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest	Mesic	4005	9005	
Limnanthes alba ssp. *parishii*	Parish's meadowfoam	annual herb	Apr-Jun	None	CE	1B.2	Lower montane coniferous forest, Meadows and seeps, Vernal pools	Vernally Mesic	1970	6560	Yes
Microseris douglasii ssp. *platycarpha*	small-flowered microseris	annual herb	Mar-May	None	None	4.2	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools		50	3510	
Monardella hypoleuca ssp. *intermedia*	intermediate monardella	perennial rhizomatous herb	Apr-Sep	None	None	1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest		1310	4100	Yes

Monardella macrantha ssp. *hallii*	Hall's monardella	perennial rhizomatous herb	Jun-Oct	None	None	1B.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland	2395	7200	Yes
Myosurus minimus ssp. *apus*	little mousetail	annual herb	Mar-Jun	None	None	3.1	Valley and foothill grassland, Vernal pools	65	2100	
Navarretia fossalis	spreading navarretia	annual herb	Apr-Jun	FT	None	1B.1	Chenopod scrub, Marshes and swamps, Playas, Vernal pools	100	2150	
Navarretia prostrata	prostrate vernal pool navarretia	annual herb	Apr-Jul	None	None	1B.2	Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools	10	3970	Yes
Nolina cismontana	chaparral nolina	perennial evergreen shrub	(Mar)May-Jul	None	None	1B.2	Chaparral, Coastal scrub	460	4185	Yes
Orcuttia californica	California Orcutt grass	annual herb	Apr-Aug	FE	CE	1B.1	Vernal pools	50	2165	
Phacelia keckii	Santiago Peak phacelia	annual herb	May-Jul	None	None	1B.3	Chaparral, Closed-cone coniferous forest	1790	5250	Yes
Polygala cornuta var. *fishiae*	Fish's milkwort	perennial deciduous shrub	May-Aug	None	None	4.3	Chaparral, Cismontane woodland, Riparian woodland	330	3280	

Pseudognaphalium leucocephalum	white rabbit-tobacco	perennial herb	(Jul)Aug-Nov(Dec)	None	None	2B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland	0	6890	
Quercus engelmannii	Engelmann oak	perennial deciduous tree	Mar-Jun	None	None	4.2	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland	165	4265	
Romneya coulteri	Coulter's matilija poppy	perennial rhizomatous herb	Mar-Jul(Aug)	None	None	4.2	Chaparral, Coastal scrub	65	3935	
Scutellaria bolanderi ssp. *austromontana*	southern mountains skullcap	perennial rhizomatous herb	Jun-Aug	None	None	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest	1395	6560	Yes
Sibaropsis hammittii	Hammitt's clay-cress	annual herb	Mar-Apr	None	None	1B.2	Chaparral, Valley and foothill grassland	2360	3495	Yes
Sphaerocarpos drewiae	bottle liverwort	ephemeral liverwort		None	None	1B.1	Chaparral, Coastal scrub	295	1970	Yes
Symphyotrichum defoliatum	San Bernardino aster	perennial rhizomatous herb	Jul-Nov	None	None	1B.2	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, Meadows and seeps, Valley and foothill grassland	5	6695	Yes
Tetracoccus dioicus	Parry's tetracoccus	perennial deciduous shrub	Apr-May	None	None	1B.2	Chaparral, Coastal scrub	540	3280	

Texosporium sancti-jacobi	woven-spored lichen	crustose lichen (terricolous)		None	None	3	Chaparral	195	2165	
Tortula californica	California screw moss	moss		None	None	1B.2	Chenopod scrub, Valley and foothill grassland	35	4790	Yes
Trichocoronis wrightii var. *wrightii*	Wright's trichocoronis	annual herb	May-Sep	None	None	2B.1	Marshes and swamps, Meadows and seeps, Riparian forest, Vernal pools	15	1425	
Viguiera laciniata	San Diego County viguiera	perennial shrub	Feb-Jun(Aug)	None	None	4.3	Chaparral, Coastal scrub	195	2460	
Viguiera purisimae	La Purisima viguiera	shrub	Apr-Sep	None	None	2B.3	Chaparral, Coastal bluff scrub	1200	1395	

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