Appendix C-1

Biological Resources Report

IRVINE CAMPUS MEDICAL COMPLEX PROJECT

University of California, Irvine
Orange County, California

BIOLOGICAL RESOURCES REPORT

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JN 172571

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IRVINE CAMPUS MEDICAL CAMPUS PROJECT

UNIVERSITY OF CALIFORNIA, IRVINE
ORANGE COUNTY, CALIFORNIA

Biological Resources Report

The undersigned certify that this report is a complete and accurate account of the findings and conclusions of a biological resources assessment for the above-referenced project.

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September 2020

Executive Summary

On behalf of the University of California, Irvine (UCI), Michael Baker International (Michael Baker) has prepared this Biological Resources Report for the proposed approximately Irvine Campus Medical Complex Project (project) located at the UCI North Campus, in the City of Irvine, County of Orange, California. The proposed project consists of the construction of a new Specialty Hospital, Ambulatory Care Center, and associated facilities to replace the existing administrative offices and arboretum.

This report was prepared to document all biological resources identified within the survey area (comprising the permanent development footprint, including a 150-foot required development buffer along the San Joaquin Marsh, as well as a laydown yard and parking area, both of which are temporary impact areas) during a general biological resources survey, which includes a floral and faunal inventory, vegetation/land use mapping, habitat suitability assessments to determine the potential for special-status plant and wildlife species and vegetation communities to occur within the survey area, and an evaluation of jurisdictional aquatic or other hydrological features, if present. Details of a formal jurisdictional delineation are provided under a separate cover.

The project site consists of disturbed, undeveloped lands and ornamental vegetation associated with the surrounding developments. Four (4) natural vegetation communities were observed and mapped within the survey area: southern arroyo willow riparian forest, coastal sage scrub, disturbed coastal sage scrub, and restored coastal sage scrub. In addition, four (4) human-modified areas mapped as disturbed, bare ground, ornamental, and developed were observed within the survey area. These human-modified areas are not considered biological resources due to a lack of native soils and vegetation. Construction of the proposed project would result in a permanent loss of approximately 9.91 acres composed entirely of human-modified areas as well as a temporary loss of an additional 4.29 acres, of which 0.23 acre is coastal sage scrub.

Based on a 4-quadrangle search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) RareFind 5 and California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants, and a query of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation online system, Michael Baker determined that of the forty-five (45) special-status plant species and forty-seven (47) special-status wildlife species known to occur within the vicinity of the survey area, most are either not expected or have a low potential to occur within or surrounding the project site due to a lack of suitable habitat on-site or the project is outside of the species' known distribution range, for example.

No special-status plant species were observed within the survey area; however, Michael Baker determined that there is a moderate potential for many-stemmed dudleya (*Dudleya multicaulis*; California Rare Plant Rank 1B.2) to occur on-site. Two (2) special-status wildlife species were

observed during the surveys, coastal California gnatcatcher (*Polioptila californica*; Federally-listed as threatened species and California Species of Special Concern [SSC]) and least Bell's vireo (*Vireo bellii pusillus*; State- and Federally-listed as endangered), both of which are covered under the Orange County Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan (Orange County NCCP/HCP) with the UCI as a participating landowner. Michael Baker also determined that there is a moderate potential for orange-throated whiptail (*Aspidoscelis hyperythra*; SSC), western pond turtle (*Emys marmorata*; SSC), and western mastiff bat (*Eumops perotis californicus*; SSC) to occur within the survey area.

A total of seven (7) special-status vegetation communities were identified within the 4-quadrangle CNDDB search, with none of those specific vegetation communities present within the survey area. Two (2) other special-status vegetation communities, southern arroyo willow riparian forest and coastal sage scrub, were observed on-site. No permanent impacts to special-status vegetation communities are anticipated, although up to 0.23 acre of coastal sage scrub in the laydown area may be temporarily affected. The survey area is not located within any USFWS-designated Critical Habitat. The nearest Critical Habitat is located over 2 miles to the southeast, designated for coastal California gnatcatcher.

Additionally, the survey area is located within and is subject to the requirements and provisions set forth in the Coastal Subarea of the Orange County NCCP/HCP (R.J. Meade 1996). The UCI is a participating landowner within the Orange County NCCP/HCP for which development activities and uses that are addressed by the Orange County NCCP/HCP are considered fully mitigated under the Natural Community Conservation Planning Act, Federal Endangered Species Act, and California Endangered Species Act for impacts to habitats occupied by listed and other species "identified" by the Orange County NCCP/HCP and its associated IA. Therefore, this project is exempt from any additional mitigation for impacts to "identified" species and their habitat.

According to the Federal Emergency Management Agency, portions of the survey area and project site along the southeastern boundary (within and adjacent to the San Joaquin Marsh) are located within the 100-year flood zone, Zone A (areas with a 1 percent annual chance of flooding). The remainder of the project site and survey area are within an Area of Minimal Flood Hazard (Zone X).

Jurisdictional hydrological features within the survey area are limited to the San Joaquin Marsh, which receives urban runoff from the San Diego Creek Watershed. Flows then return to the Upper Newport Bay, and ultimately the Pacific Ocean. The proposed project is not expected to result in any impacts to streambed/banks, Waters of the United States, or associated riparian vegetation (southern arroyo willow riparian forest) subject to CDFW, U.S. Army Corps of Engineers (Corps), or Regional Water Quality Control Board jurisdiction. Further, the project site is in an area subject to the Corps- and CDFW-regulated Special Area Management Plan. However, this project will not require a Watershed Streambed Alteration Agreement from the CDFW.

Because the proposed project is surrounded by previously disturbed and developed land, it would not have a substantial effect on wildlife movement (except potentially during construction) and impacts to wildlife corridors are not expected as a result of project implementation. However, project activities conducted between October 31 and August 31 will require pre-construction nesting bird surveys and the appropriate avoidance setbacks if active nests are found.

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
amsl	above mean sea level
BMP	Best Management Practices
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	U.S. Army Corps of Engineers
CRPR	California Rare Plant Rank
CWA	Clean Water Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FE	Federally-listed as endangered
FT	Federally-listed as threatened
HA	Hydrologic Area
HSA	Hydrologic Subarea
HU	Hydrologic Unit
IA	Implementation Agreement
ICMC	Irvine Campus Medical Complex
IPaC	Information for Planning and Conservation
Michael Baker	Michael Baker International
MBTA	Migratory Bird Treaty Act
MM	minimization measures
NRCS	Natural Resources Conservation Service
NWI	USFWS National Wetland Inventory
OHWM	Ordinary High Water Mark
Orange County NCCP/HCP	County of Orange Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan
project	Health Campus Hospital &Ambulatory Care Project
Regional Board	Regional Water Quality Control Board
SAMP	Special Area Management Plan
SE	State-listed as endangered
SSC	California Species of Special Concern
ST	State-listed as threatened
UCI	University of California, Irvine
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

USGS	U.S. Geological Survey

Section 1 Introduction

On behalf of the University of California, Irvine (UCI), Michael Baker International (Michael Baker) has prepared this Biological Resources Report for the proposed Health Campus Hospital & Ambulatory Care Project (project). This report describes the biological resources record searches and literature review, survey methodologies, and results of the general biological resources survey conducted within the survey area to determine the presence or potential occurrence of State-listed and/or Federally-listed as rare, threatened, or endangered, and other special-status plants, animals, and natural vegetation communities. A summary of areas subject to jurisdiction of the regulatory agencies is included. Details of a formal jurisdictional delineation are provided under a separate cover.

1.1 PROJECT LOCATION

The proposed project site is located within the UCI North Campus, approximately 0.4 mile east of State Route 73 and 2.5 miles south of Interstate 405, in the City of Irvine, Orange County, California (Figure 1, *Regional Vicinity*). Specifically, the survey area is depicted in Section 50 of Township 6 South, Range 9 West, of the U.S. Geological Survey (USGS) *Tustin, California* 7.5-minute topographic quadrangle map (Figure 2, *Project Vicinity*).

The survey area identified for the proposed project includes the proposed project site (composed of the permanent footprint and a 150-foot required development buffer along the San Joaquin Marsh) as well as a temporary laydown yard and a temporary parking area [Figure 3, *Survey Area*]. The survey area is inclusive of and bounded by Jamboree Road to the north, the remnant UCI Arboretum and existing Facilities Management and Distribution Services to the east, undeveloped (disturbed) areas to the west, and San Joaquin Marsh directly to the east. The UCI Arboretum is immediately adjacent to the project site, and although no portion of the UCI Arboretum is within the permanent development footprint, there are small portions of it that are within a temporary footprint for staging and parking. Portions of the San Joaquin Marsh riparian corridor are located within the survey area but would not be directly affected by the project. All areas within the survey area, including the San Joaquin Marsh, are owned by UCI.

1.2 PROJECT DESCRIPTION

The project site consists of 9.91 acres associated with the permanent development footprint and another 4.29 acres associated with temporary construction areas. An additional 2.66 acres is associated with the San Joaquin Marsh Development Buffer, an area that will not be directly impacted by the project but which is a required setback from the marsh. This buffer is located within the Corps- and CDFW-regulated Special Area Management Plan (SAMP) associated with the San Diego Creek Watershed, but other than avoidance, no further action is necessary. The proposed project consists of the construction of an Acute Hospital, Clinics and

Ambulatory Services Building, and Parking Structure immediately south of the proposed Center for Child Health/MOB Site (Irvine Campus Medical Complex or ICMC).

Work would occur during dry conditions. Best Management Practices (BMP) would be implemented to ensure water quality. Weather forecasts would be monitored during construction activities. If rainfall is predicted, soil stabilization and sediment controls would be established at all disturbed areas prior to the onset of rain. No construction activities would occur during a rain event.

8/23/2019 JN M:\Mdata\172571\GIS\MXD\Health Campus Bio\August 2019 Update\Fig 01 Regional Vicinity.mxd RP

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0 2.5 5 Miles

Source: ArcGIS Online, 2018

HEALTH CAMPUS HOSPITAL AND AMBULATORY CARE PROJECT
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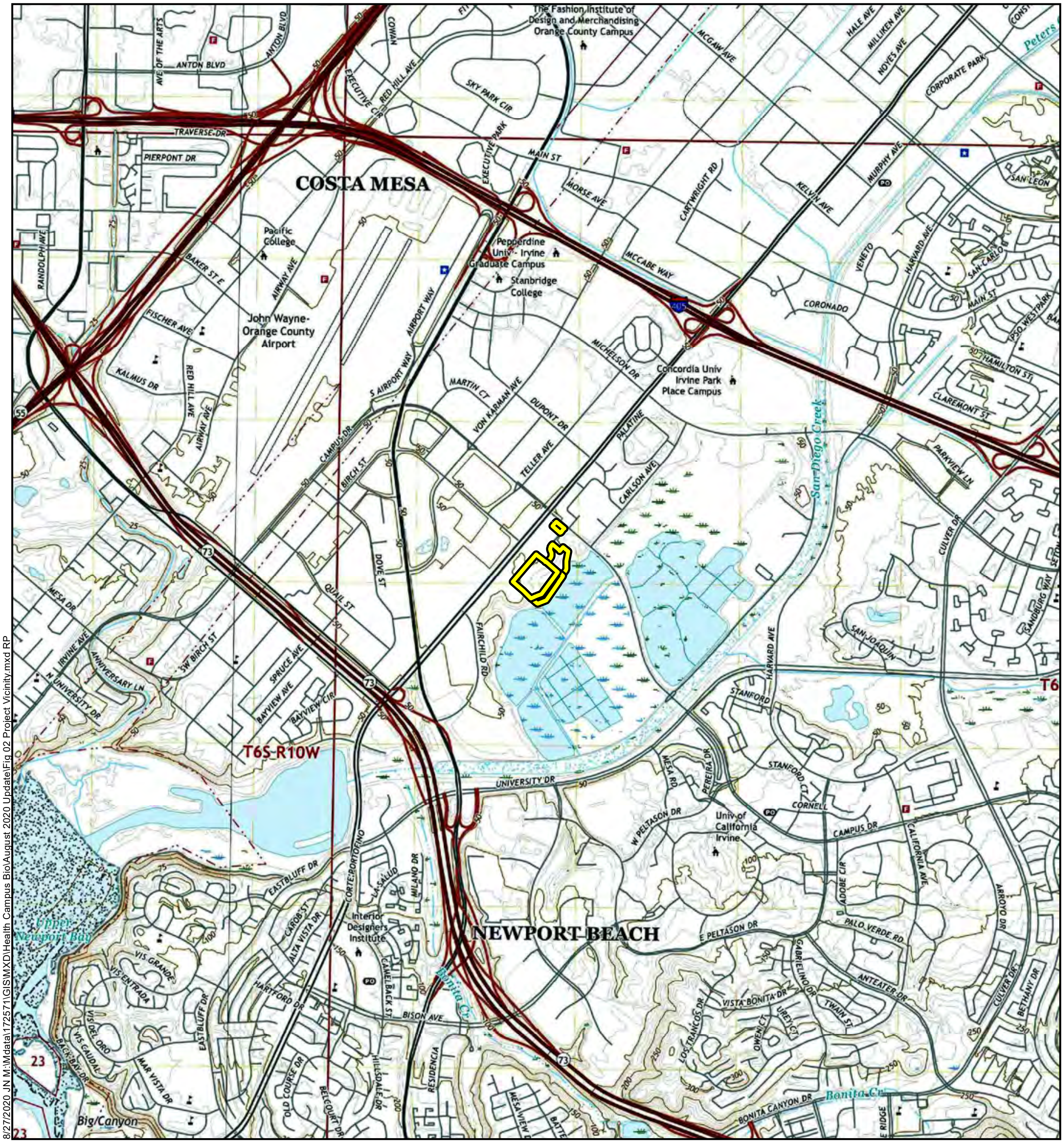
Regional Vicinity

Figure 1



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Legend

Survey Area

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0 0.25 0.5 Miles

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Project Vicinity

Source: USGS 7.5-Minute topographic quadrangle maps: *Tustin, California (2018) and Newport Beach, California (2018)*

Figure 2

Legend

- ICMC Project Site
- San Joaquin Marsh Development Buffer
- Laydown Area
- Temporary Parking Area
- Photograph Point and Direction

0 65 130 Feet

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Source: Eagle Aerial, 2014

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BIOLOGICAL RESOURCES REPORT

Survey Area

Figure 3

1.3 PURPOSE OF DOCUMENT

This report documents all biological resources identified within the survey area during a general biological resources survey and vegetation/land use mapping. Further, this report includes an analysis of the potential for the survey area to support special-status plant and animal species and special-status vegetation communities that are subject to provisions of the Federal Endangered Species Act of 1973 (FESA), Migratory Bird Treaty Act (MBTA), California Endangered Species Act (CESA), California Fish and Game Code (CFGC), California Native Plant Protection Act, Bald and Golden Eagle Protection Act, and other local policies and ordinances protecting biological resources.

This report also addresses the County of Orange Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan (Orange County NCCP/HCP), including a suitability assessment of the habitats on-site to support the three (3) "Target Species" – coastal California gnatcatcher (*Polioptila californica californica*), a Federally-listed as threatened species (FT) and California Species of Special Concern (SSC), coastal cactus wren (*Campylorhynchus brunneicapillus*; SSC), and orange-throated whiptail (*Aspidoscelis hyperythra*; SSC) – and thirty-six (36) other "Identified Species." The Orange County NCCP/HCP specifies that the populations of the target species shall be subject to long-term monitoring and that these taxa shall be treated as if they were listed under the FESA and/or CESA.

Section 2 Methodology

2.1 LITERATURE REVIEW AND DATABASE SEARCHES

Prior to conducting the field work, Michael Baker researched the environmental setting of the survey area, such as regional and local geography, land use, climate, and watershed. Further, Michael Baker conducted a 4-quadrangle search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) RareFind 5 (CDFW, Biogeographic Data Branch 2019) and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2019) and generated a Species and Resources List queried from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) online system (USFWS 2019a). These sources helped to identify special-status plant and wildlife species, vegetation communities, and other biological resources that have been previously documented within, near, and/or have the potential to occur within the survey area.

The *Special Animals List* (CDFW 2018a) and the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2018b) were reviewed for the current status designations of rare and endangered plant and wildlife species. Other resources reviewed include the CNPS California Rare Plant Rank (CRPR) System; recent aerial photography (Google Earth Pro 2019); the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) *Soil Survey of the Los Angeles County, California, Southeastern Part* (USDA, NRCS 2019); the National Hydric Soils List (USDA, NRCS 2015); and the USFWS National Wetland Inventory (NWI) (USFWS 2019b).

2.2 GENERAL BIOLOGICAL RESOURCES SURVEYS

Following the database searches, on April 11, 2019, Michael Baker biologists Dan Rosie and Stephen Anderson conducted a general biological resources survey of the entire survey area between the hours of 0900 and 1130, with weather conditions consisting of temperatures ranging from approximately 58 to 68 degrees Fahrenheit (°F), winds approximately 1 to 5 miles per hour, and approximately 50 percent high cloud cover. In addition, a second survey was conducted by Michael Baker biologist Stephen Anderson and regulatory specialist Timothy Tidwell on August 20, 2019. The surveys were conducted to document existing site conditions and biological resources, and to evaluate habitat with the potential to support various special-status plant and wildlife resources, including jurisdictional aquatic or other hydrological features, if present. Representative photographs of the survey area are provided at the end of this report in Appendix A, *Site Photographs*. Figure 3 provides the location and direction from which each photograph was taken.

2.2.1 Vegetation/Land Use Mapping and Plant Species Inventory

Classification of the on-site vegetation communities and other land uses is based on the descriptions provided in the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), with modifications to better represent existing conditions in the field using the *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008), an expanded vegetation classification system based on Holland (1986). Plant species nomenclature and taxonomy follow *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al. 2012). All plant species encountered were noted and identified at minimum to the lowest possible taxonomic level necessary to determine rarity. For a complete list of plant species observed on-site, refer to Appendix B, *Plant and Wildlife Species Observed List*.

2.2.2 General Wildlife Observations

Wildlife identification and nomenclature followed standard references, including The American Ornithologists' Union *Checklist of North and Middle American Birds* (American Ornithologists' Union 2016), the *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, With Comments Regarding Confidence In Our Understanding* (Crother 2012), and *Mammals of North America, Second Edition* (Kays and Wilson 2009). All wildlife observed and/or otherwise detected through sign (e.g., tracks, scat) were recorded. Other wildlife may occupy the site but are not easily detectable during the day (i.e., nocturnal) and without extensive survey efforts during the appropriate season, in addition to several species being transient and potentially occupying the site other times of the year. For a complete list of wildlife species observed or otherwise detected on-site, refer to Appendix B.

2.3 SURVEY LIMITATIONS

This Biological Resources Report has been performed to meet professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation that was performed is limited by the scope of work performed. Biological surveys conducted as part of this assessment were not necessarily performed during a particular blooming period, nesting period, or particular portion of the season when positive identification of specific special-status resources would be expected if present. The biological surveys conducted for this report are also limited by the environmental conditions present within the survey area at the time of the field work. In addition, even negative biological surveys do not guarantee that target organisms are not present or will not be discovered in the future within a given area. Although Michael Baker's field studies were based on current industry practices, industry practices change over time as new methods are refined and certain practices may not be applicable in the future. No other guarantees or warranties, expressed or implied by this report or the work that Michael Baker has performed, are provided.

The findings and opinions expressed in this report are based on site reconnaissance, a review of the online databases of special-status resource records including the CNDDB RareFind 5 and

CNPS Online Inventory, and Michael Baker's professional expertise. The accuracy of online databases may vary. For example, the CNDDB is compiled from observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys, and only includes positive data results; negative results are not reflected. Although Michael Baker believes the data sources that it has used in the preparation of this report are reasonably reliable, Michael Baker cannot and does not guarantee the authenticity or reliability of these data sources, although they are considered well-known and are part of standard industry use. Additionally, pursuant to the terms and limitations of our contract, the data sources reviewed in the preparation of this report and its investigation included only those that are practically reviewable without the need for extensive research and analysis.

Section 3 Existing Conditions

The following is a summarization of the results of the database searches and biological resources surveys. Discussions regarding the general environmental setting, vegetation communities and other land uses present, and plant and animal species observed are presented below. Representative photographs of the survey area are provided in Appendix A, and a complete list of all the plant and animal species observed on-site during the surveys is provided in Appendix B.

3.1 ENVIRONMENTAL SETTING

The project site is located within the Southwestern California region of the California Floristic Province, at the UCI North Campus. The northeastern portion of the survey area primarily consists of developed areas and ornamental plantings associated with the existing UCI Facilities Management and Distribution Services and the UCI Arboretum, although some patches of coastal sages scrub are present. The southern boundary of the survey area includes a portion of the southern arroyo willow riparian forest that is the lateral northwestern extent of the San Joaquin Marsh. The western portion of the survey area consists of highly disturbed areas, with a strip of intact coastal sage scrub along the moderate slopes at the southern end.

3.1.1 Climate

The survey area, located at the UCI North Campus in the City of Irvine, California, has a climate characterized as Mediterranean, with cool, mild winter rains and hot, dry summers. The Irvine area is generally hot and dry through most of the year, with highs averaging approximately 79 °F in the summer and lows averaging 48 °F in the winter. Average annual precipitation for the Irvine, California, area is approximately 14 inches (U.S. Climate Data 2019).

3.1.2 Watershed

The project site is located within the Santa Ana River Watershed (Hydrologic Unit Code 18070204), Santa Ana River Hydrologic Unit (HU 801.00), Lower Santa Ana River Hydrologic Area (HA 801.10), and East Coastal Plain Hydrologic Subarea (HSA 801.11) of the Water Quality Control Plan for the Santa Ana River Basin (Region 8). The Santa Ana River HU is a roughly rectangular-shaped area of approximately 154 square miles, extending from the Santiago Canyon foothills on the east to the Pacific Ocean on the west, and from the City of Orange on the north to the City of Lake Forest on the south. The unit includes the Cities of Irvine, Tustin, Orange, Newport Beach, Santa Ana, Costa Mesa, and Lake Forest. Waters from the survey area are eventually conveyed to San Diego Creek, Upper Newport Bay, and ultimately the Pacific Ocean. Further, the project site is located within the San Diego Creek Watershed that is subject to the Corps- and CDFW-regulated SAMP.

Michael Baker searched the Federal Emergency Management Agency (FEMA) – 100 Year Flood Zones for flood data within the project site (ArcGIS 2019). According to FEMA, the southeastern portion of the survey area and portions of the project site are located within the 100-year flood zone, Zone A (areas with a 1 percent annual chance of flooding).

It should be noted that the project site is not located within the Coastal Zone regulated by the California Coastal Commission pursuant to the California Coastal Act.

3.2 TOPOGRAPHY AND SOILS

The general area that the project site is situated in is characterized primarily by flat area and gentle slopes, with moderate slopes in the southeast leading towards the San Joaquin Marsh. Surface elevations within the survey area vary between approximately 55 feet above mean sea level (amsl) along the northwestern boundary of the survey area along Jamboree Road to approximately 10 feet amsl at the southeastern end of the survey area at San Joaquin Marsh.

On-site and adjoining soils were reviewed prior to the field visit using the USDA, NRCS Web Soil Survey (USDA, NRCS 2019). Mapped soils within the project site and survey area primarily include Alo clay, 9 to 15 percent slopes (Map Unit Symbol: 100), with Tidal Flats (211) within the survey area along the southeastern boundary as associated with the San Joaquin Marsh (refer to Figure 4, *USDA Soils*).

Michael Baker then reviewed the National Hydric Soils List (USDA, NRCS 2015) to identify soils mapped within the survey area that are considered to be hydric. According to the soils list, Alo clay, 9 to 15 percent slopes, is not considered hydric; however, Tidal Flats are considered hydric. Soil textures identified on-site were generally consistent with those mapped by the *Soil Survey of the Los Angeles County, California, Southeastern Part* (USDA, NRCS 2019), with the soil textures consisting of clay and silty clay.

3.3 VEGETATION COMMUNITIES AND OTHER LAND USES

Four (4) natural plant communities and four (4) other land uses were identified within the survey area during the field surveys. Vegetation classification was based on Holland (1986), and modifications were made based on Oberbauer et al. (2008). A complete list of plant species observed during the surveys is provided in Appendix B. A map that illustrates the extent of each vegetation community/land use is presented as Figure 5, *Vegetation Communities and Other Land Uses*. Table 1 provides the acreages of the mapped classifications observed within the survey area, broken down by project site components and the San Joaquin Marsh Development Buffer, each discussed in detail below.

Legend

- ICMC Project Site
- San Joaquin Marsh Development Buffer
- Laydown Area
- Temporary Parking Area
- 100 — Alo clay, 9 to 15 percent slopes
- 211 — Tidal flats

0 65 130 Feet

8/27/2020 JN M:\data\t7257\GIS\MXD\Health Campus BioAugust 2020 Update\Fig 04 USDA Soils.mxd RP

Source: Eagle Aerial, 2014, USDA, 2016

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USDA Soils

Figure 4

Legend

- ICMC Project Site
- San Joaquin Marsh Development Buffer
- Laydown Area
- Temporary Parking Area
- Southern Arroyo Willow Riparian Forest (0.18 acre)
- CSS (1.04 acres)
- CSS Restoration (0.15 acre)
- Disturbed CSS (0.03 acre)
- Disturbed (11.71 acres)
- Ornamental (1.19 acres)
- Developed (2.57 acres)

0 65 130 Feet

8/27/2020 JN M:\Data\17257\GIS\MXD\Health Campus BioAugust 2020Update\Fig 05 Vegetation Communities and Other Land Uses.mxd RP

Source: Eagle Aerial, 2014

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Vegetation Communities and Other Land Uses

Figure 5

Table 1: Vegetation Communities/Land Uses within the Survey Area

Vegetation Community/Land Use (Holland/Oberbauer Code)	ICMC Project Site (Permanent Impact)	Laydown Area and Parking Area (Temporary Impact)	San Joaquin Marsh Development Buffer (No Impact)	Total*
Southern Arroyo Willow Riparian Forest (61320)	0.00	0.00	0.18	0.18
Coastal Sage Scrub (32500)	0.00	0.05	0.99	1.04
Restored Coastal Sage Scrub	0.00	0.15	0.00	0.15
Disturbed Coastal Sage Scrub	0.00	0.03	0.00	0.03
Disturbed (12000)	8.35	1.87	1.49	11.63
Ornamental (12000)	0.18	1.00	0.00	1.18
Developed (12000)	1.38	1.19	0.00	2.57
TOTAL*	**9.91**	**4.29**	**2.66**	**16.86**

* Totals may not equal to sum due to rounding.

Southern Arroyo Willow Riparian Forest

A portion of the southern arroyo willow riparian forest situated along the fringes of the San Joaquin Marsh is located within the survey area. This vegetation community on-site is dominated by black willow (and (*S. gooddingii*), with scattered individuals of arroyo willow (*Salix lasiolepis*) and mule fat (*Baccharis salicifolia*). The understory is dominated by willow dock (*Rumex salicifolius*). Poison hemlock (*Conium maculatum*) and California rose (*Rosa californica*) dominate the banks surrounding the marsh, extending the riparian limits where tree canopy is limited.

Coastal Sage Scrub

A strip of relatively intact coastal sage scrub is present at the southern end of the survey area within the San Joaquin Marsh Development Buffer. Another small patch is located within the temporary laydown area. Dominant plants include California encelia (*Encelia californica*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), California buckwheat (*Eriogonum fasciculatum*), coast prickly pear (*Opuntia littoralis*), and bladderpod (*Peritoma arborea*). Patches of both disturbed coastal sage scrub and restored coastal sage scrub area located within the temporary laydown area and are directly associated with the UCI Arboretum.

Disturbed

Disturbed areas are lands that are frequently and repeatedly disturbed, and thereby often compacted and dominated by opportunistic, primarily non-native species that often limit the reestablishment of native vegetation. This also includes areas of bare ground consisting of an existing dirt access road that is maintained and/or compacted, thereby precluding vegetation from establishing. Dominants within this non-native vegetation community on-site primarily include

black mustard (*Brassica nigra*), poison hemlock, whitestem filaree (*Erodium moschatum*), artichoke thistle (*Cynara cardunculus*), soft chess (*Bromus hordeaceus*), and foxtail barley (*Hordeum murinum*).

Ornamental

Ornamental vegetation consists of landscaped, irrigated, and/or maintained trees, shrubs, and ground cover. Mapped primarily throughout and surrounding developed areas, species present include, but are not limited to, western sycamore (*Platanus racemosa*), lemon scented gum (*Eucalyptus citriodora*), carrotwood (*Cupaniopsis anacardioides*), Brazilian pepper tree (*Schinus terebinthifolius*), pine trees (*Pinus* sp.), and locust (*Robinia* sp.). Also mapped as ornamental within the survey area are all remnant arboretum species present. Although the majority of these individuals are endangered species from around the world, none are either native or natural to this region.

Developed

Developed land within the survey area consists of the paved portions of the roadways and the development and infrastructure associated with existing UCI North Campus facilities.

3.4 GENERAL WILDLIFE OBSERVATIONS

Due to the disturbed nature of the survey area, including surrounding developments, habitat within the survey area supports a limited variety of wildlife species. Species common to native and disturbed vegetation communities described above that were observed during the surveys include, but are not limited to, house finch (*Haemorhous mexicanus*), common yellowthroat (*Geothlypis trichas*), lesser goldfinch (*Spinus psaltria*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), Bewick's wren (*Thryomanes bewickii*), and northern mockingbird (*Mimus polyglottos*). A complete list of wildlife species observed during the surveys is provided in Appendix B.

Section 4 Special-Status Biological Resources

The following section discusses the potential for special-status plant and wildlife species and special-status vegetation communities to occur within the survey area. 'Potential to occur' is based on the presence or absence of suitable habitat for each special-status species evaluated, as well as the general ecological requirements for each species and known occurrences within, and/or within the vicinity of, the survey area. All CNDDB occurrences documentation of special-status species and vegetation communities, including USFWS-designated Critical Habitats, within a 5-mile radius of the survey area are shown in Figure 6, *Special-Status Species/Habitat Documented within a 5-mile Radius*. An evaluation of the potential for each species identified in the database records search to occur on-site is presented in Appendix C, *Special-Status Species Table*.

4.1 SPECIAL-STATUS SPECIES

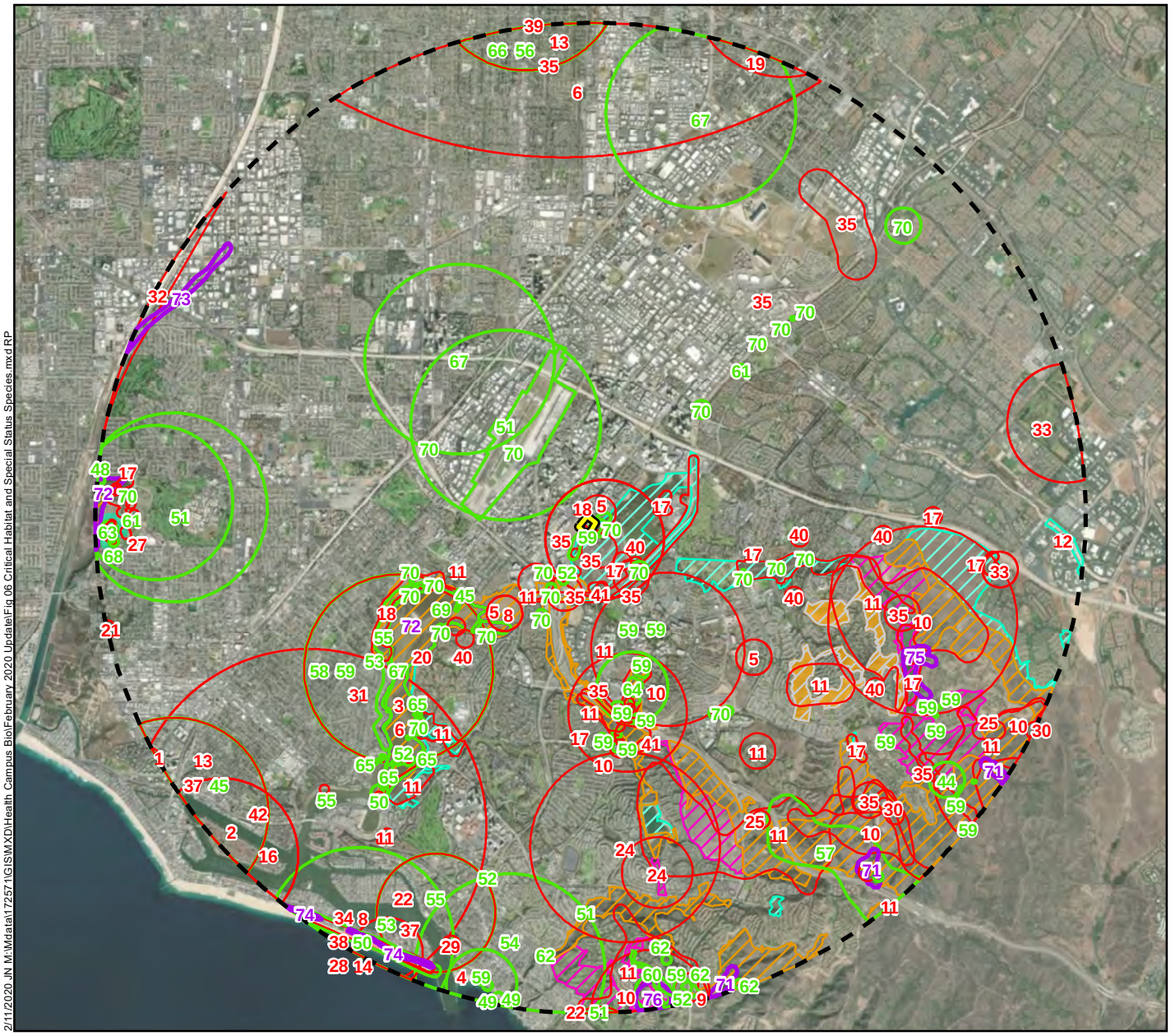
The results of the database record searches (4-quadrangle search of the CNDDB RareFind 5 and CNPS Online Inventory; and query of the USFWS IPaC online system) revealed documented occurrences for a total of forty-five (45) special-status plant species and a total of forty-seven (47) special-status wildlife species. Several of the special-status species with documented occurrences were evaluated by Michael Baker as having a "Low" or "Not Expected" potential for occurrence and are therefore not discussed further. Species determined to have a "Moderate" or "High" potential for occurring, and those observed on-site during the surveys, warrant further discussion.

No special-status plant species were observed during the surveys. Two (2) special-status wildlife species were observed during the surveys, coastal California gnatcatcher (FT/SSC) and least Bell's vireo (*Vireo bellii pusillus*; Federally-listed as endangered [FE]/State-listed as endangered [SE]). No other special-status wildlife species were observed during the surveys.

Further, based on the literature review/database searches and on-site habitat suitability assessments, Michael Baker determined that the survey area contains suitable habitat with a moderate or high potential to support one (1) special-status plant species and three (3) other special-status wildlife species.

4.1.1 Special-Status Plant Species

No special-status plant species were observed during the surveys. Of the forty-five (45) special-status plant species documented within the 4-quadrangle search, many-stemmed dudleya (*Dudleya multicaulis*; CRPR 1B.2) was determined to have a moderate potential to occur within the survey area. All other special-status plant species were determined to have a low potential or are not expected to occur within the survey area due to a lack of suitable habitat on-site or the project being outside of the species' known distribution range.



Legend

- Project Site
- 5-mile Radius Buffer

Special Status Resources

- Animal
- Plant
- Vegetation Community

NCCP/HCP

- Existing Use
- Non-Reserve Open Space
- Reserve
- Special Linkage

Critical Habitat

- Coastal California gnatcatcher
- San Diego fairy shrimp
- Western snowy plover

ID	Animal	ID	Animal	ID	Animal	ID	Plant	ID	Plant	ID	Vegetation Community
1	American badger	14	globose dune beetle	28	sandy beach tiger beetle	44	Allen's pentachaeta	57	intermediate mariposa-lily	71	Southern Coast Live Oak Riparian Forest
2	bank swallow	15	grasshopper sparrow	29	southern California legless lizard	45	aphanisma	58	Los Angeles sunflower	72	Southern Coastal Salt Marsh
3	Belding's savannah sparrow	16	hoary bat	30	southern California rufous-crowned sparrow	46	California Orcutt grass	59	many-stemmed dudleya	73	Southern Cottonwood Willow Riparian Forest
4	big free-tailed bat	17	least Bell's vireo	31	southern California saltmarsh shrew	47	chaparral ragwort	60	mesa horkelia	74	Southern Foredunes
5	burrowing owl	18	light-footed Ridgway's rail	32	steelhead - southern California DPS	48	chaparral sand-verbena	61	mud nama	75	Southern Sycamore Alder Riparian Woodland
6	California black rail	19	Mexican long-tongued bat	33	tricolored blackbird	49	cliff spurge	62	Nuttall's scrub oak	76	Valley Needlegrass Grassland
7	California horned lark	20	mimic tryonia	34	western beach tiger beetle	50	coast woolly-heads	63	prostrate vernal pool navarretia		
8	California least tern	21	monarch	35	western mastiff bat	51	Coulter's goldfields	64	Robinson's pepper-grass		
9	coast horned lizard	22	orange-throated whiptail	37	western snowy plover	52	Coulter's saltbush	65	salt marsh bird's-beak		
10	coastal cactus wren	23	osprey	38	western tidal-flat tiger beetle	53	Davidson's saltscale	66	salt spring checkerbloom		
11	coastal California gnatcatcher	24	Pacific pocket mouse	39	western yellow-billed cuckoo	54	decumbent goldenbush	67	San Bernardino aster		
12	Cooper's hawk	25	red-diamond rattlesnake	40	white-tailed kite	55	estuary seablite	68	San Diego button-celery		
13	Crotch bumble bee	26	Riverside fairy shrimp	42	yellow rail	56	Gambel's water cress	69	south coast saltscale		
		27	San Diego fairy shrimp	43	yellow warbler			70	southern tarplant		
				41	yellow-breasted chat						

HEALTH CAMPUS HOSPITAL AND AMBULATORY CARE PROJECT
BIOLOGICAL RESOURCES REPORT

Special-Status Species/Habitat Documented within a 5-mile Radius

Michael Baker INTERNATIONAL

0 1 2 Miles

Source: Esri, USFWS, 2019

Figure 6

Many-stemmed dudleya: This perennial herb species is known to occur on heavy, often clayey soils or grassy slopes in chaparral, coastal scrub, and valley and foothill grassland habitats. Clay soils in coastal sage scrub is marginally present within the survey area. This species was transplanted into the survey area and immediate surrounding area on the bluffs overlooking the San Joaquin Marsh Reserve in 2003 and may be present within the survey area or project site. It was not observed by Michael Baker biologists during general field surveys, but due to dense mustard conditions, a 100%-coverage inventory of on-site plant species was not performed. Therefore, there is still a moderate potential for this species to occur within the survey area in areas with dense overhanging vegetation. It should be noted that although this species was designated as a "species of interest" or "special interest species" in the Orange County NCCP/HCP potentially eligible for future coverage, many-stemmed dudleya has not been added to the list of covered species and therefore does not receive any regulatory coverage for take under the Orange County NCCP/HCP's take permits if present (Sulentich personal communication 2020).

4.1.2 Special-Status Wildlife Species

Two (2) special-status wildlife species were observed during the surveys, coastal California gnatcatcher (FT/SSC) and least Bell's vireo (FE/SE). Of the forty-seven (47) special-status wildlife species documented within the 4-quadrangle search, orange-throated whiptail (SSC), western pond turtle (*Emys marmorata*; SSC), and western mastiff bat (*Eumops perotis californicus*; SSC) were also determined to a have a moderate potential to occur within the survey area. All other special-status wildlife species were determined to have a low potential or are not expected to occur within the survey area due to a lack of suitable habitat on-site. Although it is one of the three "target species" of the Orange County NCCP/HCP, there is no suitable habitat on-site for coastal cactus wren and it is not expected to occur within the survey area.

Orange-throated whiptail: This reptile species is known to inhabit low-elevation coastal scrub, chaparral, and cismontane woodlands, often found on the edge of intact vegetation and disturbed areas. A strip of mature coastal sage scrub surrounded by disturbed areas is present within the San Joaquin Marsh Development Buffer, as well as small patches of coastal sage scrub located in the laydown area. However, the nearest occurrence for orange-throated whiptail is approximately 4 miles to the south. Therefore, there is a moderate potential for this species to occur within the survey area. This species is fully covered for take under the Orange County NCCP/HCP (R.J. Meade 1996) and no additional action is required as long as the project is in compliance with take permit conditions.

Western pond turtle: This reptile species is usually found basking near ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Although no open waters were observed within the survey area, the southern arroyo willow riparian forest located along the southeastern boundary of the survey area provides limited basking opportunities adjacent to the freshwater marsh and open waters of the San Joaquin Marsh. Further, the nearest occurrence is documented

less than 0.2 mile south of the survey area, where this species is known to have a large population in the San Joaquin Marsh. Therefore, there is a moderate potential for this species to bask and nest along the southern and eastern edges of the survey area. This species is not covered under the Orange County NCCP/HCP (R.J. Meade 1996), but the project site does not contain any aquatic habitat and the on-site habitat in the project site is also not suitable for nesting, as this species typically requires areas with sparse vegetation and no overstory (Bettelheim 2005). The project site closest to the San Joaquin Marsh is characterized as disturbed habitat that has a dense coverage of weeds and non-native species, with nearby dense stands of tall black mustard. Therefore, if present within the survey area, this species is unlikely to be present away from the southern and eastern edges, where it would not be directly impacted by the project.

Western mastiff bat: Primarily a cliff-dwelling species, this mammal species occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. It roosts on cliff faces, high buildings, trees, and tunnels. Marginally suitable roosting habitat (tall buildings and trees) is present within the survey area. However, the nearest occurrence is adjacent to (east of) the survey area. Therefore, there is a moderate potential for this species to roost within the survey area. This species is not covered under the Orange County NCCP/HCP (R.J. Meade 1996) and may roost in adjacent areas but based on the boundaries of the project site would not be expected to roost within the area proposed for construction.

4.2 SPECIAL-STATUS VEGETATION COMMUNITIES

The CNDDB 4-quadrangle records search revealed a total of seven (7) special-status vegetation community documented within the vicinity of the project site: Southern Coast Live Oak Riparian Forest, Southern Coastal Salt Marsh, Southern Cottonwood Willow Riparian Forest, Southern Dune Scrub, Southern Foredunes, Southern Sycamore Alder Riparian Woodland, and Valley Needlegrass Grassland. None of these specific vegetation communities occur within the survey area.

Two (2) other special-status vegetation communities not recorded within the 4 quadrangles by CNDDB were observed on-site: southern arroyo willow riparian forest and coastal sage scrub. San Joaquin Marsh habitat within the survey area was mapped by the USFWS NWI as Freshwater Forested/Shrub Wetland, but more specifically as PFO/SSA (Palustrine, Forested, Scrub-Shrub, Temporary Flooded). The southern arroyo willow riparian forest is subject to jurisdiction of the regulatory agencies. Coastal sage scrub is considered a “rare and worthy of consideration” vegetation community by CDFW due to loss and fragmentation along the foothills in southern California. The Orange County NCCP/HCP primarily focuses on the protection of coastal sage scrub and the organisms that depend on it for continued survival (R.J. Meade 1996). No other special-status vegetation communities were observed within the survey area.

4.3 JURISDICTIONAL HYDROLOGICAL FEATURES

Jurisdiction hydrological features were not observed throughout the majority of the survey area. One (1) jurisdictional feature is present within the survey area, mapped as the southern arroyo willow riparian forest located along the fringes of the San Joaquin Marsh.

Within the survey area, the jurisdictional feature (San Joaquin Marsh) consists of a fairly open riparian canopy and relatively dense, herbaceous understory. Inundation occurs within the survey area when rainfall and groundwater totals exceed the capacity of the adjacent freshwater marsh to the southeast during storm events. The Ordinary High Water Mark (OHWM) was delineated by identifying the extent of the present wetland hydrology Primary Indicator, Water-Stained Leaves (B9). Streambanks within the survey area are all exceeded by riparian vegetation. Most areas within the OHWM of this jurisdictional feature within the survey area meet the criteria for Corps wetland Waters of the U.S. (WoUS) and are considered wetland WoUS. Within the survey area, the outer limits of the riparian vegetation (due to all active banks being exceeded) constitutes the limits of CDFW jurisdictional streambed, banks, and associated riparian vegetation.

For details regarding the results of the jurisdictional delineation, refer to the *Jurisdictional Delineation Report* prepared by Michael Baker under a separate cover.

4.4 NESTING BIRDS AND WILDLIFE MOVEMENT

The survey area currently provides habitats suitable to provide nesting opportunities for various bird species. Small mammals are likely to use the survey area for foraging. Other ground-moving wildlife tolerant of disturbed native habitats may utilize the survey area to forage, breed, disperse, and establish new residents. The San Joaquin Marsh located partially within and east of the survey area provides the most potential for supporting wildlife movement through the area, with patches of coastal sage scrub in the southern and eastern portions of the survey area that may provide additional, but limited cover. Jamboree Road and Campus Drive pose the largest threat to these species, having a potential to result in mortalities caused by passing motorists.

4.5 CRITICAL HABITAT

The survey area is not located within any USFWS-designated Critical Habitat. The nearest Critical Habitat is located over 2 miles to the east, designated for coastal California gnatcatcher (FT/SSC).

4.6 LOCAL POLICIES AND ORDINANCES

4.6.1 Orange County NCCP/HCP

The Orange County NCCP/HCP is a comprehensive, multi-jurisdictional habitat conservation plan focusing on conservation of species and their associated habitats in Orange County (R.J. Meade 1996). The Orange County NCCP/HCP focuses on protection of coastal sage scrub habitat and

three designated “Target Species”: the coastal California gnatcatcher (FT/SSC), coastal cactus wren (SSC), and orange-throated whiptail (SSC). A reserve area was created to meet the ecological requirements of these three (3) species and thirty-six (36) other “Identified Species,” with the understanding that the three target species would serve as “surrogates” for the broader suite of organisms that depend upon coastal sage scrub for their continued survival in the Orange County NCCP/HCP planning area. The Implementation Agreement (IA) satisfies the State and Federal mitigation requirements for designated development and adequately provides for the conservation and protection of 39 species and their habitats identified in the Orange County NCCP/HCP.

Specifically, the survey area is located within the Coastal Subarea of the Orange County NCCP/HCP and is subject to the requirements and provisions set forth in the Orange County NCCP/HCP, which specifies that the populations of the target species shall be subject to long-term monitoring and that these taxa shall be treated as if they were listed under CESA/FESA. Refer to Appendix C for special-status species known to (or that have the potential to) occur within the survey area and surrounding vicinity, and that are covered by the Orange County NCCP/HCP.

The survey area is not located within the NCCP Reserve and is not a designated Special Linkage or Existing Use Area. All impacts would occur to non-native/disturbed habitat mapped in Figure 5 as Disturbed. Under the Orange County NCCP/HCP, the USFWS can require focused surveys for least Bell’s vireo in areas of their choosing should planned activities affect suitable habitat for this species. Although least Bell’s vireo was found within the survey area, it was not within the project site and there is no suitable habitat within the project site; direct project impacts to least Bell’s vireo or its habitat, other than those related to indirect construction impacts (e.g., noise, dust) would not be expected. As such, other than implementation of BMPs and general compliance with standard environmental regulations such as those pertaining to protection of nesting birds, no additional mitigation is expected under the Orange County NCCP/HCP.

4.6.2 City of Irvine Tree Removal Ordinance

Any public trees in the right-of-way of public streets, public trees located in and around public parks and other public facilities, trees in common areas located in village edges and landscape or parking lot setbacks on arterial streets, trees in eucalyptus windbreaks or any tree included in a remnant of a eucalyptus windbreak, and private trees on nonresidential properties to the extent Zoning Ordinance requirements are affected are within jurisdiction of the City. However, the University of California is an autonomous state agency and is not subject to the City of Irvine’s regulations on tree removal. It is expected that a total of fifty (50) trees would be removed from the Arboretum during construction.

Section 5 Conclusions and Recommendations

The following discusses the possible adverse impacts to biological resources that may occur from implementation of the proposed project and recommends minimization measures (MM) to be incorporated into the project as necessary to reduce impacts to a less than significant level.

Direct impacts include the construction of the new buildings and associated facilities as well as the use of temporary laydown and parking areas as described in Section 1.2 above. Direct impacts are both temporary and permanent. Indirect effects as a result of constructing the proposed project include, but are not limited to, noise, lighting, dust, and potential off-site sedimentation. Due to the overall low-impact of the proposed development and the disturbed nature of the project site, and proper installation and maintenance of BMP implements, the potential for adverse indirect effects is considered low.

5.1 SPECIAL-STATUS SPECIES

No special-status plant species were observed during the surveys. Two (2) special-status wildlife species were observed during the surveys. Michael Baker determined that the survey area contains suitable habitat for one (1) special-status plant species and three (3) other special-status wildlife species. Therefore, a total of six (6) special-status species listed below in Table 2 were either observed on-site or have a moderate to high potential to occur within the survey area.

Table 2: Special-Status Species Present or Potentially Present

Special-Status Species	Status	Potential for Occurrence
Plant		
many-stemmed dudleya	CRPR 1B.2	Moderate potential to occur on-site.
Birds		
coastal California gnatcatcher	FT / SSC	Observed present within the project site. Moderate potential to nest within the project site.
least Bell's vireo	FE / SE	Observed present adjacent to the survey area within the San Joaquin Marsh. Moderate potential to nest within the survey area (development buffer), but not the project site.
orange-throated whiptail	SSC	Moderate potential to occur within the project site.
western mastiff bat	SSC	Moderate potential to roost within the project site.
western pond turtle	SSC	Moderate potential to bask and nest within the survey area (development buffer).

5.1.1 Special-Status Plant Species

Federally- and/or State-listed plant species known to occur within the region of the survey area are not covered for take under the Orange County NCCP/HCP, with the exception of Laguna

Beach dudleya (*Dudleya stolonifera*; FT/State-listed as threatened [ST]), which is not expected to occur on-site. Other Federally- and/or State-listed plant species – such as salt marsh bird's-beak (*Chloropyron maritimum* ssp*. maritimum*; FE/SE), San Diego button-celery (*Eryngium aristulatum var. parishii*; FE/SE), Gambel's water cress (*Nasturtium gambelii*; FE/ST), and California Orcutt grass (*Orcuttia californica*; FE/SE) that are not expected to occur on-site would be subject to "take" only under the provisions of FESA and/or CESA, respectively. Refer to Appendix C, *Special-Status Species Table*.

Proposed impacts to special-status species with a CRPR 1 or 2 requires California Environmental Quality Act (CEQA) disclosure and although they warrant no legal protection, a lead agency may require mitigation in the form of off-site preservation or translocation, for example, if not covered by the Orange County NCCP/HCP. Impacts to CRPR 3 and 4 species are not considered significant under CEQA and warrant no legal protection but may simply require CEQA disclosure. In the case of many-stemmed dudleya, this species was transplanted into the general survey area and surrounding area in 2003. Refer to Appendix C, *Special-Status Species Table*, for a list of special-status species known to occur within the vicinity of the survey area, and their potential to occur on-site. With the implementation of MM BIO-1, impacts to special-status plant species would be less than significant.

Minimization Measures

MM BIO-1: Prior to construction, a qualified botanist shall conduct a focused rare plant survey within the survey area to confirm absence of special-status plant species, particularly but not limited to many-stemmed dudleya. The surveys shall be floristic in nature (i.e., identifying all plant species to the taxonomic level necessary to determine rarity), and shall be inclusive of, at a minimum, areas proposed for disturbance.

The results of the survey shall be provided to the County of Orange. If special-status plant species are found within the areas proposed for disturbance that are not already covered under the Orange County NCCP/HCP, measures to minimize impacts shall be implemented and, if impacts cannot be avoided and mitigation is required, it will be provided to ensure CEQA compliance. The surveys and reporting shall follow 2018 CDFW and/or 2001 CNPS guidelines.

5.1.2 Special-Status Wildlife Species

The proposed project has the potential to directly affect one (1), and indirectly affect another (1) of the thirty-nine (39) Orange County NCCP/HCP "Target and Identified" Species. A coastal California gnatcatcher (FT/SSC) was observed foraging within the intact coastal sage scrub located at the southern end of the survey area. This area is outside of the project site and will not be directly affected by the project. Other than construction noise and visual disturbance, no direct impacts to coastal California gnatcatcher would be expected as a result of the proposed project's

permanent footprint. Although not incidentally observed in this area during project-related field surveys, coastal California gnatcatcher could still occur in the coastal sage scrub located in the Arboretum, where a temporary laydown area is planned and where up to 0.23 acre of coastal sage scrub may be temporarily impacted. The total patch of coastal sage scrub within the Arboretum is relatively small and is isolated by development to the north and east, riparian habitat and grasslands to the south, and disturbed areas to the west. At approximately 3.5 acres total, it is smaller than the average territory size for gnatcatcher pairs along the coast (5.7 acres), but the entire area could still be used by a single gnatcatcher pair, if present (Atwood and Bontrager 2020). Any birds that may be present would be unlikely to be actively using the extreme edge of the patch where the laydown area is proposed, and would be more likely to be actively using the heart of the coastal sage scrub in the Arboretum, which is located along the Arboretum's eastern edge bordering Campus Drive and is outside of the laydown area footprint.

The UCI is a participating landowner within the Orange County NCCP/HCP. For participating landowners, development activities and uses that are addressed by the Orange County NCCP/HCP are considered fully mitigated under the Natural Community Conservation Planning Act (NCCP Act), FESA, and CESA for impacts to habitats occupied by listed and other species "identified" by the Orange County NCCP/HCP and its associated IA. Therefore, this project does not require any additional mitigation for impacts to "identified" species and their habitat (i.e., coastal California gnatcatcher). The only further action that would be required would be to avoid any active nests, if present (refer to Mitigation Measure **BIO-4**). In addition, a least Bell's vireo (FE/SE) was heard singing in the riparian forest just south of the survey area. Although this species is identified for coverage by the Orange County NCCP/HCP, take is subject to conditions ("impacts to major occurrences outside of the reserve must not have significant long-term conservation value and that provision is made for any other appropriate mitigation"). Since no vireo were observed on-site within the project site and no vireo habitat is present within the project site, additional mitigation for this species is not expected. No direct impacts to this species are expected as a result of the proposed project.

Due to the presence of marginally suitable habitat throughout the survey area, there is a potential for direct impacts to two (2) (orange-throated whiptail and western mastiff bat) and indirect impacts to the other (1) (western pond turtle) special-status wildlife species with a moderate potential to occur within the survey area, or any other special-status wildlife species present prior to and during construction. Focused pre-construction wildlife clearance surveys prior to the commencement of construction, and monitoring during construction, would be necessary to determine presence or absence. If special-status wildlife species are detected within proposed impact areas that could result in take, measures including avoidance and/or minimization measures are recommended. If take of State- and/or Federally-listed species, such as the tricolored blackbird (*Agelaius tricolor*; ST), cannot be avoided, impacts would be subject to "take" only under the provisions of the CESA and/or FESA, respectively. Under Section 9 of the FESA, take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or

attempt to engage in any such conduct." Under the CESA, take is defined as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") and is regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species. The term "harm" has been clarified to include any act which actually kills or injures fish or wildlife, and emphasizes that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. With the implementation of MM BIO-2 and MM BIO-3, impacts to special-status wildlife species would be less than significant.

Minimization Measures

MM BIO-2: Prior to clearing, mowing, or ground-breaking activities, a qualified biologist shall conduct a focused wildlife clearance survey for special-status wildlife species with the potential to occur within the project site, which includes least Bell's vireo, coastal California gnatcatcher, orange-throated whiptail, western mastiff bat, and western pond turtle. Focused surveys shall be inclusive of the entire survey area. Areas immediately adjacent to the San Joaquin Marsh at the southern area of the project site have a higher potential to support least Bell's vireo and western pond turtle, areas immediately adjacent to CSS have a higher potential to support coastal California gnatcatcher, and the majority of the project site provides potential habitat for orange-throated whiptail. In addition, all trees and buildings within and near the project site should be surveyed for roosting bats such as western mastiff bat. If special-status wildlife species are found that are already covered by the Orange County NCCP/HCP, they shall be allowed to move out of harm's way on their own. If they do not move, the biologist shall capture them unharmed and release them in appropriate habitat an adequate distance from the project site under the conditions of the take permits that were issued by CDFW and USFWS for the Orange County NCCP/HCP. If special-status species not already covered by the NCCP/HCP are found within the project site at the time of construction that cannot move on their own, a qualified biologist shall coordinate with CDFW and/or USFWS, as applicable, to determine measures to avoid and minimize impacts and, if impacts cannot be avoided and mitigation is required, it will be provided to ensure CEQA compliance. However, based on the analysis conducted for this project, special-status species that are not covered by the Orange County NCCP/HCP are not expected to occur within the areas proposed for construction.

MM BIO-3: During construction, prior to the end of each work day, all open pipes and trenches shall be covered adequately to prevent wildlife from falling in and getting trapped. Prior to the start of construction each day, the construction site shall be checked, including vegetation, open pipes and trenches, and under staged vehicles, equipment, and materials. If species are found, measures adherent to

mitigation measure MM BIO-2 for wildlife species shall be implemented.

5.2 SPECIAL-STATUS VEGETATION COMMUNITIES

Seven (7) natural communities of special concern were identified during the CNDDB records search as potentially occurring within the survey area, none of which are present. However, two (2) other special-status vegetation communities – southern arroyo willow riparian forest and coastal sage scrub – were observed on-site during the survey. No other special-status vegetation communities were observed within the survey area. No impacts to special-status vegetation communities are anticipated.

The San Joaquin Marsh within the survey area was mapped by the USFWS NWI as Freshwater Forested/Shrub Wetland, but more specifically as PFO/SSA (Palustrine, Forested, Scrub-Shrub, Temporary Flooded). Habitat associated with this feature (southern arroyo willow riparian forest) is subject to jurisdiction of the regulatory agencies (refer to Section 5.3 below).

5.3 JURISDICTIONAL HYDROLOGICAL FEATURES

The streambed and active banks of the San Joaquin Marsh located within the survey area are subject to CDFW jurisdiction pursuant to Sections 1600 *et seq.* of the CFGC, with the southern arroyo willow riparian forest vegetation extending CDFW jurisdiction to the outer limits of the riparian vegetation. The areas within the OHWM of the San Joaquin Marsh do not meet the three-parameter criteria for wetland WoUS, but rather qualify as non-wetland WoUS subject to jurisdiction of the Corps pursuant to Section 404 of the Federal Clean Water Act (CWA) and Regional Water Quality Control Board (Regional Board) pursuant to CWA Section 401. There are no isolated or other features on-site classified as waters of the State subject to Section 13263 of the California Porter-Cologne Water Quality Control Act. No impacts to CDFW, Corps, or Regional Board jurisdiction are expected to occur.

5.4 NESTING BIRDS AND WILDLIFE MOVEMENT

Due to the location of the proposed project, which is surrounded primarily by previously disturbed and developed land apart from the adjacent San Joaquin Marsh, significant impacts to wildlife corridors are not expected as a result of implementing the proposed project. However, the survey area provides habitats suitable to provide nesting opportunities for various bird species. With the implementation of MM BIO-4, impacts to nesting birds would be less than significant.

Minimization Measures

MM BIO-4: Proposed construction activities shall avoid the bird breeding season (typically January through July for raptors and February through August for non-raptors, although specifically in coastal southern California resident hummingbirds may

begin nesting as early as the end of October), if feasible. If avoidance of the period from October 31 to August 31 is not feasible, a qualified biologist shall conduct a pre-construction nesting bird survey to determine the presence/absence, location, and status of any active nests on or adjacent to the survey area. The extent of the survey buffer area surrounding the site should be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided.

In the event that active nests are discovered, a suitable buffer (distance to be determined by the biologist based on the specific species found to be nesting, but typical nest buffers are from 500 feet to 300 feet but can be smaller depending on the bird species) shall be established around such active nests, and no construction within the buffer shall be allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest) or that it is safe to resume certain construction activities. Avoidance buffers may be reduced in size if a qualified biological monitor is present to observe the birds. The biological monitor must use best professional judgment to ensure that construction activities do not cause "take" (e.g., adults flushing off of a nest, fledglings changing behavior that could put them in harm, or any other form of disturbance).

5.5 CRITICAL HABITAT

The survey area is not located within any USFWS-designated Critical Habitat; therefore, Section 7 consultation with the USFWS will not be required for loss or adverse modification of Critical Habitat. The nearest Critical Habitat is located over 2 miles to the east, designated for coastal California gnatcatcher (FT/SSC), and would not be impacted by the proposed project.

5.6 LOCAL POLICIES AND ORDINANCES

5.6.1 Orange County NCCP/HCP

The project site is located within the Coastal Subregion of the Orange County NCCP/HCP (R.J. Meade 1996). However, the project site is not located within the Reserve System or identified special linkage areas. The nearest designated portion of the Orange County NCCP/HCP Reserve System (Non-Reserve Open Space associated with the San Joaquin Marsh) is located adjacent to (immediately east of, but not within) the project site. Implementation of the proposed project will temporarily affect up to 0.23 acre of coastal sage scrub vegetation consisting of small disconnected patches of varying quality but is not expected to affect any other covered Orange County NCCP/HCP habitats. If possible to avoid some or all of this 0.23 acre of coastal sage

scrub, attempts will be made; however, due to the large effort that will be required to construct the project, avoiding isolated patches of coastal sage scrub in the laydown area may not be possible. Restoration of the temporary disturbance areas (construction laydown area and parking area) is not proposed; due to the current deteriorated conditions of these areas, they would be left to revegetate on their own.

Under the Orange County NCCP/HCP, certain patches of coastal sage scrub throughout the Plan Area and outside of the Reserve System were authorized for take, as shown in Figure 31 of the NCCP/HCP maps. However, at the time that the Orange County NCCP/HCP was written, the survey area was recognized as developed, marsh, riparian, and grassland, with no coastal sage scrub recognized within the survey area or project site, as shown in Figure 4 of the NCCP/HCP maps. Although coastal sage scrub is now present within the survey area and project site, this vegetation was not recognized by the NCCP/HCP and based on historical satellite imagery from 1994, this vegetation did not exist and has been restored or has developed in the nearly 25 years since the Orange County NCCP/HCP was written. On-site coastal sage scrub is newly restored, will not be permanently impacted, and within the project site is growing in small disconnected patches of varying quality. In addition, the UCI is a participating landowner within the NCCP/HCP Plan Area and the project site is located outside of the Reserve System and is not within a Special Linkage or Existing Use Area. Under the NCCP/HCP, the loss of coastal sage scrub by participating landowners has already been mitigated by the creation of the Reserve System, the creation of an NCCP Non-Profit Corporation to manage the Reserve System, the designation of Special Linkage Areas and Existing Use Areas, and the implementation of an Adaptive Management Program. No further mitigation is required by participating landowners for the loss of coastal sage scrub. As a result, mitigation for temporary impacts to these small restored patches of coastal sage scrub is not expected.

5.6.2 City of Irvine Tree Removal Ordinance

A few trees are present within the existing Facilities Management and Distribution Services in the eastern portion of the project site. However, because the University of California is an autonomous state agency, any trees on land owned by UCI are not subject to local regulations. A total of fifty (50) trees are estimated to be removed from the Arboretum during construction.

5.7 CUMULATIVE IMPACTS

The UCI Design & Construction Services is currently making several campus improvements in addition to this project. Cumulative impacts would be limited to projects located on the UCI campus property in areas that are zoned for these developments, which are generally surrounded by existing development and urban areas. No other projects affecting biological resources are known in the vicinity of the UCI North Campus at this time. Therefore, cumulative impacts would be less than significant.

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Appendix A: Site Photographs

Photograph 1 – View of the disturbed area in the northern portion of the survey area, facing northeast.

Photograph 2 – View of the disturbed area within the north portion of the project site, facing northeast.

Photograph 3 – View of the disturbed area adjacent to the San Joaquin Marsh within the south end survey area, facing east.

Photograph 4 – View of the disturbed habitat within the San Joaquin Marsh Development Buffer, facing northeast.

Photograph 5 – View of intact coastal sage scrub located in the San Joaquin Marsh Development Buffer, facing southwest.

Photograph 6 – View of the San Joaquin Marsh Development Buffer, with riparian forest to the right and disturbed habitat to the left, facing northeast.

Appendix B: Plant and Wildlife Species Observed List

Scientific Name *	**Common Name**	**Cal-IPC Rating** ** **Special-Status****
Plants		
Acacia spp.*	acacia (ornamental)	
Amsinckia menziesii	small flowered fiddleneck	
Artemisia californica	California sagebrush	
Asclepias fascicularis	narrow leaf milkweed	
*Avena fatua**	wild oat	Moderate
Baccharis salicifolia	mule fat	
Baccharis pilularis	coyote brush	
*Brassica nigra**	black mustard	Moderate
*Brassica rapa**	field mustard	Limited
*Bromus catharticus**	rescue grass	
*Bromus diandrus**	common ripgut grass	Moderate
*Bromus hordeaceus**	soft chess	Limited
*Bromus rubens**	red brome	High
*Centaurea melitensis**	tocalote	Moderate
Cercocarpus betuloides	birch leaf mountain mahogany	
*Chenopodium album**	lamb's quarters	
*Conium maculatum**	poison hemlock	Moderate
Cucurbita foetidissima	calabazilla	
*Cupaniopsis anacardioides**	carrotwood	
Cylindropuntia prolifera	coastal cholla	
Cylindropuntia sp.	cholla (ornamental)	
*Cynara cardunculus**	artichoke thistle	Moderate
*Cynodon dactylon**	Bermuda grass	Moderate
Elymus condensatus	giant wild rye	
Encelia californica	California sunflower	
Eriogonum fasciculatum	California buckwheat	
*Erodium cicutarium**	redstem filaree	Limited
*Erodium moschatum**	whitestem filaree	
*Eucalyptus citriodora**	lemon scented gum	
*Euphorbia maculata**	spotted spurge	
*Euphorbia peplus**	petty spurge	
*Festuca perennis**	Italian rye grass	Moderate
*Foeniculum vulgare**	fennel	High
Fouquieria splendens	ocotillo (ornamental)	
Frankenia salina	alkali heath	
*Helminthotheca echioides**	bristly ox-tongue	Limited
Heteromeles arbutifolia	toyon	
Heterotheca grandiflora	telegraph weed	

Scientific Name *	**Common Name**	**Cal-IPC Rating** ** **Special-Status****
*Hordeum murinum**	foxtail barley	Moderate
Juniperus sp.*	juniper (ornamental)	
*Lactuca serriola**	prickly lettuce	
*Lepidium didymum**	lesser swine cress	
Lepidium nitidum	shining pepper grass	
*Lycopersicon esculentum**	tomato	
*Lysimachia arvensis**	scarlet pimpernel	
Malacothamnus fasciculatus	chaparral bush mallow	
Malosma laurina	laurel sumac	
*Malva parviflora**	cheeseweed	
Malvella leprosa	alkali mallow	
*Marrubium vulgare**	horehound	Limited
*Medicago polymorpha**	bur clover	Limited
Melilotus indicus	annual yellow sweetclover	
*Mesembryanthemum crystallinum**	crystalline ice plant	Moderate
*Nicotiana glauca**	tree tobacco	Moderate
*Olea europaea**	olive	Limited
*Opuntia ficus-indica**	mission cactus	
Opuntia littoralis	prickly pear cactus	
Peritoma arborea	bladderpod	
Phacelia minor	California bluebell	
Phacelia cicutaria	caterpillar phacelia	
Pinus sp.*	pine (ornamental)	
Platanus racemosa	western sycamore (ornamental)	
*Polypogon monspeliensis**	annual beard grass	Limited
Pseudognaphalium californicum	ladies' tobacco	
*Pseudognaphalium luteoalbum**	Jersey cudweed	
Quercus agrifolia	coast live oak	
Quercus lobata	valley oak	
Rhamnus ilicifolia	hollyleaf redberry	
Rhus integrifolia	lemonade berry	
Ribes speciosum	fuchsia flowered gooseberry	
Robinia sp.*	locust (ornamental)	
Rosa californica	California wild rose	
*Rumex crispus**	curly dock	Limited
Rumex salicifolius	willow dock	
Salix exigua	narrowleaf willow	
Salix gooddingii	black willow	
Salix lasiolepis	arroyo willow	
Salvia leucophylla	purple sage	

Scientific Name *	**Common Name**	**Cal-IPC Rating** ** Special-Status*** **
Salvia mellifera	black sage	
Salvia spathacea	hummingbird sage	
Sambucus nigra ssp. *caerulea*	blue elderberry	
*Schinus terebinthifolius**	Brazilian pepper tree	Limited
Schoenoplectus californicus	California bulrush	
*Silybum marianum**	milk thistle	Limited
*Sisymbrium irio**	London rocket	Moderate
*Sonchus asper**	prickly sowthistle	
*Sonchus oleraceus**	common sowthistle	
Vitis girdiana	southern California grape	
Reptiles		
Sceloporus occidentalis longipes	Great Basin fence lizard	
Birds		
Anas platyrhynchos	mallard	
Branta canadensis	Canada goose	
Calypte anna	Anna's hummingbird	
Cathartes aura	turkey vulture	
Corvus brachyrhynchos	American crow	
Geothlypis trichas	common yellowthroat	
Haemorhous mexicanus	house finch	
Melospiza melodia	song sparrow	
Melozone crissalis	California towhee	
Mimus polyglottos	northern mockingbird	
Myiarchus cinerascens	ash-throated flycatcher	
Pheucticus melanocephalus	black-headed grosbeak	
Pipilo maculatus	spotted towhee	
Polioptila californica californica	coastal California gnatcatcher	FT/SSC
Sayornis nigricans	black phoebe	
Sayornis saya	Say's phoebe	
Selasphorus sasin	Allen's hummingbird	
Spinus psaltria	lesser goldfinch	
Thryomanes bewickii	Bewick's wren	
Toxostoma redivivum	California thrasher	
Tyrannus vociferans	Cassin's kingbird	
Vireo bellii pusillus	least Bell's vireo	FE/SE
Zenaida macroura	mourning dove	
Zonotrichia leucophrys	white-crowned sparrow	
Mammals		

Scientific Name *	Common Name	Cal-IPC Rating** Special-Status***
Canis latrans	coyote	
Sylvilagus audubonii	desert cottontail	

* Non-native species

** **California Invasive Plant Council (Cal-IPC) Ratings**

High — These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate — These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited — These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

*** **California Rare Plant Rank (CRPR)**

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 approximately which more information is needed - a Review List
4 Plants of limited distribution - a Watch List

Threat Ranks

.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)

Federal Classifications

FE Federally Endangered
FT Federally Threatened

State Classifications

SE State Endangered
SSC California Species of Special Concern

Appendix C: Special-Status Species Table

Scientific Name **Common Name**	**Status*** Federal / State CRPR *or* G-Rank / S-Rank	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
Plants			
Abronia maritima **red sand-verbena**	-- / -- 4.2	Perennial herb. Blooms February through December. Generally associated with coastal dunes. Known elevations range from 0 to 300 feet above mean sea level (amsl).	**Not Expected.** Suitable habitat (coastal dunes) is not present within the survey area. Further, the nearest occurrence is from 1932 and over 2.5 miles to the southwest.
Abronia villosa var**.** *aurita* **chaparral sand-verbena**	-- / -- 1B.1	Annual herb. Blooms January through September. Occurs in sandy areas in chaparral, coastal scrub, and desert dunes. Known elevations range from 50 to 4,985 feet amsl.	**Not Expected.** Suitable habitat (sandy areas in coastal scrub) is not present within the survey area. Further, the nearest occurrence is over 5 miles to the west.
Aphanisma blitoides **aphanisma**	-- / -- 1B.2	Annual herb. Blooms March through June. Found in coastal scrub and dunes along bluffs and slopes near the ocean in sandy or clay soils. Known elevations range from 0 to 560 feet amsl.	**Not Expected.** Suitable habitat (bluffs and slopes) is not present within the survey area. Further, the nearest occurrence is over 1.5 miles to the west.
Atriplex coulteri **Coulter's saltbush**	-- / -- 1B.2	Perennial herb. Blooms March through October. Generally associated with alkaline or clay soils that occur in grasslands and coastal bluff habitats. Known elevations range from 30 to 1,440 feet amsl.	**Low.** Although the nearest occurrence is less than 1 mile to the south, suitable habitat (clay soils in grasslands and coastal bluff habitats) is marginally present within the survey area.
Atriplex pacifica **south coast saltscale**	-- / -- 1B.2	Annual herb. Blooms March through October. Occurs on alkaline soils in coastal scrub, coastal bluff, and playas. Known elevations range from 3 to 1,640 feet amsl.	**Not Expected.** Suitable habitat (alkaline soils in coastal scrub) is not present within the survey area. Further, the nearest occurrence is from 1932 and approximately 2.5 miles to the southwest.
Atriplex parishii **Parish's brittlescale**	-- / --- 1B.1	Annual herb. Blooms April through October. Found in alkaline soils within coastal bluff scrub and coastal scrub. Known elevations range from 100 to 1,540 feet amsl.	**Not Expected.** Suitable habitat (alkaline soils in coastal scrub) is not present within the survey area. Further, the nearest occurrence is from 1881 and over 2 miles to the west.

Scientific Name **Common Name**	**Status*** Federal / State CRPR *or* G-Rank / S-Rank	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
Atriplex serenana var. *davidsonii* **Davidson's saltscale**	-- / -- 1B.2	Annual herb. Blooms April through October. Occurs in coastal bluff scrub and coastal scrub on alkaline soils. Known elevations range from 30 to 660 feet amsl.	**Not Expected.** Suitable habitat (alkaline soils in coastal scrub) is not present within the survey area. The nearest occurrence is over 0.5 mile to the south.
Calochortus catalinae **Catalina mariposa lily**	-- / -- 4.2	Perennial herb (bulb). Blooms March through June (sometimes as early as February). Found in heavy soils, open slopes, and openings in valley and foothill grassland, chaparral, coastal scrub, and cismontane woodland. Known elevations range from 45 to 4,725 feet amsl.	**Low.** Suitable habitat (coastal scrub) is marginally present within the survey area. However, the nearest occurrence is over 4 miles to the south.
Calochortus weedii var. *intermedius* **intermediate mariposa-lily**	-- / -- 1B.2	Perennial herb (bulb). Blooms May through July. Found in chaparral, coastal sage scrub, and valley and foothill grasslands, as well as rocky outcrops. Known elevations range from 55 to 4,135 feet amsl.	**Low.** Suitable habitat (coastal sage scrub) is marginally present within the survey area. However, the nearest occurrence is over 6 miles to the southeast.
Camissoniopsis lewisii **Lewis' evening-primrose**	-- / -- 3	Annual herb. Blooms March through June. Occurs on sandy or clay soils in valley and foothill grassland, coastal bluff scrub, cismontane woodland, coastal dunes, and coastal scrub. Known elevations range from 0 to 1,740 feet amsl.	**Low.** Suitable habitat (clay soils in coastal scrub) is marginally present within the survey area. However, the nearest occurrence is less than 2 miles to the southwest.
Centromadia parryi ssp. *australis* **southern tarplant**	-- / -- 1B.1	Annual herb. Blooms March through October. Often found in disturbed sites near the coast at marsh edges; also, in alkaline soils, sometimes with saltgrass (*Distichlis spicata*). Sometimes in grasslands and on vernal pool margins. Known elevations range from 0 to 3,200 feet amsl.	**Low.** Suitable habitat (disturbed sites at marsh edges) is marginally present within the survey area. However, the nearest occurrence is approximately 1.5 miles to the southwest.

Scientific Name **Common Name**	**Status*** Federal / State CRPR *or* G-Rank / S-Rank	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
Chaenactis glabriuscula var. *orcuttiana* **Orcutt's pincushion**	-- / -- 1B.1	Annual herb. Blooms January through August. Occurs on sandy sites within coastal bluff scrub and coastal dunes. Known elevations range from 0 to 460 feet amsl.	**Not Expected.** Suitable habitat (coastal bluff scrub and coastal dunes) is not present within the survey area. Further, the nearest occurrence is over 9 miles to the south.
Chloropyron maritimum ssp**.** *maritimum* **salt marsh bird's-beak**	FE / SE 1B.2	Annual herb. Blooms May through October. Limited to the higher zones of marshes and swamps, along with coastal dunes. Known elevations range from 0 to 35 feet amsl.	**Not Expected.** Although the nearest occurrence is less than 1 mile to the southwest, suitable habitat (marshes, swamps, and coastal dunes) is not present within the survey area.
Cistanthe maritima **seaside cistanthe**	-- / -- 4.2	Annual herb. Blooms March through June. Occurs in sandy sites within coastal bluff scrub, coastal scrub, and valley and foothill grassland. Known elevations range from 50 to 590 feet amsl.	**Not Expected.** Suitable habitat (sandy sites) is not present within the survey area. Further, the nearest occurrence is over 9 miles to the southeast.
Comarostaphylis diversifolia ssp. *diversifolia* **summer holly**	-- / -- 1B.2	Shrub. Blooms April through June. Often in mixed chaparral and cismontane woodland, sometimes in post-burn areas. Known elevations range from 130 to 1,835 feet amsl.	**Not Expected.** Suitable habitat (mixed chaparral and cismontane woodland) is not present within the survey area. Further, the nearest occurrence is over 11 miles to the southeast.
Convolvulus simulans **small-flowered morning-glory**	-- / -- 4.2	Annual herb. Blooms March through July. Occurs on wet clay, serpentine ridges in chaparral, coastal scrub, and valley and foothill grassland. Known elevations range from 30 to 2,760 feet amsl.	**Not Expected.** Although the nearest occurrence is less than 1 mile to the south, suitable habitat (wet clay, serpentine ridges) is not present within the survey area.
Deinandra paniculata **paniculate tarplant**	-- / -- 4.2	Annual herb. Blooms March through November. Found on vernally mesic sites, sometimes vernal pools or surrounding mima mounds, in coastal scrub and valley and foothill grassland. Known elevations range from 55 to 4,070 feet amsl.	**Not Expected.** Suitable habitat (vernally mesic sites) is not present within the survey area. Further, the nearest occurrence is over 6 miles to the southeast.

Scientific Name **Common Name**	**Status*** Federal / State CRPR *or* G-Rank / S-Rank	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
Dichondra occidentalis **western dichondra**	-- / -- 4.2	Perennial herb. Blooms March through July. Found on sandy loam, clay, and rocky soils in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Known elevations range from 130 to 1,510 feet amsl.	**Low.** Suitable habitat (clay soils in coastal scrub) is marginally present within the survey area. However, the nearest occurrence is over 4 miles to the south.
Dudleya multicaulis **many-stemmed dudleya**	-- / -- 1B.2	Perennial herb. Blooms April through July. Occurs on heavy, often clayey soils or grassy slopes in chaparral, coastal scrub, and valley and foothill grassland habitats. Known elevations range from 45 to 3,280 feet amsl.	**Moderate.** Suitable habitat (clayey soils in coastal scrub) is marginally present within the survey area. However, the nearest occurrence is less than 0.5 mile to the south.
Dudleya stolonifera **Laguna Beach dudleya**	FT / ST 1B.1	Perennial herb (stoloniferous). Blooms May through July. Found on thin soils of north-facing sandstone cliffs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. Known elevations range from 15 to 855 feet amsl.	**Not Expected.** Suitable habitat (sandstone cliffs) is not present within the survey area. Further, the nearest occurrence is over 7 miles to the southeast.
Eryngium aristulatum var**.** *parishii* **San Diego button-celery**	FE / SE 1B.1	Annual, perennial herb. Blooms April through June. Found in San Diego mesa hardpan and claypan vernal pools, southern interior basalt flow vernal pools in coastal scrub and valley and foothill grassland. Known elevations range from 115 to 2,495 feet amsl.	**Not Expected.** Suitable habitat (vernal pools) is not present within the survey area. Further, the nearest occurrence is nearly 5 miles to the west.
Euphorbia misera **cliff spurge**	-- / -- 2B.2	Shrub. Blooms December through August. Found on rocky sites in coastal bluff scrub, coastal scrub, and Mojavean desert scrub. Known elevations range from 0 to 920 feet amsl.	**Not Expected.** Suitable habitat (rocky sites in coastal scrub) is not present within the survey area. Further, the nearest occurrence is nearly 5 miles to the south.

Scientific Name **Common Name**	**Status*** Federal / State CRPR *or* G-Rank / S-Rank	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
Helianthus nuttallii ssp. *parishii* **Los Angeles sunflower**	-- / -- 1A	Perennial herb (rhizomatous). Blooms August through October. Occurs in marshes, swamps, and on damp river banks. Believed to be extirpated. Known elevations range from 15 to 5,495 feet amsl.	**Low.** Suitable habitat (marshes, swamps, damp river banks) is present within the survey area. However, the nearest occurrence is from 1933 over 2 miles to the southwest.
Hordeum intercedens **vernal barley**	-- / -- 3.2	Annual herb. Blooms March through June. Occurs in vernal pools, dry, saline streambeds, and alkaline flats of valley and foothill grassland, coastal dunes, and coastal scrub habitats. Known elevations range from 15 to 3,280 feet amsl.	**Not Expected.** Suitable habitat (vernal pools, dry, saline streambeds, and alkaline flats) is not present within the survey area. Further, the nearest occurrence is nearly 2 miles to the southeast.
Horkelia cuneata var. *puberula* **mesa horkelia**	-- / -- 1B.1	Perennial herb. Blooms February through July. Found on sandy or gravelly areas within chaparral, cismontane woodland, and coastal scrub. Known elevations range from 460 to 2820 feet amsl.	**Not Expected.** Suitable habitat (sandy or gravelly areas within coastal scrub) is not present within the survey area. Further, the nearest occurrence is nearly 5 miles to the south.
Isocoma menziesii var. decumbens **decumbent goldenbush**	-- / -- 1B.2	Shrub. Blooms April through November. Found on sandy soils within coastal scrub and chaparral, as well as disturbed sites. Known elevations range from 65 to 1640 feet amsl.	**Not Expected.** Suitable habitat (sandy soils) is not present within the survey area. Further, the nearest occurrence is nearly 3 miles to the southwest and this perennial species would have been detected during the survey.
Juncus acutus ssp. *leopoldii* **southwestern spiny rush**	-- / -- 4.2	Perennial grass. Blooms May through June. Found in most saline places in salt marshes, alkaline seeps, and coastal dunes (mesic sites). Known elevations range from 0 to 1,310 feet amsl.	**Not Expected.** Although the nearest occurrence is less than 1 mile to the south, suitable habitat (salt marshes) is not present within the survey area and this perennial species would have been detected during the survey.
Lasthenia glabrata ssp. *coulteri* **Coulter's goldfields**	-- / -- 1B.1	Annual herb. Blooms February through June. Usually found in alkaline soils in marshes, playas, vernal pools, and valley and foothill grasslands. Known elevations range from 3 to 4,595 feet amsl.	**Low.** Although the nearest occurrence is just over 1 mile to the northwest, suitable habitat (alkaline soils in marshes) is marginally present within the survey area.

Scientific Name **Common Name**	**Status*** Federal / State CRPR *or* G-Rank / S-Rank	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
Lepidium virginicum var. *robinsonii* **Robinson's pepper-grass**	-- / -- 4.3	Annual herb. Blooms January through July. Found in chaparral and coastal sage scrub. Occurs in dry soils and shrubland between 0 and 4,400 feet amsl.	**Low.** Suitable habitat (dry soils in coastal sage scrub) is marginally present within the survey area. However, the nearest occurrence is nearly 2 miles to the south.
Lycium californicum **California box-thorn**	-- / -- 4.2	Shrub. Blooms March through August. Found within coastal bluff scrub and coastal scrub. Known elevations range from 0 to 525 feet amsl.	**Not Expected.** Although the nearest occurrence is less than 0.5 mile to the south and suitable habitat (coastal scrub) is marginally present within the survey area, this perennial would have been detected during the survey.
Malacothrix saxatilis var. *saxatilis* **cliff aster**	-- / -- 4.2	Perennial herb. Blooms March through September. Found within coastal bluff scrub and coastal scrub. Known elevations range from 15 to 100 feet amsl.	**Low.** Suitable habitat (coastal scrub) is marginally present within the survey area. However, the nearest occurrence is nearly 7 miles to the southeast.
Nama stenocarpa **mud nama**	-- / -- 2B.2	Annual herb. Blooms March through May. Grows on the muddy embankments of ponds and lakes. Also reported to utilize river embankments. Known elevations range from 15 to 1,640 feet amsl.	**Low.** Suitable habitat (muddy embankments of ponds, lakes, and rivers) is marginally present within the survey area. However, the nearest occurrence is nearly 1 mile to the east.
Nasturtium gambelii **Gambel's water cress**	FE / ST 1B.1	Perennial herb (rhizomatous). Blooms April through October. Found in freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. Known elevations range from 15 to 2,560 feet amsl.	**Low.** Suitable habitat (freshwater and brackish marshes) is marginally present within the survey area. However, the nearest occurrence is from 1927 and nearly 6 miles to the north.
Navarretia prostrata **prostrate vernal pool navarretia**	-- / -- 1B.1	Annual herb. Blooms April through July. Found in alkaline soils in grassland and vernal pools, along with coastal scrub, meadows, seeps, and mesic, alkaline site. Known elevations range from 65 to 490 feet amsl.	**Not Expected.** Suitable habitat (alkaline soils in grassland and coastal scrub) is not present within the survey area. Further, the nearest occurrence is nearly 5 miles to the west.

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Nemacaulis denudata var**.** *denudata* **coast woolly-heads**	-- / -- 1B.2	Annual herb. Blooms April through September. Found in coastal dunes. Known elevations range from 0 to 35 feet amsl.	**Not Expected.** Suitable habitat (coastal dunes) is not present within the survey area. Further, the nearest occurrence is over 3 miles to the southwest.
Orcuttia californica **California Orcutt grass**	FE / SE 1B.1	Annual grass. Blooms April through August. Found in vernal pools. Known elevations range from 460 to 2,200 feet amsl.	**Not Expected.** Suitable habitat (vernal pools) is not present within the survey area. Further, the site is outside of the known elevation range for this species and the nearest occurrence is approximately 5 miles to the west.
Pentachaeta aurea ssp. *allenii* **Allen's pentachaeta**	-- / -- 1B.1	Annual herb. Blooms March through June. Occurs in coastal scrub openings and valley and foothill grasslands. Known elevations range from 225 to 1,560 feet amsl.	**Not Expected.** Suitable habitat (coastal scrub openings, valley and foothill grassland) is marginally present within the survey area. However, the site is outside of the known elevation range for this species and the nearest occurrence is over 4.5 miles to the east.
Phacelia ramosissima var. *austrolitoralis* **south coast branching phacelia**	-- / -- 3.2	Perennial herb. Blooms March through August. Found in sandy, sometimes rocky sites within chaparral, coastal scrub, coastal dunes, and coastal salt marsh. Known elevations range from 15 to 720 feet amsl.	**Not Expected.** Suitable habitat (sandy/rocky sites in coastal scrub) is not present within the survey area. Further, the nearest occurrence is approximately 1.5 miles to the southwest.
Quercus dumosa **Nuttall's scrub oak**	-- / -- 1B.1	Shrub. Blooms February through March. Found on sandy soils near the coast and sometimes on clay loam within closed-cone coniferous forest, chaparral, and coastal scrub. Known elevations range from 50 to 4,035 feet amsl.	**Not Expected.** Suitable habitat (sandy soils in coastal scrub) is not present within the survey area. Further, the nearest occurrence is approximately 4.5 miles to the southwest.

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Sagittaria sanfordii **Sanford's arrowhead**	-- / -- 1B.2	Perennial herb (rhizomatous). Blooms May through October. Found in standing or slow-moving freshwater ponds, marshes, and ditches. Known elevations range from 0 to 1,180 feet amsl.	**Low.** Suitable habitat (marshes) is marginally present within the survey area. However, the nearest occurrence is approximately 5 miles to the northwest.
Senecio aphanactis **chaparral ragwort**	-- / -- 2B.2	Annual herb. Blooms January through April. Occurs on drying alkaline flats in chaparral, cismontane woodland, and coastal scrub. Known elevations range from 45 to 2,625 feet amsl.	**Not Expected.** Suitable habitat (drying alkaline flats) is not present within the survey area. Further, the nearest occurrence is approximately 2 miles to the southeast.
Sidalcea neomexicana **salt spring checkerbloom**	-- / -- 2B.2	Perennial herb. Blooms March through June. Occurs in alkali springs, marshes, and playas in chaparral, coastal scrub, lower montane coniferous forest, and Mojavean desert scrub. Known elevations range from 0 to 7,810 feet amsl.	**Not Expected.** Suitable habitat (alkaline springs, marshes, and playas) is not present within the survey area. Further, the nearest occurrence is approximately 6 miles to the north.
Suaeda esteroa **estuary seablite**	-- / -- 1B.2	Perennial herb. Blooms June through October (sometimes May through January). Found on clay, silt, and sand substrates in coastal salt marshes and swamps. Known elevations range from 0 to 395 feet amsl.	**Not Expected.** Suitable habitat (coastal salt marshes and swamps) is not present within the survey area. Further, the nearest occurrence is approximately 1.5 miles to the southwest.
Symphyotrichum defoliatum **San Bernardino aster**	-- / -- 1B.2	Perennial herb (rhizomatous). Blooms July through November. Grows in vernally mesic sites and disturbed areas or near ditches, streams, and springs in meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, and valley and foothill grassland. Known elevations range from 5 to 6,695 feet in elevation amsl.	**Low.** Suitable habitat (vernally mesic sites) is marginally present within the survey area. However, the nearest occurrence is approximately 2.5 miles to the southwest.

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Verbesina dissita **big-leaved crownbeard**	FT / ST 1B.1	Perennial herb. Blooms April through July (sometimes as early as March). Found on gravelly soils of steep, rocky, primarily north-facing slopes in coastal scrub and maritime chaparral less than 1.5 miles from the ocean. Known elevations range from 145 to 955 feet amsl.	**Not Expected.** Suitable habitat (gravelly soils on north-facing slopes) is not present within the survey area. Further, the nearest occurrence is approximately 12 miles to the southeast.
Invertebrates			
Bombus crotchii **Crotch bumble bee**	-- / -- G3G4 / S1S2	Found from coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*.	**Low.** A host plant (*Eriogonum*) is present within the survey area. However, the nearest occurrence is over 4 miles to the southwest.
Branchinecta sandiegonensis **San Diego fairy shrimp**	FE / --	Endemic to San Diego and Orange County mesas. Found within small, shallow vernal pools which range in depth from 2-12in and in water temperature from 50-68F.	**Not Expected.** Suitable habitat (vernal pools) is not present within the survey area. Further, the nearest occurrence is approximately 5 miles to the west.
Cicindela gabbii **western tidal-flat tiger beetle**	-- / -- G2G4 / S1	Inhabits estuaries and mudflats along the coast of Southern California. Generally found on dark-colored mud in the lower zone; occasionally found on dry saline flats of estuaries.	**Not Expected.** Suitable habitat (estuaries and mudflats) is not present within the survey area. Further, the nearest occurrence is approximately 5.5 miles to the southwest.
Cicindela hirticollis gravida **sandy beach tiger beetle**	-- / -- G5T2 / S2	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Found in clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	**Not Expected.** Suitable habitat (areas adjacent to non-brackish water along the coast) is not present within the survey area. Further, the nearest occurrence is approximately 5 miles to the southwest.

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Cicindela latesignata latesignata **western beach tiger beetle**	-- / -- G2G4T1T2 / S1	Found in mudflats and beaches in coastal Southern California.	**Not Expected.** Suitable habitat (mudflats and beaches) is not present within the survey area. Further, the nearest occurrence is approximately 5.5 miles to the southwest.
Coelus globosus **globose dune beetle**	-- / -- G1G2 / S1S2	Inhabits foredunes and sand hummocks of coastal sand dune habitat. It burrows beneath the sand surface and is most common beneath dune vegetation. Erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico.	**Not Expected.** Suitable habitat (foredunes and sand hummocks) is not present within the survey area. Further, the nearest occurrence is approximately 5.5 miles to the southwest.
Danaus plexippus pop. 1 **monarch - California overwintering population**	-- / -- G4T2T3 / S2S3	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	**Low.** Suitable habitat (wind-protected tree groves) is marginally present within the survey area. However, the nearest occurrence is approximately 5 miles to the southwest.
Panoquina errans **wandering skipper**	-- / -- G4G5 / S2	Found in Southern California coastal salt marshes, ocean bluffs, and other open areas near the ocean. Requires moist saltgrass for larval development.	**Not Expected.** Suitable habitat (coastal salt marshes and ocean bluffs) is not present within the survey area. Further, the nearest occurrence is over 6 miles to the west.

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Streptocephalus woottoni **Riverside fairy shrimp**	FE / -- G1G2 / S1S2	Restricted to deep seasonal vernal pools, vernal pool like ephemeral ponds, and stock ponds and other human modified depressions. Basins that support Riverside fairy shrimp are typically dry a portion of the year, but usually are filled by late fall, winter, or spring rains, and may persist through May. Endemic to western Riverside, Orange, and San Diego Counties in tectonic swales/earth slump basins in grassland and coastal sage scrub. All known habitat lies within annual grasslands, which may be interspersed through chaparral or coastal sage scrub vegetation.	**Not Expected.** Suitable habitat (vernal pools and vernal pool like depressions) is not present within the survey area. Further, the nearest occurrence is approximately 5 miles to the west.
Tryonia imitator **mimic tryonia (California brackishwater snail)**	-- / -- G2 / S2	Inhabits coastal lagoons, estuaries, salt marshes, and where creek mouths that join tidal marshes from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.	**Not Expected.** Suitable habitat (coastal lagoons, estuaries, and salt marshes) is not present within the survey area. Further, the nearest occurrence is approximately 2.5 miles to the southwest.
Fish			
Eucyclogobius newberryi **tidewater goby**	FE / SSC G3 / S3	Found in brackish water within shallow lagoons and lower stream reaches and need fairly still but not stagnant water and high oxygen levels. Distributed along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River.	**Not Expected.** Suitable habitat (brackish water) is not present within the survey area. Further, the nearest occurrence is approximately 12 miles to the southeast.

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Oncorhynchus mykiss irideus pop. 10 **steelhead – southern California DPS**	FE / -- G5T1Q / S1	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions. Occurs in south coast flowing waters.	**Not Expected.** Suitable habitat (south coast flowing waters) is not present within the survey area. Further, the nearest occurrence is approximately 7 miles to the north.
Amphibians			
Spea hammondii **western spadefoot**	-- / SSC G3 / S3	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washed lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rain pools, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	**Not Expected.** Suitable breeding habitat (rain pools) is not present within the survey area. Further, the nearest occurrence is over 5 miles to the east.
Reptiles			
Anniella stebbinsi **southern California legless lizard**	-- / SSC G3 / S3	Locally abundant specimens are found in coastal sand dunes and a variety of interior habitats, including sandy washes and alluvial fans. A large protected population persists in the remnant of the once extensive El Segundo Dunes at Los Angeles International Airport.	**Not Expected.** Suitable breeding habitat (coastal sand dunes, sandy washes, and alluvial fans) is not present within the survey area. Further, the nearest occurrence is approximately 4.5 miles to the south.
Aspidoscelis hyperythra **orange-throated whiptail**	-- / WL G5 / S2S3	Inhabits low-elevation coastal scrub, chaparral, and cismontane woodlands. Prefers washes and other sandy areas with patches of brush and rocks. Often found on the edge of intact vegetation and disturbed areas. Perennial plants necessary for its primary food, termites.	**Moderate.** Suitable habitat (edge of intact vegetation and disturbed areas, coastal scrub) is present within the survey area. However, the nearest occurrence is approximately 4 miles to the south.

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Crotalus ruber **red-diamond rattlesnake**	-- / SSC G4 / S3	Found in chaparral, woodland, grassland, and desert scrub habitats from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, and cracks in rocks or surface cover objects.	**Not Expected.** Suitable habitat (rocky areas in dense vegetation) is not present within the survey area. Further, the nearest occurrence is over 3.5 miles to the southeast.
Emys marmorata **western pond turtle**	-- / SSC G3G4 / S3	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually found with aquatic vegetation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 kilometers from water for egg-laying. Found between 0 and 6,000 feet amsl in elevation.	**Moderate.** Suitable habitat (aquatic sites) is marginally present within the survey area. Further, the nearest occurrence is less than 0.2 mile to the south.
Phrynosoma blainvillii **coast horned lizard**	-- / SSC G3G4 / S3S4	Frequents a wide variety of habitats, including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest, along sandy washes with scattered low bushes. Prefers open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants and other insects.	**Low.** Suitable habitat (coastal sage scrub) is marginally present within the survey area. However, primary food source (ants) were not observed and the nearest occurrence is over 5 miles to the southeast.
Birds			
Accipiter cooperii (Nesting) **Cooper's hawk**	-- / WL G5 / S4	Generally found in forested areas up to 3,000 feet amsl, especially near edges and rivers. Prefers hardwood stands and mature forests but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	**Low.** Suitable nesting habitat (tall trees) is marginally present within the survey area. However, the nearest occurrence is approximately 5 miles to the east.

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Agelaius tricolor (Nesting colony) **tricolored blackbird**	-- / SCE, SSC G2G3 / S1S2	Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California.	**Low.** Suitable nesting habitat (open water, protected nesting substrate) is marginally present within the survey area. However, the nearest occurrence is over 4 miles to the east.
Aimophila ruficeps canescens **southern California rufous-crowned sparrow**	-- / WL G5T3 / S3	Frequents relatively steep, often rocky hillsides with grass and forb patches in coastal sage scrub and sparse mixed chaparral habitats.	**Not Expected.** Suitable habitat (rocky hillsides in coastal sage scrub) is not present within the survey area. Further, the nearest occurrence is over 4 miles to the east.
Ammodramus savannarum (Nesting) **grasshopper sparrow**	-- / SSC G5 / S3	Favors native grasslands with a mix of grasses, forbs, and scattered shrubs. Loosely colonial when nesting. Occurs in dense grasslands on rolling hills, lowland plains, in valleys, and on hillsides on lower mountain slopes.	**Low.** Although the nearest occurrence is approximately 0.4 mile to the north, suitable nesting habitat (grasslands, scattered shrubs) is marginally present within the survey area.
Athene cunicularia (Burrow sites and some wintering sites) **burrowing owl**	-- / SSC G4 / S3	Primarily found in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation, but it persists and even thrives in some landscapes highly altered by human activity, such as earthen canals, berms, rock piles, and pipes. Subterranean nester, most often dependent upon burrowing mammals, most notably, the California ground squirrel (*Otospermophilus beecheyi*).	**Low.** Although the nearest occurrence is approximately 0.2 mile to the northeast and suitable nesting and wintering habitat (annual grasslands, low-growing vegetation) is marginally present within the survey area, suitable burrows or squirrels were not observed within the survey area.
Campylorhynchus brunneicapillus sandiegensis (San Diego and Orange Counties only) **coastal cactus wren**	-- / SSC G5T3Q / S3	From southern Ventura County and southwestern San Bernardino County to northwestern Baja California, occupies coastal sage scrub largely consisting of tall stands of coastal prickly pear (*Opuntia littoralis*) or cholla (*Cylindropuntia* spp.) cacti for nesting and roosting.	**Not Expected.** Suitable habitat (tall stands of cacti in coastal sage scrub) is not present within the survey area. Further, the nearest occurrence is approximately 1.5 miles to the south.

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Charadrius alexandrinus nivosus (Nesting) **western snowy plover**	FT / SSC G3T3 / S2S3	Occurs on sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	**Not Expected.** Suitable nesting habitat (beaches, levees, and shores) is not present within the survey area. Further, the nearest occurrence is approximately 5 miles to the southwest.
Coccyzus americanus occidentalis (Nesting) **western yellow-billed cuckoo**	FT / SE G5T2T3 / S1	Obligate willow-cottonwood riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow (*Salix* spp.), often mixed with cottonwoods (*Populus* spp.), with the lower story dominated by blackberry (*Rubus* spp.), nettles (*Urtica* spp.), and/or wild grape (*Vitis* spp.).	**Not Expected.** Suitable nesting habitat (broad riparian forests) is not present within the survey area. Further, the nearest occurrence is approximately 5.5 miles to the north.
Coturnicops noveboracensis **yellow rail**	-- / SSC G4 / S1S2	Occurs in freshwater marshlands. Summer resident in eastern Sierra Nevada in Mono County.	**Low.** Suitable habitat (freshwater marshlands) is marginally present within the survey area. However, the nearest occurrence is over 4 miles to the southwest.
Elanus leucurus (Nesting) **white-tailed kite**	-- / FP G5 / S3S4	Often found in rolling foothills and valley margins with scattered oaks, riparian bottomlands, or marshes next to deciduous woodlands. Prefers isolated, dense-topped trees for nesting and perching near open valley and foothill grasslands, meadows, or marshes for foraging.	**Low.** Although the nearest occurrence is approximately 0.4 mile to the southeast, suitable nesting habitat (dense-topped trees) is marginally present within the survey area.
Empidonax traillii extimus (Nesting) **southwestern willow flycatcher**	FE / SE G5T2 / S1	Occurs in broad riparian woodlands in southern California. Typically requires large areas of willow thickets in broad valleys and canyon bottoms, or around ponds and lakes. These areas typically have standing or running water or are at least moist.	**Not Expected.** Suitable nesting habitat (broad riparian woodlands) is not present within the survey area. Further, there are no documented occurrences within the records search.

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Eremophila alpestris actia **California horned lark**	-- / WL G5T4Q / S4	Found in open areas dominated by sparse low herbaceous vegetation or widely scattered low shrubs. Nests in hollow on ground often next to grass tufts or clods of earth or manure. Known from coastal regions, chiefly from Sonoma County to San Diego County, including main part of San Joaquin Valley and east to the foothills.	**Low.** Suitable habitat (low herbaceous vegetation with widely scattered low shrubs) is marginally present within the survey area. However, the nearest occurrence is approximately 1.5 mile to the south.
Icteria virens (Nesting) **yellow-breasted chat**	-- / SSC G5 / S3	Summer resident that inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, and wild grape. Breeding habitat must be dense to provide shade and concealment. Forages and nests within 10 feet of ground.	**Low.** Although the nearest occurrence is approximately 0.5 mile to the south, suitable nesting habitat (dense riparian thickets) is marginally present within the survey area.
Laterallus jamaicensis coturniculus **California black rail**	-- / ST, FP G3G4T1 / S1	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of approximately 1 inch that do not fluctuate during the year, and dense upland buffer and marsh vegetation for nesting habitat.	**Low.** Suitable habitat (marshes and wet meadows) is marginally present within the survey area. Further, the nearest occurrence is approximately 2.5 miles to the southwest.
Pandion haliaetus **osprey**	-- / WL G5 / S4	Found along ocean shores, bays, freshwater lakes, and larger streams. Builds large nests in tree-tops within 15 miles of a good fish-producing body of water.	**Not Expected.** Suitable habitat (ocean shores, bays, freshwater lakes, and larger streams) is not present within the survey area. Further, the nearest occurrence is over 2 miles to the southwest.
Passerculus sandwichensis beldingi **Belding's savannah sparrow**	-- / SE G5T3 / S3	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in pickleweed (*Salicornia* spp.) on and around margins of tidal flats.	**Not Expected.** Suitable habitat (coastal salt marshes) is not present within the survey area. Further, the nearest occurrence is approximately 2.5 miles to the west.

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Polioptila californica californica **coastal California gnatcatcher**	FT / SSC G4G5T2Q / S2	Obligate, permanent resident of coastal sage scrub below 2,500 feet amsl in Southern California. Occurs in low, coastal sage scrub in arid washes, and on mesas, bowls, and slopes lacking tall perching vegetation. Not all areas classified as coastal sage scrub are occupied.	**Present.** One (1) individual was observed in the intact coastal sage scrub strip located at the southern end of the survey area. Further, there are 35 documented occurrences within the records search.
Rallus obsoletus levipes **light-footed Ridgway's rail**	FE / SE, FP G5T1T2 / S1	Found in salt marshes traversed by tidal sloughs, where dense growths of cordgrass (*Spartina foliosa*) and pickleweed dominate for nesting. Requires shallow water and mudflats for foraging on mollusks and crustaceans, with adjacent higher vegetation for cover during high water.	**Not Expected.** Although the nearest occurrence is approximately 800 feet to the east, suitable habitat (salt marshes) is not present within the survey area.
Riparia riparia **bank swallow**	-- / ST G5 / S2	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, and oceans to dig nesting holes.	**Not Expected.** Suitable habitat (vertical banks/cliffs in riparian areas) is not present within the survey area. Further, the nearest occurrence is over 5 miles to the southwest and is considered extirpated.
Setophaga petechia **yellow warbler**	-- / SSC G5 / S3S4	Found in riparian plant associations near water. Also nests in montane shrubbery in open conifer forests in the Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores (*Platanus racemosa*), ash (*Fraxinus* spp.), and alder (*Alnus* spp.*)*.	**Low.** Suitable habitat (riparian areas near water) is marginally present within the survey area. However, the nearest occurrence is over 5 miles to the west.

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Sternula antillarum browni (Nesting colony) **California least tern**	FE / SE, FP G4T2T3Q / S2	Colonial breeder on bare or sparsely vegetated, flat substrates, including sand beaches, alkali flats, landfills, or paved areas. Prefers broad, level expanses of open sandy or gravelly beach, dredge spoil, and other open shoreline areas, and broad river valley sandbars. Nests along the coast from San Francisco Bay south to northern Baja California.	**Not Expected.** Suitable nesting habitat (sandy or gravelly beaches) is not present within the survey area. Further, the nearest occurrence is approximately 1 mile to the southwest.
Vireo bellii pusillus (Nesting) **least Bell's vireo**	FE / SE G5T2 / S2	Primarily occupies riverine riparian habitats that typically feature a dense, stratified canopy and herbaceous wetland understory. Nests within 1-2 meters of the ground. Summer resident of Southern California below 2,000 feet amsl.	**Present.** One (1) individual was heard in the southern arroyo willow riparian forest located along the southeastern boundary of the survey area. Suitable nesting habitat (riparian habitat with herbaceous understory) is present within the survey area but not in the project site.
Mammals			
Choeronycteris mexicana **Mexican long-tongued bat**	-- / SSC G4 / S1	Occasionally found in San Diego County, which is on the periphery of their range. Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves, and in and around buildings.	**Low.** Suitable roosting habitat (buildings) is present within the survey area. However, the nearest occurrence is approximately 6 miles to the north.
Eumops perotis californicus **western mastiff bat**	-- / SSC G5T4 / S3S4	Primarily a cliff-dwelling species, occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts on cliff faces, high buildings, trees, and tunnels.	**Moderate.** Marginally suitable roosting habitat (tall buildings and trees) is present within the survey area. However, the nearest occurrence is adjacent to (east of) the survey area.

Scientific Name **Common Name**	**Status*** Federal / State CRPR *or* G-Rank / S-Rank	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
Lasiurus cinereus **hoary bat**	-- / -- G5 / S4	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	**Low.** Suitable roosting habitat (medium to large trees) is present within the survey area. However, the nearest occurrence is over 5 miles to the southwest.
Nyctinomops macrotis **big free-tailed bat**	-- / -- G5 / S3	Found in low-lying arid areas in Southern California. Needs high cliffs on rocky outcrops for roosting sites. Feeds principally on large moths.	**Not Expected.** Suitable roosting habitat (high cliffs on rocky outcrops) is not present within the survey area. Further, the nearest occurrence is approximately 5 miles to the south.
Perognathus longimembris pacificus **Pacific pocket mouse**	FE / SSC G5T1 / S1	Seems to prefer soils of fine alluvial sands and sandy slopes of coastal scrub near the ocean, but much remains to be learned. Historically, known to inhabit the narrow coastal mesas from the Mexican border north to El Segundo, Los Angeles County.	**Not Expected.** Suitable habitat (sandy slopes of coastal scrub) is not present within the survey area. Further, the nearest occurrence is over 3 miles to the south and this species is only known extant from eight locales.
Sorex ornatus salicornicus **southern California saltmarsh shrew**	-- / SSC G5T1? / S1	Inhabits coastal salt marshes of Los Angeles, Orange, and Ventura Counties. Requires dense vegetation and woody debris for cover.	**Not Expected.** Suitable habitat (salt marshes) is not present within the survey area. Further, the nearest occurrence is over 2 miles to the southwest.
Taxidea taxus **American badger**	-- / SSC G5 / S3	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrow.	**Not Expected.** Suitable habitat (open, uncultivated ground) is not present within the survey area. Further, the nearest occurrence is over 5 miles to the southwest.

* **California Rare Plant Rank (CRPR)**

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 approximately which more information is needed - a Review List
4 Plants of limited distribution - a Watch List

Threat Ranks

.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)

Federal Classifications

FE	Federally Endangered
FT	Federally Threatened
FP	Fully Protected

State Classifications

SE	State Endangered
ST	State Threatened
SCE	State Candidate for Endangered
SSC	California Species of Special Concern
WL	Watch List

G-Rank / S-Rank

Global Rank and State Rank as per NatureServe and CDFW CNDDB RareFind 5, ranging from critically imperiled (G1/S1) to demonstrably secure (G5/S5)

Infraspecific Taxon Conservation Status Ranks

Infraspecific taxa refer to subspecies, varieties, and other designations below the level of the species. Infraspecific taxon status (T-ranks) apply to plants and animals only; these T-ranks do not apply to ecological communities. The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank. Rules for assigning T-ranks follow the same principles outlined above for global conservation status ranks.