



**AN UPDATED
BIOLOGICAL RESOURCES ASSESSMENT FOR
TTM 36544; SKYLINE HEIGHTS PROJECT
CITY OF CORONA, RIVERSIDE COUNTY, CALIFORNIA**

±249.4 Acre Property, ±249.4 Acres Surveyed

APNs: 275-030-010, 275-040-006, 275-040-011, 275-040-012, 275-040-023, 275-040-024, 275-050-020, 275-050-021, 275-070-003, 275-080-010, USGS 7.5-minute topographic Corona South Quadrangle, Township 4 South, Range 7 West, portions of Sections 3, 4, and 9

Prepared For:

Brian Hardy
Richland Ventures, Inc.
3161 Michelson Drive, Suite 245
Irvine, CA 92612
949-383-4137

Prepared By:

L&L Environmental, Inc.

Leslie Irish, CEO, Principal Analyst	Lirish@lleviroinc.com
Ann Lopez, Delineator & Regulatory Analyst	ALopez@lleviroinc.com
Joshua Ball, Environmental Scientist	Jball@lleviroinc.com
Melanie and John Dicus, Botanists	Meldicus@gmail.com
Garrett Huffman, Biologist	Garrett@huffmanenvironmental.com
Ryan, Meszaros, Botanist	Ryan@huffmanenvironmental.com
Julia Fox, Technical Editor	Jkfox@lleviroinc.com

Field Work Conducted: 2008 & 2013 (GEC); 2016, 2017, 2018, 2023, 2024

Report Date: March 2015, August 2016, October 2024

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ACRONYMS

ADA	Americans with Disabilities Act
AMSL	Above Mean Sea Level
APN	Assessor's Parcel Number
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practices
BUOW	Burrowing Owl
CAGN	Coastal California Gnatcatcher
CC&R	Covenants, Conditions & Restrictions
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CMP	Coulter's Matilija poppy
CNDDB	California Natural Diversity Database
CNF	Cleveland National Forest
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DBESP	Determination of Biologically Equivalent or Superior Preservation
EIR	Environmental Impact Report
EO	CNDDB Element Occurrence
EVMWD	Elsinore Valley Municipal Water District
FESA	Federal Endangered Species Act
FPWE	Foothill Parkway Westerly Extension
GEC	Gonzales Environmental Consulting, LLC
GPS	Global Positioning System
HCP	Habitat Conservation Plan
HOA	Homeowner's Association
IML	Intermediate Mariposa Lily
IPaC	Information for Planning and Consultation
L&L	L&L Environmental, Inc.
LBV	Least Bell's Vireo
LDR	Low Density Residential
LMP	Land Management Plan
MBTA	Migratory Bird Treaty Act
MIS	Management Indicator Species
MM	Mitigation Measure
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
NAP	Not a Part
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
OHWM	Ordinary High Water Mark
ORV	Off-road Vehicle
PQP	Public Quasi-Public Conserved Lands
QCB	Quino Checkerspot Butterfly
RAWS	Remote Automatic Weather Station
RCA	Western Riverside County Regional Conservation Authority
RCRCD	Riverside-Corona Resource Conservation District

RPW	Relatively Permanent Water
RWQCB	Regional Water Quality Control Board
SBS	Scale Broom Scrub
SOPA	Schedule of Proposed Action
SWPPP	Stormwater Pollution Prevention Plan
TEPC	Threatened, Endangered, Proposed and Candidate
TNW	Traditional Navigable Water
TTM	Tentative Tract Map
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
USSCS	U.S. Soil Conservation Service
WEAP	Workers Environmental Awareness Program
WoS	Waters of the State
WoTUS	Waters of the U.S.

SUMMARY

Richland Ventures, Inc., is proposing to develop the Skyline Heights (TTM 36544) project (Project) on ±249.4 acres (survey area) of vacant land situated in the eastern foothills of the Santa Ana Mountains, southwest of the City of Corona in western Riverside County, California. The site is within the area covered by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) but is not within a Criteria Cell.

The survey area contains disturbed and undisturbed native and non-native habitat and includes native and non-native grasslands, streambeds, woodlands and riparian habitats, coastal scrub, scale broom scrub, chaparral, ornamental vegetation, and disturbed areas. Sensitive habitat communities present within the survey area include scale broom scrub (*Lepidospartum squamatum* Alliance), needle grass grasslands (*Nassella lepida*/*Nassella pulchra* Alliance), sycamore woodlands (*Platanus racemosa* Alliance), and bush penstemon scrub (*Keckiella antirrhinoides* Alliance).

Coast live oak woodlands are present within the survey area. Although coast live oak woodlands (*Quercus agrifolia* Alliance) are not designated sensitive (with state rank 3 or higher) and they are not wetland or riparian species in the arid west, coast live oak woodlands are generally considered of high value for wildlife. When present within drainages, coast live oak are included in the streambed mitigation and when present in upland areas they are addressed in the local ordinances for trees.

No state or federally listed plant species were observed in the survey area during studies. Special status species observed during focused botanical surveys on and immediately adjacent to the survey area, includes Brewer's calandrinia (*Calandrinia breweri*), intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), paniculate tarplant (*Deinandra paniculata*), chaparral nolina (*Nolina cismontana*), Fish's milkwort (*Rhinotropis [Polygala] cornuta* var. *fishiae*), and Coulter's matilija poppy (*Romneya coulteri*). Intermediate mariposa lily, Fish's milkwort, and Coulter's matilija poppy are MSHCP covered species and adequately conserved under the Plan

Chaparral nolina is not an MSHCP covered species. Mitigation Measure BIO-MM3 (Compensation Parcel) requires conservation of 10 acres of natural habitat, including approximately 1,396 chaparral nolina in perpetuity. BIO-MM4 (Designate Unimpacted Areas as Open Space) will conserve an additional ±1,767 chaparral nolina in designated open space (deed restricted to prevent development) and provide for long-term preservation of the species. BIO-MM2 (Special Status Botanical Species) requires the collection of seed and salvage/translocation of Coulter's matilija poppy, intermediate mariposa lily, and chaparral nolina, as well as preparation of a Chaparral Nolina Planting Plan. Impacts to chaparral nolina and other special status botanical species would be less than significant with implementation of proposed mitigation.

Brewer's calandrinia and paniculate tarplant are not MSHCP covered species. Project-related impacts to these species would not substantially affect regional populations or available habitat. Impacts would be less than significant, and no mitigation is proposed.

Focused surveys for coastal California gnatcatcher (*Poliioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), and listed fairy shrimp were negative. No federally listed threatened or endangered wildlife species or fully protected wildlife species were observed during surveys and the survey area is not within designated critical habitat for any federally listed wildlife species. Of the listed species with the potential to occur in the survey area, coastal California gnatcatcher, SKR and quino checkerspot butterfly are MSHCP covered species and adequately conserved under the Plan. The Project site is not within the boundaries of the Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP). The MSHCP covers impacts to Stephens' kangaroo rat, because the Project site is located within the MSHCP boundaries but is located outside of the boundaries of the SKR HCP. Project-related impacts (if any) to Stephens' kangaroo rat would be a covered impact under the MSHCP and no mitigation is proposed.

Golden eagle (*Aquila chrysaetos*), a state fully protected species, is also covered under the MSHCP and adequately conserved under the Plan. However, the MSHCP does not allow direct mortality or take of golden eagle, nor does it provide take authorization for nesting birds, including nesting golden eagles (discussed below).

Crotch bumble bee (*Bombus crotchii*) was observed on the Project site during 2024 surveys. Crotch bumble bee is a candidate for state listing as an endangered species and is not a covered species under the MSHCP. Under the California Endangered Species Act (CESA), a candidate species is provided the same protections as a listed species. In the event the Crotch bumble bee is listed as endangered or threatened by the CDFW, Proposed Mitigation Measure BIO-MM22 (Crotch Bumble Bee) would be implemented. BIO-MM22 (Crotch Bumble Bee) requires clearing/ground disturbing activities be prohibited from February 1 through September 30 within suitable habitat. For construction between October 1 and January 31, a pre-construction survey is required within suitable habitat to confirm that no nests occur on site. Should any nests be identified, the Project biologist shall consult with CDFW to determine if a permit is required. In addition, BMPs shall be observed during construction and pesticides considered to be harmful to the Crotch bumble bee will be prohibited. BIO-MM4 (Designate Unimpacted Areas as Open Space) will also conserve the unimpacted portions of the survey area and prevent the development of avoided Crotch bumble bee habitat. Impacts to Crotch bumble bee would be less than significant with implementation of proposed mitigation.

Mountain lion (*Puma concolor*) was detected on the site during surveys in 2013. The Southern California/Central Coast ESU (evolutionarily significant unit) of mountain lion is a candidate for state listing. It is a covered species under the MSHCP and adequately conserved under the

Plan. Mitigation Measure BIO-MM13 (Mountain Lion Program) requires the Project to develop a program to reduce the likelihood of human-lion conflicts.

The Project is within the MSHCP survey area for the burrowing owl. A 2024 focused habitat assessment and burrow survey found marginal habitat but no suitable burrows. No burrowing owls, burrowing owl sign, or suitable burrows are present, consistent with an earlier focused study conducted in 2013. A 30-day preconstruction clearance survey is required by the MSHCP (BIO-MM12 [Burrowing Owl]). If burrowing owl is identified in the Project impact area or buffer zone prior to or during construction, avoidance of any active burrows and an avoidance buffer is required, as well as development of a mitigation plan and consultation with CDFW. Impacts to burrowing owl would be less than significant with implementation of proposed mitigation.

Habitat suitable for nesting birds, including raptors, is present within and adjacent to the site. Avian nesting season is generally January 1 through August 31, although nesting periods can vary from species to species and year to year. The Project will avoid construction activities during the nesting season. A pre-construction clearance survey will be conducted within three days prior to the start of any Project-related activities. If active nests are present, an avoidance buffer will be established until the Project biologist has determined that the nest is no longer active (BIO-MM11 [Nesting Birds]). With implementation of proposed mitigation, impacts to nesting birds would be reduced to a less-than-significant level.

General mitigation measures to minimize impacts to both common and special status wildlife species include BIO-MM1 (Flag or Fence Disturbance Areas), BIO-MM14 (Biological Monitoring), BIO-MM15 through 17 (Invasive Vegetation Control), BIO-MM18 (Refuse Collection), BIO-MM19 (Speed Limit), and BIO-MM23 (Workers Environmental Awareness Program).

Special status wildlife species observed within the survey area, include orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), northern red-diamond rattlesnake (*Crotalus ruber*), Cooper's hawk (*Accipiter cooperii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), black-chinned sparrow (*Spizella atrogularis*), California horned lark (*Eremophila alpestris actia*), Lawrence's goldfinch (*Spinus lawrencei*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). These species, as well as other wildlife species that were not observed during surveys but have a moderate or high potential to occur, could be impacted by Project implementation. No additional mitigation is proposed as these species are covered under the MSHCP and are adequately conserved under the Plan.

Jurisdictional drainages are present within and immediately adjacent to the Project, which are subject to the control of the Regional Water Quality Control Board (RWQCB) under the Porter-Cologne Water Quality Control Act and CDFW under Section 1602 of the California Fish and Game Code. Waters and wetlands subject to the Federal Clean Water Act, including those

under the jurisdiction of the U.S. Army Corps of Engineers (USACE), are not present under the current regulations. Jurisdiction previously attributed to USACE in earlier documents was based on the implementation policies of the Clean Water Act which no longer apply.

Jurisdictional areas in the survey area, both on and within planned offsite impact areas, include ± 19.30 acres of CDFW/MSHCP jurisdiction, of which ± 10.43 acres are considered CDFW wetlands/riparian and ± 8.87 acres are CDFW streambeds/riverine. Of the ± 19.30 acres of CDFW/MSHCP jurisdiction, ± 2.48 acres are considered non-wetland Waters of the State (WoS) under the jurisdiction of RWQCB. No federal waters or wetlands subject to the Clean Water Act and under the jurisdiction of the USACE are present.

Based on the current development plans provided by KWC Engineers (dated 08/30/2024), the Project will permanently impact ± 10.51 acres of CDFW/MSHCP jurisdiction, of which ± 3.81 acres are wetlands/MSHCP riparian and ± 6.70 acres are non-wetland unvegetated or upland vegetated streambeds and MSHCP riverine. Of this ± 1.48 acres are non-wetland WoS under the jurisdiction of the RWQCB.

Temporary impacts include an additional ± 1.13 acres of non-wetland CDFW streambed and MSHCP riverine of which ± 0.25 acre is also of RWQCB non-wetland state waters associated with a temporary haul road.

Regulatory permits are required for impacts to these resources (BIO-MM9 [RWQCB Permit] and BIO-MM10 [CDFW Permit]). Mitigation for jurisdictional and riparian/riverine impacts is proposed at a value of 2:1 for permanent impacts and restoration of temporary impacts. Project-related impacts to CDFW wetlands/CDFW streambed/state waters and MSHCP riparian/riverine resources in the Project impact area would be less than significant with implementation of proposed mitigation.

No naturally occurring vernal pools were observed in the survey area. Two areas of seasonal ponding were observed within low points associated with disturbances related to past construction of the Foothill Parkway Westerly Extension. Wet and dry season fairy shrimp surveys were conducted with negative findings for the presence of fairy shrimp.

The Project surrounds a 10-acre parcel of Public/Quasi-Public Conservation Lands (PQP). Ten (10) acres of biologically equivalent or superior habitat to the PQP parcel, located immediately adjacent to Forest Service land (BIO-MM3 [Compensation Parcel]) and MSHCP Core B (Cleveland National Forest) will be avoided and deed restricted as compensation for edge effects that may occur to the PQP parcel and isolation of the habitat.

As proposed, the Project design will avoid impacts to ± 97.6 acres of habitat, including ± 7.74 acres of CDFW state streambeds/wetlands and MSHCP Riparian/Riverine habitat, and ± 0.8 acre of RWQCB state waters. Most of the avoided habitat is adjacent to the Cleveland National Forest

and large areas of existing open space. Natural habitat areas not impacted by the project will be designated as open space and conserved via deed restriction to prevent future development (BIO-MM4 [Designate Unimpacted Areas as Open Space]) and will add permanently to conserved habitat in the area adjacent to MSHCP Core B (Cleveland National Forest).

1.0) INTRODUCTION

The following report has been prepared for Richland Ventures, Inc. by L&L Environmental, Inc. (L&L). It describes the proposed Skyline Heights project (Project) and its potential impacts on biological resources. The Skyline Heights survey area consists of APNs: 275-030-010; 275-040-006, -011, -012, -023, and -024; 275-050-020 and -021; 275-070-003; and 275-080-010 totaling ±249.4 acres (survey area) located within the southwest area of the City of Corona in Riverside County, California. Following the annexation of lands within the survey area to the City of Corona, some of the identifying parcel numbers changed (RCGIS 2024). Therefore, not all parcel numbers will coincide with previous reports conducted by L&L and others.

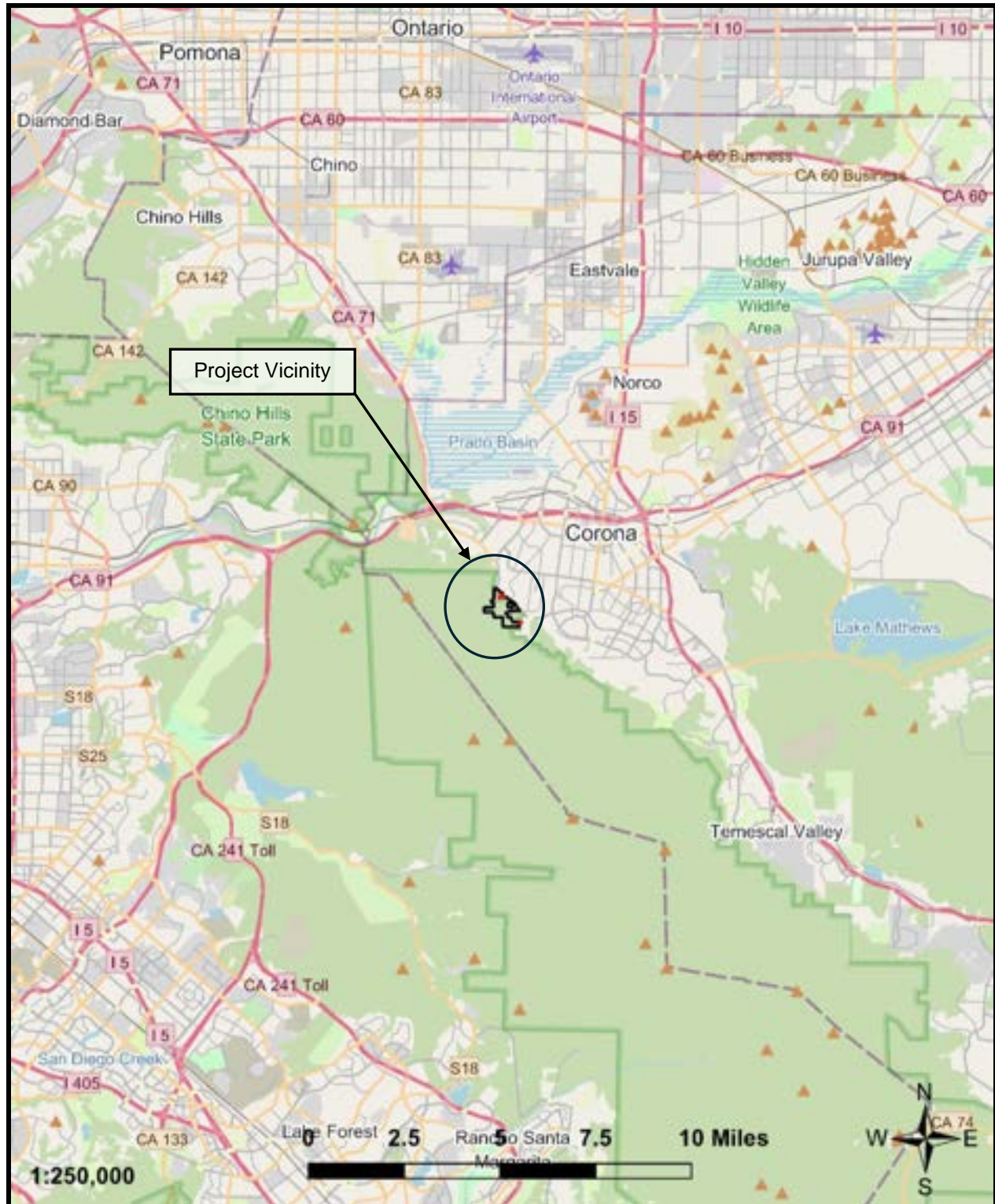
L&L's assessment consisted of (1) a review of previous data and reports documenting biological surveys conducted over the survey area, (2) a records search, conducted to verify special status species or habitats, (3) review of received comment letters regarding the Project, (4) an evaluation of available aerial photography and topographic maps, (5) general surveys for habitat and vegetation mapping, jurisdictional delineation, a focused habitat assessment and burrow survey for burrowing owl, and habitat assessments and focused surveys for the Crotch bumble bee and fairy shrimp.

Prior studies which supported the Skyline Heights CEQA approval in 2017 encompassed ±237.41 acres. Changes to the Project area since 2017 have resulted from the removal of APN 275-030-011 (12.11 acres), and the inclusion of portions of land previously graded and slopes created for the Foothill Parkway Westerly Extension (FPWE) project. The FPWE was addressed in a separate CEQA document.

1.1) Project Location

The Project is located within the southwest portion of the City of Corona, west of the FPWE and Trudy Way between Wardlow Canyon Wash to the north and Skyline Drive to the south, Riverside County, California (Figure 1). The Project is located within portions of Sections 3, 4, and 9 of Township 4 South, Range 7 West, of the San Bernardino Baseline Meridian, in Riverside County, California (Figure 2). This location is shown on the Corona South, California 7.5-minute U. S. Geological Survey (USGS) quadrangle. The approximate center of the survey area is located at 33°50'39.72" N/117°36'41.11" W.

The survey area is generally bounded to the north and east by single-family residences and on the south and west by the Cleveland National Forest and large privately owned parcels (Figure 3). Within the boundary of the survey area is an undeveloped 10-acre PQP parcel that is considered "Not a Part" and is federal land managed by the U.S. Forest Service.

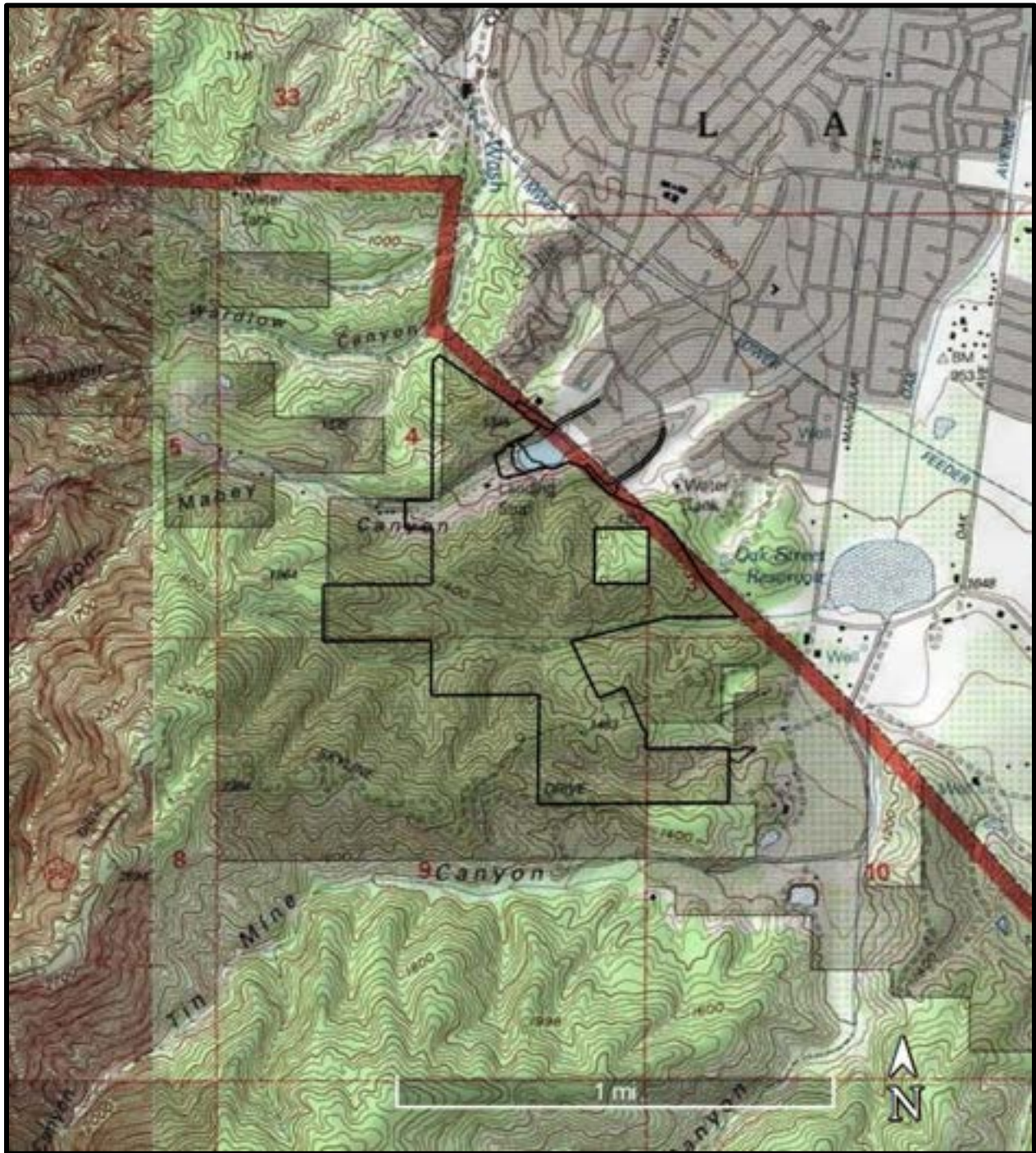


(OpenStreetMap)

Skyline Heights, City of Corona, Riverside County, California

Project Vicinity

Figure 1



(USGS 7.5-minute topographic Corona South Quadrangle Township 4 South, Range 7 West, portions of Sections 3, 4, 9, and 10)

Skyline Heights, City of Corona, Riverside County, California

Project Location

Figure 2



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Aerial Photograph
Figure 3

The immediate surrounding area consists of Low Density Residential (2 to 6 dwelling units per acre) as well as undeveloped open space within the City of Corona. Skyline Drive, a graded U.S. Forest Service access road, is located just south of the survey area. This road provides recreational hiking and mountain biking opportunities to residents on a local and regional level.

1.2) Project Description

1.2.1) Proposed Project

The proposed Skyline Heights Specific Plan would allow for development of the 249.4-acre property with up to 292 residential dwelling units on 65.41 acres, public parks on 9.25 acres, private parks on 2.17 acres, a 1.50 acre pump station/tank site, landscaped slopes on 49.07 acres, along with ± 121.99 acres of natural open space. The Project is located within APNs: 275-030-010, 275-040-006, 275-040-011, 275-040-012, 275-040-023, 275-040-024, 275-050-020, 275-050-021, 275-070-003, 275-080-010, USGS 7.5-minute topographic Corona South Quadrangle, Township 4 South, Range 7 West, portions of Sections 3, 4, and 9.

The Skyline Heights development would result in impacts to approximately 158.8 acres on and offsite, including ± 129.1 acres of direct physical impacts, ± 8.7 acres of construction buffer, ± 20.5 acres fuel modification zone impacts and ± 0.5 acre on the far west side of the development which may be impacted by flood control measures that could include inundation of vegetation and maintenance activities. Of the ± 158.8 acres of impacts, ± 1.7 acres associated with the proposed haul road will be temporary impacts.

This action would modify an earlier, February 1, 2017, City of Corona City Council approved the Skyline Heights project and certified Skyline Heights EIR. The Approved Project consisted of applications for a General Plan Amendment, Change of Zone, and a Tentative Tract Map (TTM 36544) to allow for future development of a 270.9-acre property (APNs 275-030-010; 275-040-006, -011, -012, -023, and -024; 275-050-020 and -021; 275-070-003; and 275-080-010) located west of Foothill Parkway and north of Skyline Drive within the City of Corona, California.

This report addresses the proposed revision to TTM 36544 (TTM 36544R1) which includes the reduction in property size from 270.9 acres to 249.4 acres.

2.0) METHODOLOGY

2.1) Literature Review

Preliminary investigations included a review of information obtained from the U.S. Fish and Wildlife Service (USFWS) and CDFW; literature searches; examination of aerial photographs; and database searches, including California Native Plant Society (CNPS), California Natural Diversity Data Base (CNDDDB) records, and special status species accounts for Riverside County, WebSoil, GlobeExplorer, Google Earth, Arid West Regional Wetland Plant List, Natural Resources Conservation Service, University of California at Davis, Agriculture and Natural Resources, California Soil Resources Lab and U.S. Geological Survey. A list of special status species was compiled, including all species in the Project vicinity that were:

- Listed as endangered or threatened, proposed for listing, or candidates for listing under the Federal Endangered Species Act (FESA);
- Included in one of the CDFW publications on species of special concern;
- “Fully protected” by the State of California;
- Included in the CNPS compilation;
- Identified as plants meeting the definition of rare or endangered under the California Environmental Quality Act (CEQA); or
- Listed as U.S. Forest Service sensitive species.

This information included both regional and site-specific data on special status species. These species are detailed in Tables 14 and 15.

A literature review was conducted to identify local occurrences and habitat requirements of special status species and communities occurring in the region. Literature reviewed included compendia provided by the resource agencies (CDFG 2009, 2012; CDFW 2023, 2024a, 2024b, 2024c; USFWS 1999a) and a search of the California Natural Diversity Database (CNDDDB; CDFW 2024c) and California Native Plant Society Inventory of Rare and Endangered Plants (CNPS 2024) for the USGS Alberhill, Black Star Canyon, Corona North, Corona South, El Toro (Lake Forest), Lake Mathews, Prado Dam, Riverside West, and Santiago Peak 7.5' minute topographic quadrangles. A search of the Information for Planning and Consultation database (IPAC; USFWS 2024a) was also conducted for the Project site. Special status species information from standard reference works, field guides, existing literature, and unpublished reports were also included as part of the background research.

Potentials for occurrence of plant and wildlife species were evaluated and classified as either absent, not expected, low, moderate, high, or occurs. These classifications are based on the presence and quality of habitat, geographic and elevation range of species, proximity to a known occurrence of a species obtained from CNDDDB or other reliable data, and field observations.

Classifications for individual species may be modified based on biologists' experience and expert opinion.

2.1.1) MSHCP

The Project lies within the MSHCP mapped burrowing owl survey area (RCA 2024a). The MSHCP requires that a habitat assessment be conducted to address potential impacts to habitat for burrowing owl as well as riparian species. If potential habitat for burrowing owl and/or selected riparian species is present, protocol surveys are required. More specifically, the MSHCP Implementation Structure specifies protection of species associated with riparian/riverine areas. A function and values assessment of a project site's jurisdictional features is part of the implementation structure (Dudek 2003). The assessment must consider species composition, topography/hydrology, and soil analysis. Analysis of the downstream functions and values related to conservation of covered species within criteria cells that may be affected by a project is also required.

The survey area is located within the Temescal Canyon Area Plan of the MSHCP but is not in a Criteria Cell. The survey area is adjacent to the east of Core B (Cleveland National Forest) and surrounds a single 10-acre parcel, owned by the U.S. Forest Service, identified in the MSHCP as Public/Quasi-Public Lands (PQP) (Figure 4).

2.1.2) Previous Reports

For the production of this Biological Resources Assessment, L&L reviewed and utilized both data and text from Gonzales Environmental Consulting, LLC's (GEC) biological reports and field data and results from L&L's 2016, 2017 and ongoing 2024 biological surveys. GEC's biological reports included:

- Determination of Biologically Equivalent or Superior Preservation APNs: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 (GEC 2013a).
- Habitat Assessment and Focused Surveys for Burrowing Owl APNs: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 (GEC 2013b).
- Habitat Assessment and Rare Plant Surveys for APNs: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 (GEC 2013c).
- Habitat Assessment and Focused Surveys for Coastal California Gnatcatcher APNs: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 (GEC 2013d).
- Habitat Assessment and Focused Surveys for Least Bell's Vireo APNs: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 (GEC 2013e).



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
PQP/WRCRCA Conserved Lands
Figure 4

- Jurisdictional Delineation for APNs: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 (GEC 2013f).

In addition, the following comment letters that supplied records or species accounts were included in our records search and document review and, where appropriate, that information was also included in our findings:

- Comment Letter Regarding Draft Environmental Impact Report: Skyline Heights Project, State Clearing House No. 2014021003. Leslie MacNair, Regional Manager, California Department of Fish and Wildlife. January 19, 2016 (CDFW 2016).
- Comment Letter Regarding Draft Environmental Impact Report: Skyline Heights Project. Darrell Vance, District Ranger, Trabuco Ranger District, Cleveland National Forest, U.S. Forest Service. May 2, 2016 (USFS 2016).
- Comment Letter Regarding Draft Environmental Impact Report: Skyline Heights Project. Kate Kramer, Conservation Co-chair, Riverside/San Bernardino Chapter, CNPS. May 1, 2016 (CNPS 2016).

2.2) Biological Survey Methods

Biological studies included in this report were conducted in 2005, 2006, 2008, and 2013 (GEC) and 2016, 2017, 2019 and 2024 (L&L). Biological studies conducted between 2005 and 2013 included general biological surveys to identify plants and wildlife, habitat assessments and focused surveys for burrowing owl, least Bell's vireo and coastal California gnatcatcher, focused surveys for narrow endemic and special status plant species, a jurisdictional delineation and a Determination of Biologically Equivalent or Superior Preservation (DBESP).

Biological studies conducted between 2016 and 2019 consisted of general biological surveys to identify plants and wildlife, an evaluation of previously mapped oak trees and riparian vegetation, a habitat assessment for burrowing owl and least Bell's vireo, focused surveys for special status plant species, and vegetation mapping. The general biological surveys were conducted concurrently with the other surveys described below.

In early 2024, an updated habitat assessment was conducted to address the current Project area condition, to identify any potential changes from previous conditions and to determine current survey needs to address special status species, current MSHCP survey protocol and jurisdictional drainages. Additional time was spent assessing the needs for burrowing owl, least Bell's vireo, Crotch bumble bee and fairy shrimp within seasonal ponding areas. Based on this, focused assessments and protocol surveys were conducted for special status plants, fairy shrimp, Crotch bumble bee and burrowing owl in 2024.

Survey limitations during the biological field work included density of cover, steep terrain, and accessibility restrictions. Where areas could not be accessed, they were viewed from the closest

accessible adjacent landform via the use of binoculars and compared to aerial photograph prints or electronic devices carried in the field and supplemented by remote low elevation aerial real time photography.

2.2.1) Vegetation

Prior to conducting field work, previous vegetation mapping, aerial photography and online digital vegetation maps were reviewed to verify community types within the survey area and to identify potential changes from previous conditions.

Mapping of upland vegetation alliances was performed with the aid of ArcGIS and Google Earth programs. A preliminary vegetation map was drawn onscreen at a scale of 1:2,000 to 1:5,000 using color aerial photographs (Google) and used as a base layer. The polygons of this preliminary map differentiate the distinct land cover signatures related to patterns observed on the aerial.

All vegetation types within the survey area were visited on foot and inaccessible areas (i.e., steep slopes greater than 2:1) were observed from adjacent vantage points or with the use of binoculars and low-level aerial photography, as needed. General survey limitations included areas with dense concentrations of poison oak, steep and impassable slopes, and dense perennial chaparral shrub cover that limited accessibility of some areas. All inaccessible areas were consistent with the surveyed area and no vegetation type was excluded from the survey.

In the field, vegetation communities were evaluated, identified, and mapped on large-scale aeriels or by the use of hand held electronic equipment (Trimble/I-pad/Tablet). L&L then transferred field data into Google Earth and to a GIS system for calculations (NAD83). This was accomplished by drawing polygons for each habitat type and calculating the area of habitat or the number of individual species by global positioning system (GPS) point. The resulting digital layer was used to produce figures included in this report.

Riparian/Riverine Habitat

Aerial photography, topography and vegetation mapping was reviewed along with previous agency reviewed jurisdictional mapping for the Project area. This was followed by overlying the revised Project boundary to determine the current Project resources and planned impacts.

Vegetation mapping within drainages was performed as a part of the overall habitat mapping effort. In general, L&L considered channels, either unvegetated or vegetated with upland species, to be CDFW streambeds and MSHCP riverine habitat. Wetland or facultative wet species were considered to be MSHCP riparian and CDFW wetlands. Where wetland vegetation fell within or adjacent to drainages, that habitat was considered part of the CDFW jurisdiction and was calculated to the outer limits of the dripline. Where coast live oak (*Quercus agrifolia*), an Arid

West upland species, was dominant we considered the drainage to be riverine. In addition to being CDFW wetlands any facultative woody species was considered to be riparian under the MSHCP. L&L describes jurisdiction in terms of non-wetland streambed (unvegetated or upland vegetated) and wetland (lowland or facultative) to aid in the development of a functions and values assessment. Detailed methodologies for the jurisdictional delineation are in Section 2.6.

2.2.2) Wildlife Survey and Habitat Assessment

General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed and special status plant and wildlife species potentially occurring in the survey area. An inventory of all species observed during the course of the surveys is included in Tables 11 and 12, Appendix A.

Potential for occurrence of listed and special status species was classified as: absent, not expected, low, moderate, high, or occurs. These classifications are based on the presence and quality of habitat, geographic and elevation range of species, proximity to a known occurrence of a species obtained from CNDDDB or other reliable data, and field observations. Classifications for individual species may be modified based on biologists' experience and expert opinion. The definitions for each classification are:

- Occurs: Species was detected during surveys or previously documented on the Project site or adjacent areas.
- High: Species documented in the vicinity (i.e., within 5 miles) of the Project site and suitable habitat is present, but species not detected during surveys.
- Moderate: Species documented in the vicinity of the Project site or suitable habitat present, and site is within geographic and elevational range of the species.
- Low: Species not documented in the vicinity of the Project site or suitable habitat is marginal.
- Not Expected: Species not documented in the vicinity of the Project site and suitable habitat marginal or absent, or site is not within geographic and elevational range of the species.
- Absent: No potential for the species to occur due to lack of habitat, geographic or elevation range, species life history, survey results, etc.

Based on the results of the habitat assessments and evaluation of special status species, some focused surveys were determined to be appropriate for the survey area and adjacent lands (where warranted by protocol).

Burrowing Owl

The burrowing owl focused habitat assessment and burrow survey was conducted on March 6, 2024. The habitat assessment and burrow survey followed the "Burrowing Owl Survey Instructions" for the Western Riverside County Multiple Species Habitat Conservation Plan Area,

dated March 29, 2006 (RCA 2006) per Section 6.3.2 of the MSHCP. These survey instructions are similar to and generally follow the California Burrowing Owl Consortium Burrowing Owl Survey Protocol and Mitigation Guidelines.

A habitat assessment was performed to determine the survey area's suitability to support burrowing owls. Key indicators of suitability included the presence of low-growing vegetation within grassland, desert, and scrublands, small fossorial mammals and their associated burrows, and isolated features such as cement, wood debris piles, and/or cement culverts.

2.3) Botanical Survey Methods

L&L performed focused botanical field surveys in 2016, 2017, and 2024. A floristic study of the survey area, as required in a complete CEQA analysis, was conducted by botanists John and Melanie Dicus (2016 and 2017) and biologists Garrett Huffman and Ryan Meszaros (2024). Survey dates were determined by targeting the blooming periods of the listed species, local blooming data, and use of reference sites. Focused plant surveys dates coincided with blooming periods in the local area.

The plant surveys were floristic in nature and followed protocols recommended in USFWS (2000), CDFW (CDFG 2009, CDFW 2018), and CNPS (2001) and the standards set forth in the MSHCP. All plants encountered were identified to a level necessary to ensure detection of listed or special status species. An inventory of all plant species observed during the course of the surveys is included in Table 11 (Appendix A).

Table 1. Botanical Survey and Vegetation Mapping Dates and Weather Conditions.

Date	Time	Temp (°F) Start/End	Wind (mph) Start/End	Cloud Cover (%) Start/End	Biologists
2016					
04/10/2016	1630-1830	65/60	1-3/0-2	20/20	J. & M. Dicus
04/11/2016	0800-1800	59/62	0-1/0-3	100/10	J. & M. Dicus
05/27/2016	1630-1900	77/70	0-1/0-2	0/0	J. & M. Dicus
5/28/2016	0815-1845	60/72	1-2/0-1	100/0	J. & M. Dicus
05/29/2016	0815-1815	63/71	0-2/1-2	100/0	J. & M. Dicus
06/26/2016	0830-1600	70/101	0/4-10	0/0	J. & M. Dicus
06/27/2016	0615-1345	68/100	0/0-2	0/40	J. & M. Dicus
06/28/2016	0630-1400	68/103	0-1/0-2	40/100	J. & M. Dicus
06/29/2016	0630-1300	66/97	0/0-2	0/0	J. & M. Dicus
08/20/2016	0700-1300	67/86	0-1/0-1	0/0	J. & M. Dicus
08/21/2016	0700-1330	68/89	0-1/0-4	0/10	J. & M. Dicus
2017					
03/25/2017	0730-1630	54/65	1-3/0-1	100/5	J. & M. Dicus
04/13/2017	0800-1700	58/68	0/0-2	60/50	J. & M. Dicus
05/30/2017	0750-1700	56/75	0-3/0-2	100/5	J. & M. Dicus
06/05/2017	0810-1715	61/88	0-4/0-3	100/0	J. & M. Dicus
08/25/2017	0830-1630	68/89	0-4/0-3	0/0	J. & M. Dicus
08/26/2017	0800-1700	72/95	0-1/0-2	0/0	J. & M. Dicus
2024					
03/06/2024	1100-1600	59/51	2-5/8-10	80/100	G. Huffman, R. Meszaros
03/23/2024	1400-1700	53/56	1-3/2-5	70/30	G. Huffman, R. Meszaros
04/05/2024	1600-1900	50/48	2-5/2-5	30/30	G. Huffman, R. Meszaros
04/12/2024	1545-1645	64/62	2-5/2-5	0/0	G. Huffman
04/19/2024	1445-1545	68/70	3-6/4-8	0/0	G. Huffman
05/16/2024	0945-1600	63/73	3-8/2-6	100/60	R. Meszaros
05/17/2024	0830-1400	60/71	2-4/3-8	100/80	R. Meszaros
06/23/2024	0830-1500	76/88	2-4/3-8	0/5	R. Meszaros
06/24/2024	0700-1330	71/89	0-2/2-6	0/5	R. Meszaros
09/11/2024	0700-1330	68/83	0-3/4-8	0/0	G. Huffman
09/13/2024	0800-1400	71/81	2-4/3-6	0/10	G. Huffman

This methodology is consistent with recommendations by the California Native Plant Society (CNPS 2001) because it provides more than a "reasonable coverage" of all habitat types and was "floristic in nature." Systematic field techniques in all habitats of the site were employed to ensure thorough coverage of potential impact areas that is sufficient to provide comprehensive reporting. Where dense vegetation or steep terrain prevented straight transects, meandering transects were employed. Inaccessible areas (i.e., steep slopes of greater than 2:1) were observed from the nearest adjacent vantage point with the binoculars. General survey limitations included areas with dense concentrations of poison oak, steep and impassable slopes, and dense perennial chaparral shrub cover. All inaccessible areas were consistent with the surveyed area and no habitat type was excluded from the survey.

Prior to field surveys, a search of the CNDDDB (CDFW 2024c) was conducted to determine the special status species identified within the Project topographic quadrangle (quad) and adjacent quads. In addition, information from the U.S. Forest Service, Cleveland National Forest, Santa

Ana Mountain Area (USFS 2005c) was included. Table 13 documents all special status botanical species that may occur in the vicinity of the survey area. Table 14 separately documents all U.S. Forest Service, Cleveland National Forest sensitive botanical species that may occur in the Santa Ana Mountain area. The potential for these species' occurrence (occurs, high, moderate, low, not expected, or absent) was assessed.

Climate data was accessed through weatherunderground.com for the Corona Airport and Corona weather station KCACORON19. The KCACORON19 station was chosen as a second site because the location is closer to the Skyline survey area and the data has been collected since at least 2012. Records for these locations document rainfall from September 1, 2015, through August 23, 2016, as 7.72 and 10 inches, respectively. Records for September 1, 2016, through August 31, 2017, as 14.27 and 16.83 inches, respectively. Rainfall during the 2015-2016 season was lower than the average of 12 inches, but this total is significantly higher than the 2012-2013 survey season. Rainfall in 2017 and 2024 is above average.

No species known to the area from available records or comment letters was left out of our analysis.

2.4) Crotch Bumble Bee Methods

Habitat Assessment

Prior to conducting the Crotch bumble bee survey and in preparation for the field visits historic and current species accounts and occurrence data was reviewed to determine the closest recorded sightings. Habitat maps and aerial photos of the survey area were reviewed for their potential to support CBB. Following this, a field survey and habitat assessment was conducted on March 6, 2024, and resulted in the delineation of relatively high concentration areas of CBB preferred nectar patches in bloom or that would bloom at a later survey visit. An area of ±54.62 acres of optimal nectar sources where surveyors would have the greatest chance of encountering CBB.

Focused Survey

The Crotch bumble bee focused survey was conducted by Garrett Huffman during the 2024 focused survey season. Three survey rounds were conducted from May 13 through July 19, 2024, with a minimum of two weeks between each survey. Efforts were made to survey during the most active flight periods and peak blooming periods of potential nectar and pollen sources. Biologists focused their survey efforts within areas with high-quality nectar sources commonly associated with CBB. The survey coverage goal was a minimum of three acres per hour but would deviate from that average at the discretion of the biologist. Examples of factors considered when evaluating survey speed are nectar availability and density, overall vegetation density and topography, and invertebrate activity. Surveys consisted of a combination of physical,

meandering transects and passive surveying with the aid of binoculars. When *Bombus* was encountered, the specimen would be observed and identified by using a combination of binoculars and photography. Protocol survey weather was defined as temperatures between 60 to 90 degrees Fahrenheit (°F), wind speeds less than eight mph, and absence of fog or precipitation (CDFW, 2023).

CBB individuals were only identified visually and were not captured. Individuals detected were photographed to the extent feasible to confirm identification.

Survey data collected includes start/end weather data and times, area surveyed with acreages, nectar/pollen source locations, a list with general abundance of nectar/pollen source species attractive to bees, and bee species observed during the survey day. Data collected at each detection location includes GPS point location, habitat type, nearby nectar/pollen source species list, flowering stage and abundance of each nectar species present, observed bee behavior, observed nest site nearby (if applicable), weather conditions, representative photograph of the habitat, and a photograph of the Crotch bumble bee individual (if possible).

Survey areas were mapped by recording a global positioning system (GPS) polygon using Fields Map by ArcGIS. Dominant nectar species were recorded on digital data sheets through the Fulcrum mobile application. Nectar sources were continuously reevaluated during each survey round to determine where to allocate survey efforts. Once potential nectar sources in a patch had senesced, the nectar source was visited briefly to confirm low suitability or not revisited in subsequent rounds.

Table 2. Crotch Bumble Bee Survey Dates and Weather Conditions.

Date	Time	Temp (°F) Start/End	Wind (mph) Start/End	Cloud Cover (%) Start/End	Biologists
05/13/2024	1007-1607	62/78	2-5/3-6	100/0	G. Huffman, B. Martinez
05/14/2024	1014-1626	62/78	3-6/2-6	100/10	G. Huffman, B. Martinez
05/16/2024	1021-1633	63/72	0-2/3-6	100/40	G. Huffman, B. Martinez
06/25/2024	0730-1400	76/88	2-4/3-8	0/5	R. Meszaros
06/27/2024	0700-1330	71/89	0/2-6	0/5	R. Meszaros
07/15/2024	0630-1330	70/89	0/2-6	0/25	R. Meszaros
07/19/2024	0700-1200	70/89	0-2/2-7	0/0	R. Meszaros

A summary Crotch bumble bee report (Appendix F) includes habitat descriptions, nectar/pollen source observations, survey polygon mapping, observations of the target species, and habitat quality descriptions within the survey area.

2.5) Fairy Shrimp Methods

Habitat Assessment

Biologist Garrett Huffman (TE-20186A-3.2) of conducted an assessment of the Project site on March 6, 2024, to determine habitat suitability for supporting fairy shrimp. Two low points capable of seasonal ponding were identified during the habitat assessment and focused fairy shrimp surveys were recommended (Appendix G). These features appear to be anthropomorphic in origin and likely developed as a result of construction activities related to FPWE. Additional indicators considered in the recommendation included cracked dry soil, evidence of periodic inundation, and a change in vegetative cover or density.

Wet Season

Survey methodology was conducted in accordance with the USFWS Survey Guidelines for Listed Large Branchiopods, revised November 13, 2017 (USFWS 2017) for wet season vernal pool branchiopod surveys. Per the Guidelines, the wet season generally occurs in California between October and June. Suitable ponding was detected late in the wet survey season and surveys were conducted March 23, 2024, to April 19, 2024. Beginning on March 23, 2024, each feature was sampled at seven-day intervals until dry and within seven days of the feature becoming inundated again. Survey visits were discontinued after the features went dry ending the season.

Biologist Garrett Huffman (TE-20186A-3.2) conducted all wet season vernal pool sampling on the project site. Data collected included average and maximum water depth, water and air temperature, length, width, extent and form of disturbance, presence of fairy shrimp, and detections of any other benthic macroinvertebrates. A standard 50 micron handheld net was used to sweep through the water and examine invertebrates. If fairy shrimp were to be detected, representative specimens of the feature would be collected, labeled and vouchered.

Dry Season

Dry season soil samples were collected in June 2024 following the wet season survey period. Quantity of sample collections is determined by applying USFWS Survey Guidelines for Listed Large Branchiopods (USFWS 2017) formula by calculating approximate feature size in square meters. Two seasonal ponding features were estimated to be in between 25-235 square meters (0.05 acres) requiring a minimum of 25 collected soil samples. All samples were collected at an average volume of 50-100 milliliters each and from the lowest topographic areas within the pool to maximize the detection of cysts, if present. Dry sample collections were conducted by biologist Garrett Huffman (TE-20186A-3.2) and dry sample processing conducted by biologist Chuck Black (TE-835549-7).

Project samples were hydrated for approximately 1-2 hours in tap water and then washed through a set of sieves. The material was passed through a Number 45 (.0139") USA Standard Testing Sieve, A.S.T.M.E.-11 specification, and caught on a Number 70 (.0083") Sieve. The filtered material was then rinsed into a container with approximately 50 millimeters of a saturated brine solution to float organic material, including fairy shrimp cysts. The material floating on the brine was decanted onto a paper filter on a filter funnel, and water was removed through the filter paper by vacuum suction. A 6.3570x power Olympus SZX9 Zoom Stereo Microscope was used to examine the remaining material. Distinctive fairy shrimp cysts, if present, were individually counted (if less than approximately 50) or estimated (for larger numbers) by examining $\frac{1}{4}$ or $\frac{1}{2}$ subsections of the filter and multiplying the subset by the appropriate factor. The presence and number of other macro-invertebrates were also noted in samples if detected.

Additional details can be found in the fairy shrimp report provided in Appendix G.

2.6) Jurisdictional Delineation Methods

Potential for occurrence of waters and wetlands within the survey area subject to the jurisdiction of CDFW under Fish and Game Code 1602, RWQCB jurisdictional waters and wetlands under the Clean Water Act and Porter-Cologne, and USACE jurisdictional waters and wetlands under the Clean Water Act were evaluated through a literature review and a visit to the property. The literature reviewed included a previous jurisdictional delineation and various other reports and studies conducted by GEC prior to 2015. L&L also reviewed the Project topographical mapping provided by KWC Engineers (2015), aerial photography provided by Google Maps and Google Earth (Google Earth 2024) or others, soils maps and descriptions (NRCS 2024), topographic maps (USGS 2024), the list of Hydric Soils (USSCS 1985), the list of wetland plants in California (Reed 1988), and the Arid West Supplement (Curtis and Lichvar 2010).

The delineation contained in this assessment concentrated on the updated definitions of state and federal waters, the current CDFW guidelines both written and spoken and the updated MSHCP guidance on determining riparian and riverine habitats.

The definition of state waters has been refined since the original publication of the Skyline Heights EIR and is now considered to be the water mark plus any associated wetlands. Wetlands are defined here using the federal 3 criteria of hydric soils, vegetation and the presence of water. As all of the drainages within the Skyline Heights SP are ephemeral and no federal wetlands are present, the WoS are consistent with the earlier reported Waters of the U.S. (WoTUS).

The definition of federal waters has been the subject of various guidance and court rulings which have changed the results of the Skyline Heights SP from the original findings. While a 404 permit was originally issued for the Project under the guidance at the time, all of the drainages present are ephemeral and as such are not subject to the current definition of federal WoTUS.

Before visiting the survey area, a detailed topographic map of the property (received from KWC) was studied. All features evident on the map were marked and considered potential jurisdictional areas to be evaluated in the field. The feature systems were labeled 1 through 6 for reference in the field and in this report.

Soil maps and descriptions of local soils from the USDA Natural Resources Conservation Service Soil Survey Geographic [SSURGO] Database (NRCS 2024) were evaluated for their properties relating to potential wetlands. Soil conditions in the survey area were noted during the field visit and discrepancies between observations and NRCS descriptions were evaluated using a Munsell soil color chart (Munsell 2000).

Fieldwork was conducted on February 21, 2015, June 15 and 16, 2019, September 28 and 29, 2023 and October 2, 3 and 4, 2023. All features were examined in the field either on foot or from adjacent ridgelines.

Dominant plant species were listed along with any potential indicators of wetland conditions. The outside dripline of vegetation was incorporated into the jurisdiction if it was considered to be a portion of the drainage system. Where half or more of the dominant plant species on a site are ranked as "obligate wetland," "facultative wetland," or "facultative" species (OBL, FACW, or FAC, respectively, see Table 3) we considered it a state wetland.

Table 3. Summary of Wetlands Vegetation Criteria

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (Estimated probability 67%-99%)
Facultative (FAC)	Equally likely to occur in wetlands and non-wetlands (est. probability 34%-66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67%-99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)

2.6.1) Riparian/Riverine and Vernal Pools

In conformance with the MSHCP, this report addresses riparian/riverine and vernal pool habitat present within the site. Where riparian vegetation is associated with drainages (and to the extent that it is native to California) we considered it suitable for a designation as riparian under the MSHCP. Where flows evidence some level of energy, at least ephemerally, we consider them riverine in the broadest sense. Where low point(s) occurred with evidence of seasonal ponding whether naturally occurring or man-made we considered three factors including: suitable soils and soils conditions, proper hydrology, and one or more vernal pool indicator species.

L&L evaluated the soils maps and the site condition for potential to support fairy shrimp or vernal pool species. Where present, the areas were mapped and photo documented for inclusion in a

jurisdictional delineation, an MSHCP determination of biological equivalence or superior preservation (DBESP) and/or a focused fairy shrimp study as appropriate.

2.6.2) Nomenclature Used

Terminology has changed over the years. Toward greater clarity and understanding, L&L uses terms in this report that follow USACE 1987 and Arid West manuals, CDFW 1602 Code, RWQCB State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State, and MSHCP Section 6.1.2 guidelines, both published and expressed. We also describe linear features or channels as Streambeds (CDFW) and State Waters (RWQCB) and Wetlands as habitat areas meeting any one (1) of the three (3) criteria of appropriate hydrology, hydric soils, or hydric vegetation. Within the MSHCP area all naturally occurring state drainages are also considered riverine habitat and woody wetland vegetation is considered riparian, while man-made features in otherwise upland areas are not (unless part of or replacing a historic natural drainage and displaying a direct downstream connection to wetland habitat).

2.6.3) Definition of Waters of the U.S.

In *Sackett*, the Supreme Court concluded that the *Rapanos* plurality was correct and the Clean Water Act's use of WoTUS encompasses only relatively permanent water (RPW), standing or continuously flowing bodies of water which form a geographical feature that are described in ordinary parlance as streams, oceans, rivers, and lakes. Wetlands are part of WoTUS when there is a continuous surface connection so there is no clear demarcation between WoTUS and wetlands. The Court concluded that the significant nexus standard is inconsistent with the Clean Water Act.

On August 29, 2023, the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers issued a final rule that amends the "Revised Definition of Waters of the United States (WoTUS) to conform key aspects of the regulatory text to the U.S. Supreme Court's May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency*. The conforming rule was published in the Federal Register and became effective on September 8, 2023. The federal register defines WoTUS as relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to [navigable] waters; intrastate lakes and ponds that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) WoTUS. For the purposes of this report, we considered WoTUS to be the ordinary high-water mark (OHWM) if continuous connectivity to actual WoTUS is established as in an RPW. The OHWM means that line established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate mean established in

the arid west manual as primary or secondary indicators. We did not consider ephemeral drainages to be WoTUS.

The limits of jurisdiction in non-tidal waters are: (1) in the absence of adjacent wetlands, jurisdiction extends to the ordinary high-water mark, or (2) when federal wetlands are present, jurisdiction extends beyond the ordinary high-water mark to the limit of the adjacent wetlands, or (3) when the water of the United States consists only of wetlands, jurisdiction extends to the limit of the wetland.

2.6.4) Definition of State Wetland and Waters

In 2019, the State Water Resources Control Board (State Water Board) adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures). The Procedures consist of four (4) major elements: 1) a wetland definition; 2) a framework for determining if a wetland feature is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

An area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both, (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate, and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The Water Code defines "waters of the state" broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the state" includes all "waters of the U.S."

The following wetlands are waters of the state: (1) natural wetlands, (2) wetlands created by modification of a surface water of the state, (3) artificial wetlands that meet any of the following criteria: (a) approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration; (b) specifically identified in a water quality control plan as a wetland or other water of the state; (c) resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or (d) greater than or equal to one (1) acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one (1) or more of the following purposes [i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3(a), or 3(b)]: (i) industrial or municipal wastewater treatment or disposal, (ii) settling of sediment, (iii) detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program, (iv) treatment of surface waters, (v) agricultural crop irrigation or stock watering, (vi) fire suppression, (vii) industrial processing or cooling, (viii) active surface mining – even if the site is

managed for interim wetlands functions and values (ix), log storage, (x) treatment, storage, or distribution of recycled water, (xi) maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits), or (xii) fields flooded for rice growing.

All artificial wetlands that are less than one (1) acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

For the purposes of this report, we considered all watermark RPW or ephemeral plus any adjacent wetland vegetation to be waters of the state. Meaning any OHWM previously calculated as federal waters was considered to be waters of the state.

Coast live oaks which were previously classified as a facultative or wetland species in earlier versions of this report but have been reclassified as upland species (USACE 2022). As a result, in this report we considered drainages where oaks are dominant within the drainage to be riverine and not riparian.

2.6.5) Wetland Delineation

The permitting authority shall rely on any wetland area delineation from a final report verified by the U.S. Army Corps of Engineers (USACE) for the purposes of determining the extent of wetland waters of the U.S. A delineation of any wetland areas potentially impacted by the Project that are not delineated in a final report verified by the USACE shall be performed using the methods described in the three (3) federal documents collectively referred to as “1987 Manual and Supplements” to determine whether the area meets the definition of a wetland as defined above. As described in the 1987 Manual and Supplements, an area “lacks vegetation” if it has less than five (5) percent coverage of plants at the peak of the growing season.

2.6.6) Relevant Manual and Supplements

- Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). Ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

3.0) RESULTS

The results of biological surveys conducted on the site from 2005 to 2017 are summarized in Table 4. The current results are summarized below and data from earlier studies, where relevant, are included.

3.1) Soils and Topography

Soils data for the survey area were obtained from the U.S. Department of Agriculture, Natural Resource Conservation Service and Soil Survey Geographic (SSURGO) Database (NRCS 2024). The survey area is a mixture of Cieneba sandy loam (30-75% slopes, eroded), Soboba gravelly loamy sand (0-5% slopes), Yorba gravelly sandy loam (9-15% slopes), and Yorba cobbly sandy loam (30-50% slopes, Figure 5). The overwhelming majority of the survey area is characterized as Cieneba sandy loam.

The soils observed are similar in texture and color to those mapped although unmapped clay inclusions were also observed along some ridge lines. Soils were compacted and unstratified over the majority of the survey area. Soils at soil pit locations did not meet the National Technical Committee for Hydric Soils criteria for hydric soils within the survey area.

Topographically the survey area is located at the base of the Santa Ana Mountains and consists of relatively gentle to moderately sloping terrain that drops downward to the north and east, depending on the location in the landscape. Areas that are hilly to steep are generally rocky. The survey area has rolling hills and valleys traversed by various small tributaries to Wardlow Wash, Mabey Wash, an unnamed blueline stream, and existing residential storm drain systems. The very northern tip of the survey area lies south of Wardlow Wash (a blueline stream). Most of the northern portion of the survey area drains toward Mabey Canyon Wash (a blueline stream). Portions of Mabey Canyon Wash were confined and leveled to support a small plane runway, by a previous landowner. Near the eastern survey border, the wash enters into a large flood control basin. In the middle of the survey area, the unnamed blueline stream (Feature 3 [F-3]) flows from west to east. F-3 becomes a trapezoidal channel at its terminus at Foothill Parkway. It flows into the Oak Hills flood control basin, which is outside of the survey limits.

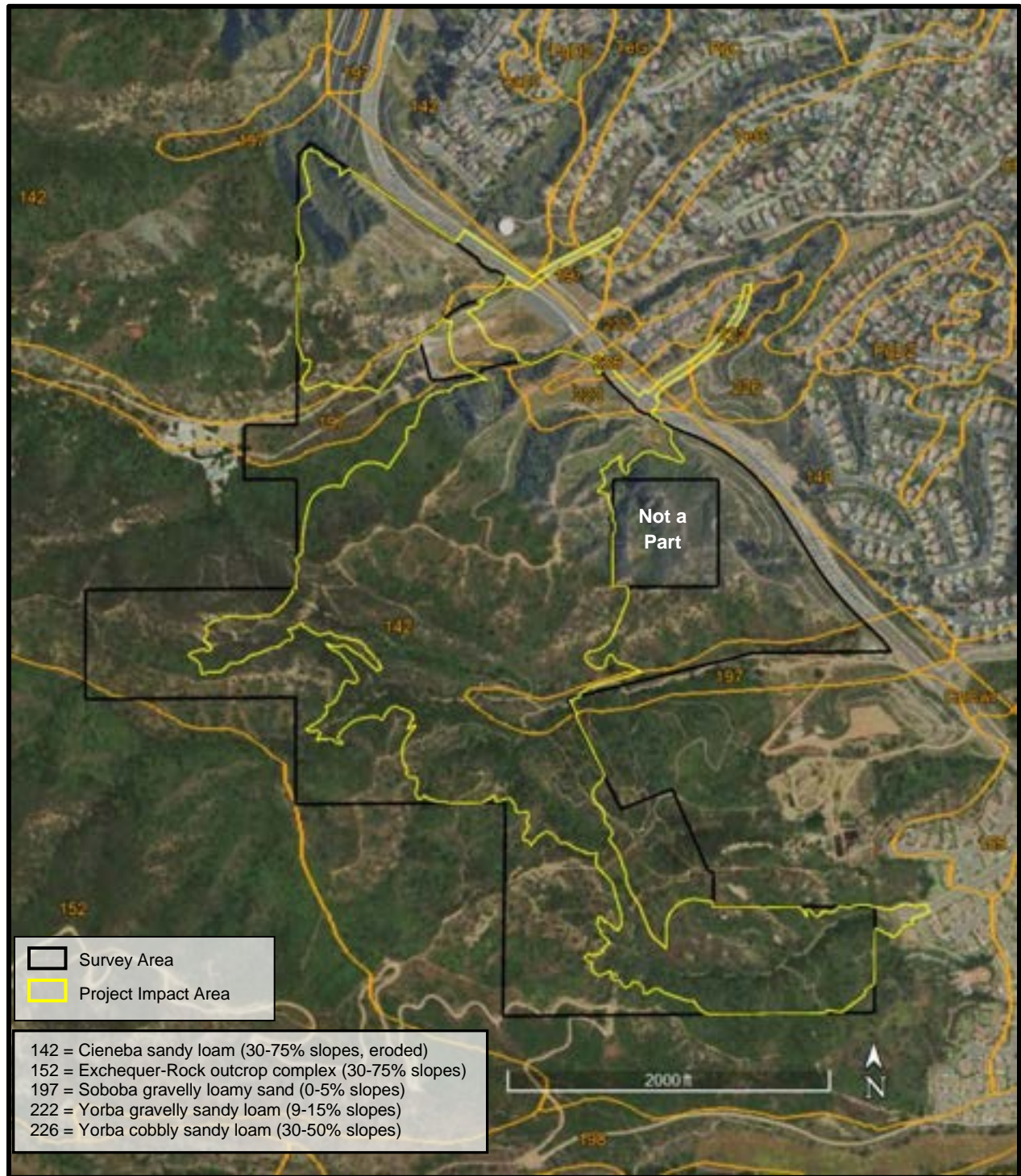
The survey area has a combined vertical relief of roughly 580 feet (177 meters), with elevation ranging from approximately 1,120 feet (341 meters) AMSL in Mabey Canyon debris basin to 1,700 feet (518 meters) elevation AMSL at the westernmost boundary, in the northwest corner of parcel 275-040-006.

Table 4. Summary of Previous Survey Results.

Survey Type and Dates (Reference)	Survey Area	Biologist(s)	Results
<p>Focused Botanical Survey and Vegetation Community Mapping March-July 2013 44 visits (GEC 2013c)</p>	<p>APNs 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006</p> <p>270.9 acres (including Foothill Parkway Westerly Extension) + 1,300-foot buffer</p>	<p>Teresa Gonzales Paul Gonzales</p>	<p>One special status plant identified: Coulter’s matilija poppy. Mapped 14 locations with 526 plants (in 2008) and 236 plants (in 2013).</p> <p>Habitat assessments on the site plus a 600-foot buffer in 2005, 2006, and 2008 found suitable habitat for Braunton’s milk-vetch, chaparral nolina, chaparral sand-verbena, intermediate mariposa-lily, intermediate monardella, long-spined spineflower, many-stemmed dudleya, Plummer’s mariposa lily, Robinson’s pepper-grass, San Fernando Valley spineflower, and white rabbit-tobacco.</p> <p>Seven vegetation communities identified: <i>Quercus agrifolia</i> Alliance, California Sycamore (<i>Platanus racemosa</i>) Woodlands Alliance, <i>Salix lasiolepis</i> Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance, and disturbed. Total impacts of 151.08 acres calculated.</p>
<p>Focused Burrowing Owl Survey April-July 2013 15 visits (GEC 2013b)</p>	<p>APNs 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006</p> <p>270.9 acres (including Foothill Parkway Westerly Extension) + buffer</p>	<p>Teresa Gonzales Paul Gonzales</p>	<p>Potentially suitable habitat for burrowing owl present but no suitable burrows or burrowing owls or occupied burrows observed.</p>

Survey Type and Dates (Reference)	Survey Area	Biologist(s)	Results
<p>Focused Coastal California Gnatcatcher Survey April-July 2013 15 visits (GEC 2013d)</p>	<p>APNs 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006</p> <p>270.9 acres (including Foothill Parkway Westerly Extension) + buffer</p>	<p>Teresa Gonzales (Permit TE-060175-3) Paul Gonzales</p>	<p>Potentially suitable habitat for California gnatcatcher is patchy. No California gnatcatchers were detected.</p>
<p>Focused Least Bell's Vireo Survey April-July 2013 8 visits (GEC 2013e)</p>	<p>APNs 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006</p> <p>270.9 acres (including Foothill Parkway Westerly Extension) + buffer</p>	<p>Teresa Gonzales (Permit TE-060175-3) Paul Gonzales</p>	<p>No suitable habitat for least Bell's vireo and no least Bell's vireos were detected.</p>
<p>Biological Assessment based on previous GEC surveys (L&L 2015a)</p>	<p>APNs 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006</p> <p>270.9 acres (excludes impacts from Foothill Parkway Westerly Extension)</p>	<p>None</p>	<p>Summarized results of GEC surveys, assessed Project impacts, and provided mitigation measures. Total impacts of 153.5 acres calculated.</p>

Survey Type and Dates (Reference)	Survey Area	Biologist(s)	Results
Habitat Assessment, Focused Botanical Survey, and Vegetation Community Mapping April-August 2016 11 visits (L&L 2016)	APNs 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 237.41 acres (not including Foothill Parkway Westerly Extension)	John Dicus Melanie Dicus	Five special status plant species observed: mapped 691 Coulter’s matilija poppy, 455 intermediate mariposa lily, 261 paniculate tarplant, 20 Fish’s milkwort, and an estimated 5,343 chaparral nolina. Western spleenwort, Payson’s jewel-flower, and intermediate monardella not observed but have moderate potential to occur. Updated mapping identified 27 vegetation communities on the site including six (6) sensitive communities. Eight special status wildlife species observed, several other listed and special status species have potential to occur.
Updated Botanical Survey March-August 2017 6 visits (L&L 2017)	APNs 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 237.41 acres (not including Foothill Parkway Westerly Extension)	John Dicus Melanie Dicus	New locations were identified for Coulter’s matilija poppy, intermediate mariposa lily, and Fish’s milkwort. One new special status plant identified: Brewer’s calandrinia. Impact area updated and impacts include 330 individual Coulter’s matilija poppy, 487 intermediate mariposa lily, 15 Fish’s milkwort, 261 paniculate tarplant, one Brewer’s calandrinia and an estimated 2,676 chaparral nolina.



(USDA Nat. Res. Cons. Serv. SSURGO Data [NRCS 2024]; Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California

Soils Map

Figure 5

3.2) Vegetation

Three (3) general vegetation types currently exist in the immediate vicinity of the survey area: riparian/woodland, upland, and unvegetated/altered. These vegetation types include multiple plant communities that make up the landscape of the survey area (Table 5, Figure 6, 6a, 6b). Non-native ornamental species (eucalyptus and pepper trees) are located adjacent to urban areas. The majority of the survey area is undisturbed and consists of a variety of chaparral habitats on the north-facing slopes and coastal sage scrub habitats on the dry south facing slopes. Needle grass grasslands are present in previously cleared areas on the ridgelines. Grasslands occur throughout the survey area and are composed primarily of non-native species including bromes (*Bromus* species), short-pod mustard (*Hirschfeldia incana*), filaree (*Erodium* species), and Russian thistle (*Salsola tragus*), and native species such as doveweed (*Croton setigerus*) and deerweed (*Acmispon glaber*). There is a concentration south of the offsite flood control basin at the eastern end of Mabey Canyon Wash.

Riparian and woodland habitats, including California sycamore (*Platanus racemosa*) woodland and mulefat (*Baccharis salicifolia*) scrub, are located in and adjacent to Feature 3 and Mabey Canyon Wash (Feature 6), as is scale broom scrub. Coast live oak woodland is present in the three main drainage features, Feature 1, Feature 3, and Mabey Canyon Wash (Feature 6).

The survey area has been impacted by off-road vehicles, bicycles, and hikers in the more accessible areas. Dirt roads and trails crisscross the survey area, providing access for illegal trash disposal and off-road usage and grading of the FPWE.

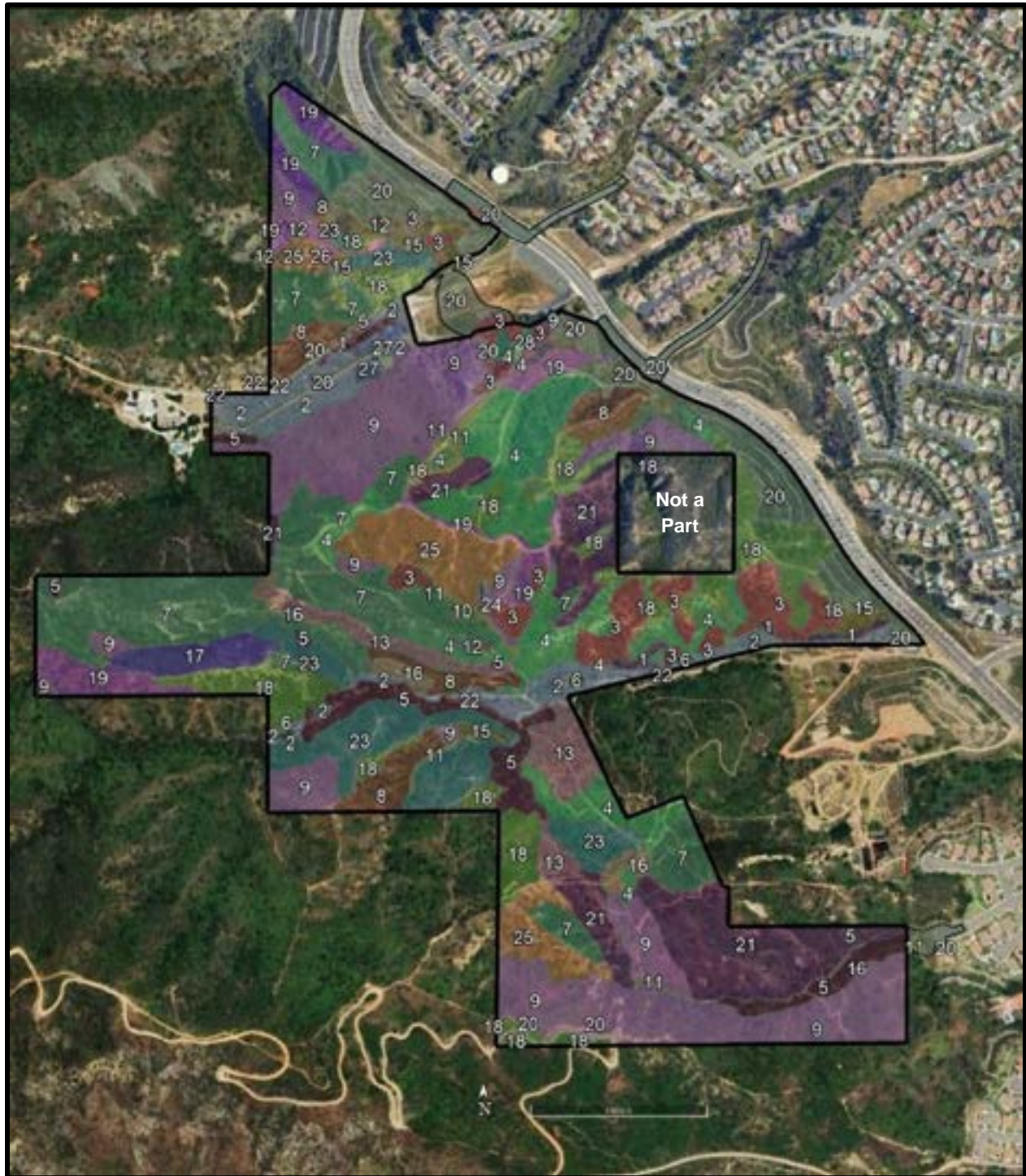
3.2.1) Riparian and Woodland Habitat

In this report, woodland whether upland or riparian describes a vegetation type dominated by woody trees and tall scrub species, forming a continuous canopy over a variety of low shrubs and a variable grassy herbaceous layer. Some woodlands may not include a shrub canopy. The woodland plant communities observed in the survey area are coast live oak woodland and California sycamore woodlands, discussed below.

We defined riparian areas to include those transitional areas adjacent to rivers, streams, estuaries, lakes, and depressional wetlands that characteristically have a high-water table and are subject to periodic flooding and the influence of adjacent water bodies. We categorized riparian species as woody species with at least some level of facultative status. The riparian plant communities observed in the survey area are mulefat scrub and California sycamore woodlands, which is considered both a woodland and riparian community.

Table 5. Updated Vegetation Communities in the Survey Area.

Vegetation Community	Alliance	Area (acres)	
		Onsite	Offsite
Coastal Sage Scrub			
California Sagebrush Scrub	<i>Artemisia californica</i> Alliance	1.81	0.14
Ca. Sagebrush – Ca. Buckwheat Scrub	<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Alliance	8.81	
California Buckwheat Scrub	<i>Eriogonum fasciculatum</i> Alliance	9.25	0.01
Ca. Sagebrush – Black Sage Scrub	<i>Artemisia californica</i> – <i>Salvia mellifera</i> Alliance	2.09	0.16
Black Sage Scrub	<i>Salvia mellifera</i> Alliance	21.94	0.002
California Brittle Bush Scrub	<i>Encelia californica</i> Alliance	.09	
Brittle Bush Scrub	<i>Encelia farinosa</i> Alliance	2.04	
Deerweed Scrub	<i>Lotus scoparius</i> Alliance	0.30	
Coastal Sage Scrub/Chaparral			
Laurel Sumac Scrub	<i>Malosma laurina</i> Alliance	10.28	0.29
Bush Penstemon Scrub	<i>Keckiella antirrhinoides</i> Alliance	41.61	0.02
Chaparral			
Chamise Chaparral	<i>Adenostoma fasciculatum</i> Alliance	21.66	
Chamise-Buckwheat-Chaparral	<i>Adenostoma fasciculatum</i> - <i>Eriogonum fasciculatum</i> Alliance	11.05	
Chamise-Black Sage Chaparral	<i>Adenostoma fasciculatum</i> - <i>Salvia mellifera</i> Alliance	21.06	0.03
Hoaryleaf Ceanothus Chaparral	<i>Ceanothus crassifolius</i> Alliance	32.38	
Scrub Oak Chaparral	<i>Quercus berberidifolia</i> Alliance	6.79	0.04
Scrub oak – Chamise Chaparral	<i>Quercus berberidifolia</i> - <i>Adenostoma fasciculatum</i> Alliance	13.74	
Eastwood Manzanita Chaparral	<i>Arctostaphylos glandulosa</i> Alliance	3.34	
Toyon Chaparral	<i>Heteromeles arbutifolia</i> Alliance	0.31	
Grasslands			
California Annual Grassland	<i>Bromus</i> Semi-natural Stands	0.43	
Needle Grass Grassland	<i>Nassella lepida</i> / <i>Nassella pulchra</i> Alliance	2.32	
Riparian/Riverine/Woodland			
Coast Live Oak Woodland	<i>Quercus agrifolia</i> Alliance	8.57	
California Sycamore Woodland	<i>Platanus racemosa</i> Alliance	0.27	
Mulefat Scrub	<i>Baccharis salicifolia</i> Alliance	0.27	
Scale Broom Scrub	<i>Lepidospartum squamatum</i> Alliance	9.87	0.01
Developed/Disturbed/Ornamental			
Eucalyptus Alliance	<i>Eucalyptus</i> sp. Semi-natural Stands	1.26	
Pepper Alliance	<i>Schinus</i> sp. Semi-natural Stands	1.03	
Disturbed		16.83	6.13
TOTAL		249.4	7.0

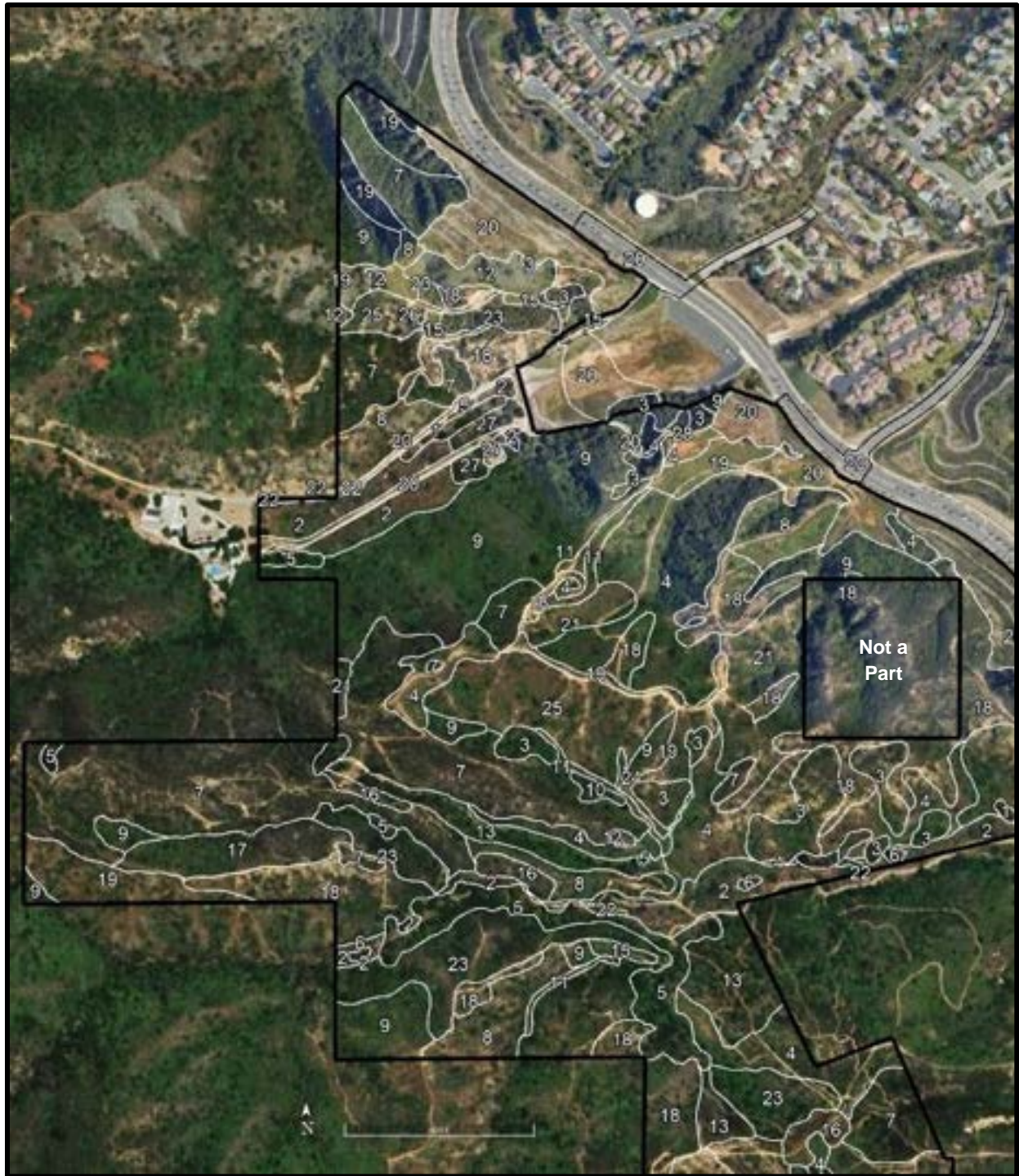


(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Vegetation Communities
Figure 6

Figures 6a and 6c Legend:

Coastal Sage Scrub		Chaparral	
Black Sage Scrub	4	Hoaryleaf Ceanothus Chaparral	7
Ca. Sagebrush – Ca. Buckwheat Scrub	8	Toyon Chaparral	10
California Sagebrush Scrub	11	Scrub Oak Chaparral	13
Brittle Bush Scrub	12	Eastwood Manzanita Chaparral	17
Ca. Sagebrush – Black Sage Scrub	15	Chamise Chaparral	18
California Buckwheat Scrub	19	Chamise-Black Sage Chaparral	21
California Brittle Bush Scrub	24	Scrub Oak – Chamise Chaparral	23
		Chamise-Buckwheat-Chaparral	25
Coastal Sage Scrub/Chaparral			
Laurel Sumac Scrub	3	Riparian/Riverine/Woodland Alliances	
Bush Penstemon Scrub	9	Coast Live Oak Woodland	5
Deerweed Scrub	26	California Sycamore Woodland	6
		Mulefat Scrub	22
		Scale Broom Scrub	2
Grassland Alliances			
Needle Grass Grassland	16		
Ca. Annual Grassland	28	Developed/Disturbed	
		Eucalyptus Alliance	1
		Disturbed	20
		Pepper Alliance	27



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Vegetation Communities Outline North
Figure 6a



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Vegetation Communities Outline South
Figure 6b

In addition, scale broom scrub (*Lepidospartum squamatum*) is a facultative, upland scrub habitat that occurs on alluvial fans or terraces and depends upon periodic flooding. These habitats are discussed below. All of these communities, with the exception of mulefat scrub, are found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainage features rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms.

Drainage features 1, 3, and 6 (Mabey Canyon Wash) include riparian/riverine habitats.

Feature 1 is a non-wetland upland or unvegetated ephemeral drainage (not a blueline) that runs west to east along the southernmost portion of the survey area and supports upland habitats along the western half of the drainage and coast live oak woodland along the eastern half.

Feature 3 is an ephemeral unnamed blueline stream (southernmost blueline) located in the middle of the survey area and flows from west to east. This drainage supports mostly scale broom scrub a facultative species, coast live oak woodland an upland species and small areas of sycamore woodland and mulefat scrub (riparian species). Where the drainage is not vegetated with facultative or riparian species it either supports upland vegetation or is unvegetated and considered non-wetland.

Feature 6, Mabey Canyon Wash (northern blueline), is an ephemeral drainage that supports upland vegetation or is unvegetated except where it supports a narrow band of mulefat scrub along the western third of the drainage and scale broom scrub in the western and center portions of the drainage. Coast live oak woodland and eucalyptus are present along the eastern third of the drainage. Portions of this drainage has been highly modified by leveling associated with a runway and a flood control facility. Within this leveled area a grove of non-native pepper trees is present along with scattered individual oaks. A grouping of oaks is present in the southwest corner of Mabey Canyon at the base of the slope.

Table 6. Vegetation Communities Also Considered Riparian or Riverine in the Survey Area.

Vegetation Community	Alliance	Area Onsite (acres)	Riparian/ Riverine (acres)*
Riverine			
Scale Broom Scrub	<i>Lepidospartum squamatum</i> Alliance	9.87	9.87
Coast Live Oak Woodland	<i>Quercus agrifolia</i> Alliance	8.57	5.71
Riparian			
California Sycamore Woodland	<i>Platanus racemosa</i> Alliance	0.27	0.27
Mulefat Thickets/Mulefat Scrub	<i>Baccharis salicifolia</i> Alliance	0.27	0.27
TOTAL		18.98	16.12

*Excludes unvegetated drainages.

Coast live oak woodland (*Quercus agrifolia* Alliance, 71.060.02)

Coast live oak occurs as the dominant tree in the canopy. Coast live oak woodland is an upland species (USACE 2022) which occurs in valleys between steep hills in the survey area (Feature 1, Feature 3, and Mabey Canyon [Feature 6]) and is scattered on hillsides in minor drainages and near the base of north facing slopes.

Where present, coast live oak contributes to the riparian/riverine corridor as an intermittent canopy along with the understory of scale broom scrub and other coastal sage scrub and chaparral plant species: poison oak (*Toxicodendron diversilobum*), scale broom, California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*), black sage (*Salvia mellifera*), laurel sumac (*Malosma laurina*), holly-leaf redberry (*Rhamnus ilicifolia*), holly-leaf cherry (*Prunus ilicifolia*), toyon (*Heteromeles arbutifolia*), and southern honeysuckle (*Lonicera subspicata* var. *denudata*). Associated trees include California ash (*Fraxinus dipetala*), California sycamore, blue elderberry (*Sambucus nigra* ssp. *caerulea*), western cottonwood (*Populus fremontii*), and red willow (*Salix laevigata*), all of which are scattered infrequently throughout the riparian/riverine corridor.

Where coast live oak occurs individually or as a woodland within the limits of the jurisdictional drainage, it is mapped as upland or riverine habitat. CDFW ranks coast live oak woodland as S5 (secure) and it is not considered a sensitive vegetation community.

California Sycamore Woodland (*Platanus racemosa* Alliance, 61.310.00)

In the survey area, this riparian community is composed primarily of sycamores with scale broom scrub understory. This community is very limited in the survey area, existing only in three (3) small areas in Feature 3 and as four (4) individual sycamores identified in Mabey Canyon Wash (Feature 6). California sycamore woodland is ranked by CDFW as S3 (vulnerable), and it is considered a sensitive vegetation community.

Mulefat Thickets/Mulefat Scrub (*Baccharis salicifolia* Alliance, 63.510.00)

Mulefat thicket is a riparian scrub strongly dominated by mulefat. This early seral community is maintained by frequent flooding. It is found in intermittent stream channels with fairly coarse substrate and moderate depth to the water table and frequently occurs as a patchy understory in riparian woodland. This community is very limited in the survey area, existing only in a narrow band along the western third of Mabey Canyon Wash (Feature 6) and in two small patches in Feature 3. Mulefat thicket is ranked by CDFW as S4 (apparently secure) and is not considered a sensitive vegetation community.

3.2.2) Upland Habitats

Grasslands

Needle Grass Grasslands (*Nassella lepida*/*Nassella pulchra* Herbaceous Alliance, 41.110.01/41.150.04)

Needle grass grasslands are typically dominated by or contain the native perennial bunchgrasses purple needle grass (*Stipa* [*Nassella*] *pulchra*) and/or foothill needle grass (*Stipa* [*Nassella*] *lepida*) in the herbaceous layer with other perennial grasses and herbs.

Cover is open to continuous and emergent trees and shrubs may be present in low cover (Sawyer et al. 2009). This plant community typically occurs as a mosaic with coastal sage scrub on heavy or clay soils. Native shrubs can also be present to varying degrees, from approximately 2 to 10 percent cover, and generally include California sagebrush, coastal goldenbush (*Ericameria* species), and California buckwheat. In the survey area, needle grass grasslands are located on high clay content soil ridgelines that were previously cleared, as evidenced in historic aerial photographs. Needle grass grasslands within the survey area contain, in addition to *Stipa* (*Nassella*) *pulchra* and *Stipa* (*Nassella*) *lepida*, a high cover of non-native species, including wild oats (*Avena barbata*, *Avena fatua*), tocalote (*Centaurea melitensis*), and smooth brome (*Bromus hordeaceus*). Native associates observed within the needle grass grassland habitat in the survey area include blue-eyed grass (*Sisyrinchium bellum*), common goldenstar (*Bloomeria crocea*), splendid mariposa-lily (*Calochortus splendens*), soap plant (*Chlorogalum pomeridianum* var. *pomeridianum*), four-spot clarkia (*Clarkia purpurea* ssp. *quadrivulnera*), and deerweed. In addition, this habitat intergrades with coastal sage scrub and chaparral habitats on its margins.

CDFW ranks purple needle grass grasslands as S3 (vulnerable) and foothill needle grass grasslands as S2 (imperiled) and both are considered sensitive.

California Annual Grassland (*Bromus* Semi-natural Stands, 42.024.00)

California annual grassland, also known as non-native grassland, consists of low herbaceous vegetation that is dominated by non-native annual grasses. California annual grassland is typically dominated by annual grasses of various genera that are primarily of Mediterranean origin, including wild oats (*Avena* species), brome grasses (*Bromus* species), and barley (*Hordeum* species). Species composition varies among stands and may include native and non-native forbs and herbs, as well as emergent trees and shrubs.

Non-native grasslands occur in small portions of the survey area where previous disturbances occurred. Native annuals and perennials associated with these grasslands in the survey area include dot-seed plantain (*Plantago erecta*), fascicled tarplant (*Deinandra fasciculata*), paniculate tarplant (*Deinandra paniculata*), purple owl's clover (*Castilleja exserta*), deerweed, and California

buckwheat. Non-native species observed within this community include wild oats, tocalote, riggut brome (*Bromus diandrus*), red brome (*Bromus rubens*), Russian thistle, long-beaked filaree (*Erodium botrys*), and Australian saltbush (*Atriplex semibaccata*).

CDFW does not rank non-native vegetation communities, and they are not considered sensitive.

Scale Broom Scrub

Scale Broom Scrub (*Lepidospartum squamatum* Alliance, 32.070.00)

Scale broom scrub (SBS) occurs along washes and drainages on low gradient alluvial fans and terraces that may be periodically or rarely flooded. Soils are usually sandy or rocky and well drained. SBS has both the drought-deciduous, low-growing, soft-leaved shrubs of sage scrubs and the larger perennial species found in chaparral habitats, but the presence of scale broom as a dominant, codominant, or conspicuous shrub (at greater than 1 percent cover) is required.

Other plants in SBS can be varied, but in the survey area it is found in association with California buckwheat, white sage (*Salvia apiana*), deerweed, chaparral yucca, black sage, laurel sumac, Coulter's matilija poppy (*Romneya coulteri*), California sagebrush, California brittlebush, thick-leaved yerba santa (*Eriodictyon crassifolium* var. *crassifolium*), California brickellbush (*Brickellia californica*), slender sunflower (*Helianthus gracilentus*), and scattered California sycamore and mulefat. In the survey area SBS is located in and adjacent to Features 3 and 6.

CDFW ranks SBS as S3 (vulnerable) and it is considered sensitive.

Coastal Sage Scrub

Sage scrub is a shrubland dominated by facultative drought-deciduous, low-growing, soft-leaved, and grayish-green (malacophyllus) shrubs and subshrubs. Sage scrub plant series typically exhibit a patchy distribution, often in close association with areas inhabited by chaparral vegetation. Due to stand variations, sage scrub is often considered part of a collection of species-specific plant series (Sawyer et al. 2009).

Sage scrub generally occurs on rolling hills at lower elevations in the survey area and outside the scour area of Feature 3. It then transitions into chaparral where hills become steep. Sage scrub intermixes with chaparral throughout the survey area. Black sage scrub (*Salvia mellifera* Alliance) is the most common coastal sage scrub community in the survey area. Sage scrub plant communities are described in the following paragraphs.

California Sagebrush Scrub (*Artemisia californica* Alliance, 32.010.01)

California sagebrush scrub has California sagebrush (*Artemisia californica*) as the dominant or co-dominant species. Generally, California sagebrush is present at a level of greater than 60

percent relative cover in the shrub canopy. Shrub canopy is intermittent to continuous and generally less than two meters tall unless some of the less common, taller shrubs such as lemonade berry (*Rhus integrifolia*) are present. It is found on relatively steep slopes with shallow soils (Sawyer et al. 2009).

Within the survey area, California sagebrush scrub is limited to secondary washes and is found along disturbed ridgelines associated with old roads. Associated species in the survey area include black sage, California buckwheat, deerweed, California brittlebush (*Encelia californica*), California everlasting (*Pseudognaphalium californicum*), and chamise (*Adenostoma fasciculatum*).

CDFW ranks this vegetation community as S4 (apparently secure) and it is not considered sensitive.

California Sagebrush – California Buckwheat Scrub (*Artemisia californica* – *Eriogonum fasciculatum* Alliance, 32.110.05)

In this vegetation community, California sagebrush and California buckwheat are co-dominant, with each species being present at 30 to 60 percent relative cover. The canopy is intermittent to continuous and is two tiered, with most shrubs less than two meters high and some shrubs present that are less than five meters high (Sawyer et al. 2009).

California sagebrush–California buckwheat scrub occurs on steep south-facing slopes within the survey area, often in association with black sage and laurel sumac. Additional native species observed in this community include chaparral yucca (*Hesperoyucca whipplei*), wishbone bush (*Mirabilis laevis* var. *crassifolia*), sweetbush (*Bebbia juncea* var. *aspera*), and odora (*Porophyllum gracile*).

CDFW ranks this vegetation community as S4 (apparently secure) and it is not considered sensitive.

California Buckwheat Scrub (*Eriogonum fasciculatum* Alliance, 32.040.00)

California buckwheat scrub is dominated by California buckwheat and commonly occurs on dry slopes, washes, and canyons that are scattered throughout foothills and mountains. This shrub is likely to be seral to other plant communities. It is most often found on slopes that have been disturbed within the last 10 years. California buckwheat scrub forms a shrub canopy less than one meter tall and forms an intermittent canopy over a variable or grassy ground layer. This scrub type prefers shallow and rocky soils (Sawyer et al. 2009).

California buckwheat scrub occurs in limited areas on ridgelines associated with old roads and steep south-facing slopes. Some species associated with this plant community include deerweed,

peak rush-rose (*Crocotanthemum* [*Helianthemum*] *scoparium*), chaparral yucca, slender wild oats, and long-beaked filaree.

CDFW ranks this vegetation community as S5 (secure), and it is not considered sensitive.

California Sagebrush - Black Sage Scrub (*Artemisia californica* - *Salvia mellifera* Alliance, 32.120.00)

In this vegetation community, California sagebrush and black sage are co-dominant, with each species being present at 30 to 60 percent relative cover in the shrub canopy. The canopy is intermittent to continuous and is one or two tiered with most shrubs less than two meters high (Sawyer et al. 2009). California sagebrush–black sage scrub occurs on steep south-facing slopes within the survey area.

CDFW ranks this vegetation community as S4 (apparently secure), and it is not considered sensitive.

Black Sage Scrub (*Salvia mellifera* Alliance, 32.020.00)

In this vegetation community, black sage is dominant or co-dominant. It is usually greater than 60 percent cover or greater than 30 percent relative cover when combined with other coastal scrub species. A variety of other coastal sage and chaparral species frequently intermix in the shrub layer as sub-dominants (Klein and Evens 2006). In the survey area these species include California buckwheat, California sagebrush, hoaryleaf ceanothus (*Ceanothus crassifolius*), chamise, bush penstemon (*Keckiella antirrhinoides*), laurel sumac, and deerweed. Black sage scrub was observed as an important component of sage scrub within the survey area. It occurs commonly on moderate to steep slopes, often intergrading with chamise chaparral and bush penstemon scrub.

CDFW ranks this vegetation community as S4 (apparently secure), and it is not considered sensitive.

California Brittle Bush Scrub (*Encelia californica* Alliance, 32.050.02)

In this vegetation community, California brittlebush is dominant or co-dominant and occurs with at least 30 percent relative cover. This vegetation occurs on rolling hills at lower elevations and is often found in close association with chaparral. It is generally found on sunny, steep slopes with sandstone, shale, or volcanic substrates (Sawyer et al. 2009).

Within the survey area, California brittle bush scrub is limited to one (1) small drainage bottom where it intergrades with California sagebrush and California buckwheat in the washes and slopes. Other associates include black sage and laurel sumac.

CDFW ranks this vegetation community as S3 (vulnerable), and it is considered sensitive.

Brittle bush scrub (*Encelia farinosa* Alliance, 33.030.00)

Brittle bush scrub is a drought-tolerant community dominated by brittlebush (*Encelia farinosa*), a short-lived subshrub that commonly occurs on alluvial fans, rocky hillsides, and other well-drained slopes. Within the survey area, brittle bush scrub is most common on the moderate to steep slopes north of Mabey Canyon. Plant associates in the area include California buckwheat, deerweed, chamise, and wishbone bush.

CDFW ranks this vegetation community as S4 (apparently secure), and it is not considered sensitive.

Deerweed Scrub (*Lotus scoparius* [*Acmispon glaber*] Alliance, 52.240.01)

This vegetation community is dominated by deerweed (*Acmispon glaber* [*Lotus scoparius*]). A short-lived shrub, deerweed is associated with areas of recent disturbance and is an early colonizer of recently burned or cleared chaparral and coastal sage scrub. Within the Project site, this vegetation community is limited to recently cleared areas and old roads. The cover is relatively sparse. Associated species include California buckwheat, California sagebrush, and paniculate tarplant.

CDFW ranks this vegetation community as S5 (secure), and it is not considered sensitive.

Coastal Sage Scrub/Chaparral Intergrade

Laurel Sumac Scrub (*Malosma laurina* Alliance, 45.455.00)

Laurel sumac scrub is often combined with other coastal sage or chaparral alliances. This vegetation community occurs commonly throughout the survey area in association with black sage scrub, California sagebrush-California buckwheat scrub, and SBS. Additional shrub species occurring in this vegetation community include toyon and bush penstemon.

CDFW ranks this vegetation community as S4 (apparently secure), and it is not considered sensitive.

Bush Penstemon Scrub (*Keckiella antirrhinoides* Alliance, 32.065.00)

Bush penstemon scrub is considered transitional between chaparral and coastal scrub vegetation. Bush penstemon occurs on all slope aspects, on south-facing slopes with California sagebrush, black sage, and California buckwheat, and on north-facing slopes where it is dominant or co-dominant with chamise, toyon, woollyleaf ceanothus (*Ceanothus tomentosus*), hoaryleaf ceanothus, scrub oak (*Quercus berberidifolia*), and Eastwood manzanita (*Arctostaphylos*

glandulosa). Additional common associates include laurel sumac, climbing bush-penstemon (*Keckiella cordifolia*), sugarbush (*Rhus ovata*), chaparral yucca, clematis (*Clematis* species), wild cucumber (*Marah macrocarpa*), California everlasting, scapellote (*Acourtia microcephala*), scarlet larkspur (*Delphinium cardinale*), and Indian pink (*Silene laciniata*).

CDFW ranks this vegetation community as S3 (vulnerable), and it is considered sensitive.

Chaparral

Chaparral is a type of shrubland that is dominated by evergreen shrubs with small, thick, leathery, dark green sclerophyllous leaves. The shrubs of chaparral are relatively tall and dense and are adapted to periodic wildfires by stump sprouting or by germination from a dormant seed bank. These evergreen shrubs are also adapted to drought by deep extensive root systems, while their small thick leaf structure prevents permanent damage from moisture loss (Zedler et al. 1997). Many typical coastal sage scrub species also intermix with chaparral species.

Chaparral typically occurs on moderate to steep south-facing slopes with dry, rocky, shallow soils, becoming more abundant with higher elevation where temperatures are lower and moisture supplies are increased. The three most common chaparral plant communities observed in the survey area are chamise chaparral (*Adenostoma fasciculatum* Alliance), chamise-black sage chaparral (*Adenostoma fasciculatum-Salvia mellifera* Alliance), and hoaryleaf ceanothus chaparral (*Ceanothus crassifolius* Alliance), which are discussed below.

Chamise Chaparral (*Adenostoma fasciculatum* Alliance, 37.101.00)

Chamise chaparral is dominated by the evergreen shrub chamise, which is the most abundant species in the non-desert shrublands of California. It is a burred and many-branched shrub with gray-brown trunk bark, clustered small linear leaves, and tiny white flowers. Chamise chaparral forms an intermittent to continuous canopy less than three meters tall. Chamise is usually associated with all slope aspects but is commonly found on drier south and west-facing slopes and ridges, growing in very shallow soils. To be classified as chamise chaparral, the stand must have at least 60 percent relative cover of chamise in the shrub canopy (Sawyer et al. 2009).

Other species often present in chamise chaparral include thicketleaf yerba santa, California buckwheat, chaparral yucca, toyon, deerweed, laurel sumac, and sugarbush. Several understory herbs listed above for sage scrub are expected as associates in chaparral plant communities in the survey area.

CDFW ranks this vegetation community as S5 (secure), and it is not considered sensitive.

Chamise-California Buckwheat Chaparral (*Adenostoma fasciculatum*-*Eriogonum fasciculatum* Association, 37.101.14)

In chamise-California buckwheat chaparral, both species are consistently present in an open to intermittent shrub overstory, where chamise is dominant or co-dominant with California buckwheat. Other species such as black sage, bigberry manzanita (*Arctostaphylos glauca*), brittlebush, and sugarbush often intermix in the shrub layer at low cover (Klein and Evens 2006). Within the survey area, this vegetation community occurs primarily on steep west-facing slopes and ridges.

CDFW ranks this vegetation community as S4 (apparently secure), and it is not considered sensitive.

Chamise-Black Sage Chaparral (*Adenostoma fasciculatum*-*Salvia mellifera* Alliance, 37.102.02)

In chamise-black sage chaparral, the species are co-dominant, with both species having between 30 percent and 60 percent relative cover in the shrub canopy (Sawyer et al. 2009). The canopy is continuous to intermittent, with shrubs generally being less than three meters in height. This alliance occurs primarily on moderate to steep south-facing slopes within the survey area. California buckwheat, bush penstemon, and laurel sumac are common associates in the survey area.

CDFW ranks this vegetation community as S4 (apparently secure), and it is not considered sensitive.

Hoaryleaf Ceanothus Chaparral (*Ceanothus crassifolius* Alliance, 37.208.00)

This vegetation community is dominated by hoaryleaf ceanothus. Hoaryleaf ceanothus can be present at greater than 60 percent relative cover or hoaryleaf ceanothus and chamise can both have between 30 to 60 percent relative cover in the shrub canopy (Sawyer et al. 2009). It is found on open, south-facing slopes with shallow and rocky soils.

This vegetation community is well-represented in the west portion of the survey area, occurring on ridges and steep slopes in both monotypic stands and in association with other chaparral and scrub species, including chamise, scrub oak, toyon, bush penstemon, laurel sumac, woollyleaf ceanothus, chaparral yucca, black sage, and sugarbush. While understory vegetation is sparse, this alliance supports some of the highest densities of chaparral nolina (*Nolina cismontana*) in the survey area.

CDFW ranks this vegetation community as S4 (apparently secure), and it is not considered sensitive.

Scrub Oak Chaparral (*Quercus berberidifolia* Alliance, 37.407.00)

Scrub oak chaparral has scrub oak as the dominant or co-dominant in the shrub canopy. As a dominant, it exceeds 60 percent relative cover in the shrub canopy. In this vegetation community, the shrub canopy is continuous and generally less than six meters high. It inhabits primarily north-facing, steep slopes with well drained soils.

Scrub oak chaparral occurs on moderate to steep, north-facing slopes within the survey area. Vegetative density is often high, with other chaparral species achieving sub-dominance, including toyon, birch leaf mountain mahogany, laurel sumac, hoaryleaf ceanothus, bush penstemon, Eastwood manzanita, and chamise. Understory vegetation is often sparse but includes poison oak, climbing bush-penstemon, fuchsia-flowered gooseberry (*Ribes speciosum*), California everlasting, scapellote, and ferns such as wood fern (*Dryopteris arguta*) and California polypody (*Polypodium californicum*). Vines such as wild cucumber, western virgin's bower (*Clematis lasiantha*), and few-flowered clematis (*Clematis pauciflora*) were also commonly observed, and chaparral nolina occurs within a small portion of this Alliance.

CDFW ranks this vegetation community as S4 (apparently secure), and it is not considered sensitive.

Scrub oak-Chamise Chaparral (*Quercus berberidifolia*-*Adenostoma fasciculatum* Association, 37.409.03)

Scrub oak-chamise chaparral has both scrub oak and chamise as co-dominant species. Emergent trees may be present in low numbers. This vegetation community also occurs on steep north-facing slopes, supporting many of the same associates as scrub oak chaparral (described above), but with both scrub oak and chamise achieving 30 to 60 percent relative cover in the shrub canopy.

CDFW ranks this vegetation community as S4 (apparently secure), and it is not considered sensitive.

Eastwood Manzanita Chaparral (*Arctostaphylos glandulosa* Alliance, 37.302.00)

In this vegetation community, Eastwood manzanita is often co-dominant with chamise, both having 30 to 60 percent relative cover. The canopy is continuous, with shrubs less than three meters high. It inhabits outcrops, ridges, and north and east facing slopes with shallow, often rocky soils (Sawyer et al. 2009). Eastwood manzanita chaparral occurs on a steep north-facing slope near the west boundary of the survey area, and is associated with chamise, scrub oak, toyon, and hoaryleaf ceanothus. Chaparral nolina occurs within this vegetation community in the survey area.

CDFW ranks this vegetation community as S3 (vulnerable), and it is considered sensitive.

Toyon Chaparral (*Heteromeles arbutifolia* Provisional Alliance, 37.912.01)

In this vegetation community, toyon is dominant at greater than 50 percent or co-dominant with California sagebrush or scrub oak at greater than 30 percent relative cover in the shrub canopy. The canopy is open to continuous, with shrubs less than seven meters high. It inhabits steep, north-facing slopes with loamy soils (Sawyer et al. 2009). In the survey area, this vegetation community occurs in one location on a steep northeast-facing slope in the center of the survey area.

CDFW considers this vegetation community to be sensitive, although it does not currently have a rank.

3.2.3) Developed/Disturbed/Ornamental

Disturbed

Disturbed describes land that has been altered from its native habitat state, either by human activities (for building and road development purposes) or by natural causes (landslides). As a result, this altered land is generally initially bare ground until either development occurs, or natural succession begins. Habitat succession is the process of reestablishing plant communities, but successional habitats may be invaded by ruderal (weedy) grass and forb species. Disturbed areas in the survey area are primarily existing dirt roads but also leveled areas within drainages at the eastern development interface and slopes constructed during the development of the adjacent FPWE. Limited vegetation occurs in this land cover type and the species that are present trend to non-native or invasive species including tocalote, London rocket (*Sisymbrium irio*), and short-pod mustard.

A portion of the survey area along the eastern boundary of the northern half of the Project area was not previously included in the Skyline Heights SP/EIR because it was a part of the FPWE and was impacted in the course of that project. That interface, which includes mostly manufactured slopes, is now included in the survey area and has been seeded with an upland native mix.

Ornamental

Eucalyptus groves (*Eucalyptus* Semi-natural Stands, 79.100.02)

Pepper tree (*Schinus* spp. Semi-natural Stands, 79.200.02)

Ornamental vegetation occurs around Mabey Canyon Wash (Feature 6) near an abandoned air strip and adjacent to the eastern portion of Feature 3. This vegetation type includes landscaped

areas with planted species such as eucalyptus (*Eucalyptus* species), pepper tree (*Schinus* species), and ornamental pine (*Pinus* species).

Eucalyptus trees are located immediately adjacent to and in the floodplain of Feature 3 and Mabey Canyon Wash (Feature 6). Pepper trees are located in the floodplain of Mabey Canyon Wash adjacent to the eucalyptus.

CDFW does not rank ornamental vegetation, and it is not considered sensitive.

3.2.4) Sensitive Vegetation Communities

Of the vegetation communities found in the survey area, eight (8) are considered sensitive: foothill needle grass grassland, purple needle grass grassland, SBS, California sycamore woodlands, California brittle bush scrub, bush penstemon scrub, Eastwood manzanita chaparral, and toyon chaparral.

Table 7. Sensitive Vegetation Communities in the Survey Area.

Vegetation Community	CaCode	State Rank	Acres In Survey Area (On and Off site)
Foothill Needle Grass Grassland (<i>Nassella lepida</i> Alliance)	41.110.01	S2	2.32
Purple Needle Grass Grassland (<i>Nassella pulchra</i> Alliance)	41.150.04	S3	
Scale Broom Scrub (<i>Lepidospartum squamatum</i> Alliance)	32.070.00	S3	9.88
California Sycamore Woodland (<i>Platanus racemosa</i> Alliance)	61.310.00	S3	0.27
California Brittle Bush Scrub (<i>Encelia californica</i> Alliance)	32.050.02	S3	0.09
Bush Penstemon Scrub (<i>Keckiella antirrhinoides</i> Alliance)	32.065.00	S3	41.63
Eastwood Manzanita Chaparral (<i>Arctostaphylos glandulosa</i> Alliance)	37.302.00	S3	3.34
Toyon Chaparral (<i>Heteromeles arbutifolia</i> Provisional Alliance)	37.912.01	Sensitive	0.31

S Ranks:

- 1 - Critically imperiled (typically having 5 or fewer occurrences or 1,000 or fewer individuals).
- 2 - Imperiled (typically having 6 to 20 occurrences or 1,001 to 3,000 individuals).
- 3 - Vulnerable (rare; typically having 21 to 100 occurrences, or 3,001 to 10,000 individuals).
- 4 - Apparently secure (uncommon but not rare, but with some cause for long-term concern; typically having 101 or more occurrences, or 10,001 or more individuals).
- 5 - Secure (common, widespread, abundant, and lacking major threats or long-term concerns).

A list of sensitive communities was created based on publications by the U.S. Forest Service for the northern Santa Ana Mountains area of the Cleveland National Forest. None of the 12 rare ecological communities (valley oak woodlands, Engelmann oak woodlands, black walnut woodlands, Cuyamaca cypress groves, gabbro outcrops, montane meadows, pebble plains, limestone/carbonate outcrops, serpentine outcrops, Sargent cypress groves, and Santa Lucia fir forests) were identified in the survey area.

3.3) Botanical

A total of 278 botanical species were observed on or adjacent to the survey areas during all the biological surveys, including the 2013, 2016, 2017, and 2024 focused botanical surveys. Portions of the site are undisturbed and support native habitats. A list of all observed botanical species is included in Table 11 (Appendix A).

3.4) Wildlife

A total of 105 wildlife species (83 vertebrates and 22 invertebrates) plus domestic cat and dog were observed on or adjacent to the survey area during the biological surveys. Wildlife species observed or detected in the survey area were characteristic of those that would be expected to occupy habitats in the region. Wildlife is generally diverse and abundant due to the large acreage of natural open space and the diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all vegetation communities within the site and adjoining areas constitutes a functional ecosystem for a variety of wildlife species. Scrub and chaparral habitats in the survey area provide foraging and cover habitat for year-round residents, seasonal residents, and migrating songbirds. In addition, the survey area encompasses raptor foraging and perching habitat. The combination of these resources, as well as the mosaic of many community types, provides for a diversity of species.

3.4.1) Fish

No perennial aquatic habitat suitable to support fish species, either common or special status, was observed in the survey area. All of the drainages in the study area are ephemeral carriers of water during or shortly after rain events. No water was present in the drainages during site visits.

3.4.2) Reptiles and Amphibians

A total of seven (7) reptiles and no amphibian species were observed in the survey area during the biological surveys. Three (3) common reptile species, side-blotched lizard (*Uta stansburiana*), Great Basin fence lizard (*Sceloporus occidentalis longipes*), and southwestern speckled rattlesnake (*Crotalus pyrrhus*) were observed during surveys. Four (4) special status reptile species were observed and are discussed in Section 3.6.

Common amphibian species that might be expected to occur in the survey area include western toad (*Anaxyrus boreas*) and pacific and California tree frogs (*Pseudacris* species) Amphibians require wet or generally wet environments. Some require standing or ponding water during the breeding season. The drainages in the survey area do support periodic water flow following precipitation events but are dry for much of the year.

3.4.3) Birds

A total of 66 avian species were observed in the survey area during biological surveys. The habitats in the survey area include upland scrub, woodland, and riparian habitats that represent suitable habitat for a wide variety of species, including both resident and migratory species. Coastal sage scrub and chaparral alliances that dominate the survey area support bird species adapted to dense, low vegetation. Woodland and riparian habitats are especially attractive to a wide variety of species throughout the year, including raptors that use large trees for roosting, perching, and nesting. Raptors observed during surveys include Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), barn owl (*Tyto alba*), western screech-owl (*Megascops kennicottii*), great horned owl (*Bubo virginianus*), and American kestrel (*Falco sparverius*). Several special status bird species were observed and are discussed in Section 3.6.

3.4.4) Mammals

Twelve (12) mammal species were observed and identified in the survey area during biological surveys, including raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), southern pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and desert cottontail (*Sylvilagus audubonii*). Larger mammals observed or detected in the survey area include coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), and mountain lion (*Puma concolor*). San Diego black-tailed jackrabbit is a special status species and mountain lion is a candidate for state listing. These species are discussed in Section 3.6.

Domestic dog (*Canis familiaris*) and cat (*Felis domesticus*) were also observed within the survey area, both leashed and free roaming.

Mule deer (*Odocoileus hemionus*) have been reported by local residents to utilize the survey area and/or vicinity but were not observed during surveys. Mule deer are found in a wide variety of habitats, except for developed and desert habitats. The species prefers areas of transitioning habitat that provide a mix of both habitats (woodland, scrub, and open grasslands) and vegetation densities. Accessible water resources are important during fawning and if the species is a year-round resident.

Evidence of small rodents was observed along roads and other clearings. Small mammal trapping was beyond the scope of this study, so species determinations were not made for most observations. Many additional small to medium-sized mammals are expected to utilize the site regularly or at least occasionally. It is likely that bat species utilize the site for roosting and foraging. Although no bat surveys were conducted, seven (7) bat species have been reported by the San Joaquin Wildlife Sanctuary, Starr Ranch Sanctuary (Trabuco Canyon), and Tucker Wildlife Sanctuary in the Santa Ana Mountains: Yuma myotis (*Myotis yumanensis*), California myotis (*Myotis californicus*), hoary bat (*Lasiurus cinereus*), big brown bat (*Eptesicus fuscus*),

western mastiff bat (*Eumops perotis californicus*), Mexican free-tailed bat (*Tadarida brasiliensis*), and pallid bat (*Antrozus pallidus*). Yuma myotis, hoary bat, western mastiff bat, and pallid bat are special status species.

A list of observed wildlife is included in Table 12 (Appendix A). Dogs, cats, horse-back riders, off-road vehicles, mountain bikers, and hikers were observed roaming freely throughout the area.

3.5) Special Status Botanical Species

3.5.1) Endangered, Threatened, Proposed, and Candidate Botanical Species

Botanical species state and/or federally listed as threatened, endangered, proposed, or candidate species for listing as endangered or threatened were evaluated as part of this assessment. They are briefly described, and potential for occurrence is assessed in Table 13 (Appendix A). These species were either documented by the CNDDDB or CNPS as occurring within the same quadrangle as the survey area or adjacent quadrangles, addressed in previous reports, or were identified by the USFWS, U.S. Forest Service, or other agency as potentially occurring in the area.

None of the listed species were observed in the survey area during multiple years of biological surveys from 2005 through 2024 and focused botanical surveys in 2013, 2016, 2017 and 2024. Six (6) species, Braunton's milk-vetch (*Astragalus brauntonii*), Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), slender-horned spineflower (*Dodecahema leptocerus*), Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*), and thread-leaved brodiaea (*Brodiaea filifolia*), have potentially suitable habitat in the survey area and are discussed below.

Munz's onion, slender-horned spineflower, and San Diego ambrosia are considered Narrow Endemic Species under the MSHCP and thread-leaved brodiaea is a Criteria Area plant species. However, the survey area is not located within a Criteria Cell, a Criteria Survey Area, or a Narrow Endemic Plant Survey Area; consequently, no surveys for Narrow Endemic or Criteria Area species were required. These species were not observed during focused botanical surveys. Braunton's milkvetch is not a covered species under the MSHCP; however, this species was surveyed for during the 2015, 2016, 2017 and 2024 surveys and was not observed in the survey area.

Based on the results of focused botanical surveys, all of these species were determined to have a low potential for occurrence in the survey area.

Braunton's milk-vetch: Braunton's milk-vetch is a federal endangered species and has a California Rare Plant Rank (CRPR) of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously threatened in California). It appears to be mainly restricted to calcium carbonate soils in brushy places, chaparral, or firebreaks below 1,500 feet (457 meters) elevation. Braunton's milk-vetch is known from locations in Ventura, Los Angeles, and Orange Counties.

The species has been recorded on the west and north sides of the Santa Ana Mountains, with the closest occurrence approximately 3.5 miles west near the terminus of Pipeline Truck Trail (CDFW 2024c). This species was not observed in the survey area during current or previous focused botanical field surveys. There is **low** potential for this species to occur in the survey area.

Munz's onion: Munz's onion is a federally endangered species, state threatened species and has a CRPR of 1B.1 (rare or endangered in California and elsewhere; seriously threatened in California). This species is covered under the MSHCP and adequately conserved under the Plan, but surveys may be required in Narrow Endemic plant survey areas and mitigation may be required if the plant is present. However, the site is not within a Narrow Endemic plant survey area and this requirement does not apply.

This species occurs in grassy openings in coastal sage scrub, chaparral, juniper woodland, and valley and foothill grasslands in clay soils. It is found on mesic exposures or seasonally moist microsites. Munz's onion is associated with a special "clay soil flora" found in southwestern Riverside County that includes herbs such as chocolate lily (*Fritillaria biflora*), Palmer's grappling hook (*Harpagonella palmeri*), knot-weed spineflower (*Chorizanthe polygonoides* ssp. *longispina*), snakeroot (*Sanicula bipinnatifida*, *S. arguta*), lomatium (*Lomatium utriculatum*, *L. dasycarpum*), shooting stars (*Dodecatheon clevelandii*), bloomeria, soaproot (*Chlorogalum parviflorum*), many-stemmed dudleya (*Dudleya multicaulis*), and red-skinned onion (*Allium haematochiton*). At least one population (Bachelor Mountain) is reported to be associated with pyroxenite outcrops instead of clay (Dudek 2003).

Only marginally suitable habitat is present in the survey area. The survey area is on the northern edge of the species range, and it was not observed during focused surveys; therefore, Munz's onion was determined to have **no** potential for occurrence.

San Diego ambrosia: San Diego ambrosia is a federal endangered species and has a CRPR of 1B.1 (rare or endangered in California and elsewhere; seriously threatened in California). This species is covered under the MSHCP and adequately conserved under the Plan but surveys may be required in Narrow Endemic plant survey areas and mitigation may be required if the plant is present. However, the site is not within a Narrow Endemic plant survey area and this requirement does not apply.

It is known to occur in Riverside and San Diego Counties. San Diego ambrosia is known to occur in chaparral, coastal sage scrub, valley and foothill grassland, and vernal pools. Although potentially suitable habitat is present, no San Diego ambrosia was observed during biological and focused botanical surveys; therefore, it has **low** potential for occurrence.

Thread-leaved brodiaea: Thread-leaved brodiaea is endemic to California, is a federal threatened species, a California endangered species, and has a CRPR of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously threatened in California). This species is

covered under the MSHCP and adequately conserved under the Plan, but surveys may be required in Criteria Area plant survey areas and mitigation may be required if the plant is present. However, the site is not within a Criteria Area plant survey area and this requirement does not apply.

It is found in valley grassland, foothill woodland, coastal sage scrub, and freshwater wetland plant communities in vernal pool habitat. It is equally likely to occur in wetlands or non-wetlands (CalFlora 2024). Although there is potentially suitable habitat present, it was not observed during biological and focused botanical surveys; therefore, it has **low** potential for occurrence.

Slender-horned Spineflower: Slender-horned spineflower is endemic to California, is a federal and California endangered species, and has a CRPR of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously threatened in California). This species is covered under the MSHCP and adequately conserved under the Plan, but surveys may be required in Narrow Endemic plant survey areas and mitigation may be required if the plant is present. However, the site is not within a Narrow Endemic plant survey area and this requirement does not apply.

It is found on open, sandy alluvial benches in valleys and canyons, typically vegetated by chaparral, coastal sage scrub, scale broom scrub, and cismontane woodlands. Potentially suitable habitat is present within scale broom scrub and some immediately adjacent habitats. Slender-horned spineflower was not observed during biological and focused botanical surveys; therefore, it has **low** potential for occurrence.

Santa Ana River woollystar: Santa Ana River woollystar is endemic to California, is a federal and California endangered species, and has a CRPR of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously threatened in California). This species is covered under the MSHCP and adequately conserved under the Plan. No additional surveys or mitigation are required for this species under the MSHCP.

Habitat for this species is sandy or gravelly alluvial fans and plains vegetated by chaparral, coastal sage scrub, and scale broom scrub. Potentially suitable habitat is present within the scale broom scrub and some immediately adjacent habitats. No Santa Ana River woollystar were observed during biological and focused botanical surveys; therefore, it has **low** potential for occurrence.

3.5.2) Special Status Botanical Species

Special status botanical species known from or with potential to occur within the Project vicinity were evaluated as a part of this assessment. These are briefly described and their potential to occur in the survey area is assessed in Table 13 (Appendix A). These species were either documented by the CNDDDB as occurring within the same quadrangle as the survey area or adjacent quadrangles, addressed in previous reports of the sites, or were identified by the USFWS, U.S. Forest Service, or other agency as potentially occurring in the area.

Observed

Six (6) special status botanical species were observed during the biological surveys: Brewer's calandrinia (*Calandrinia breweri*), intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), paniculate tarplant, chaparral nolina (*Nolina cismontana*), Fish's milkwort (*Rhinotropis cornuta* var. *fishiae*), and Coulter's matilija poppy. When calculating total plants present, plants documented 2024 within 5 feet of a previous year's observation were considered to be the same plant. This was done to accommodate for improvements to the accuracy of GPS systems and other technologies.

Intermediate Mariposa Lily: Intermediate mariposa lily (IML) has a CRPR of 1B.2 (rare, threatened, or endangered in California and elsewhere; moderately threatened in California). IML is found on sandy or clay soils on dry, rocky, or calcareous open slopes within chaparral, coastal scrub, and valley or foothill grasslands.

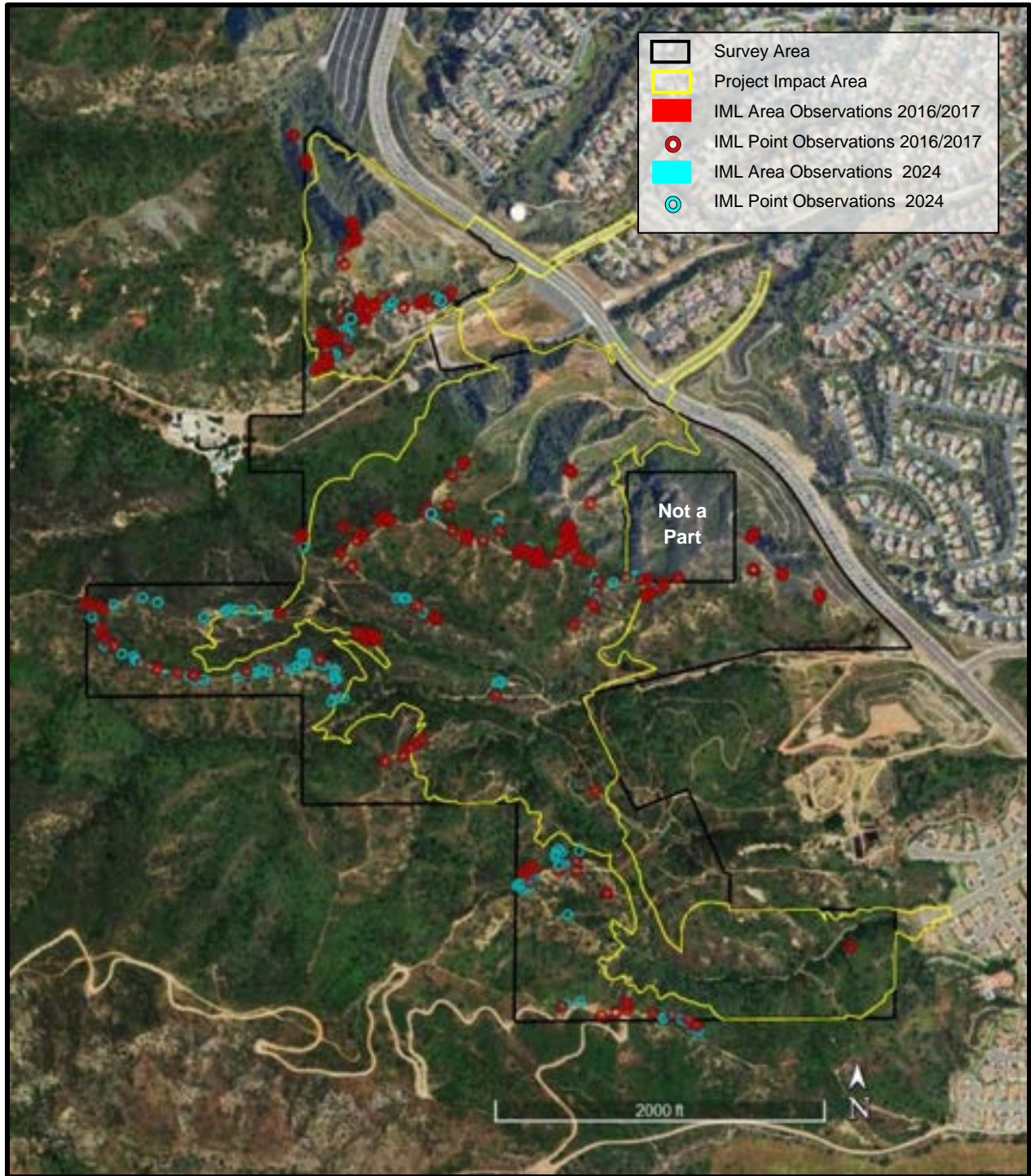
IML was recorded in the survey area in 2008 and reported in the August 2008 Foothill Parkway Westerly Extension EIR. BonTerra found approximately 303 IML individuals in the survey area in 30 locations during surveys conducted in May 2008. IML was not relocated in 2013 or observed elsewhere in the survey area, but rainfall levels were low in 2013 and IML may not have had sufficient moisture to grow or flower.

During the 2016 focused botanical survey, IML was observed scattered within the survey area. Almost all observations are located on ridgelines in California sagebrush-California buckwheat scrub, California buckwheat scrub, black sage scrub, chamise chaparral, and hoaryleaf ceanothus chaparral. Most of these locations were observed again in 2017 and 2024 with 221 new individuals identified in 2017 and 479 new individuals observed in 2024 (Figure 7 and Figure 7a-e). A total of 1,154 plants were identified within the survey area.

Large concentrations of IML located along the ridgelines within the westernmost portion of the property will be avoided. Under the MSHCP, IML is adequately conserved under the Plan.

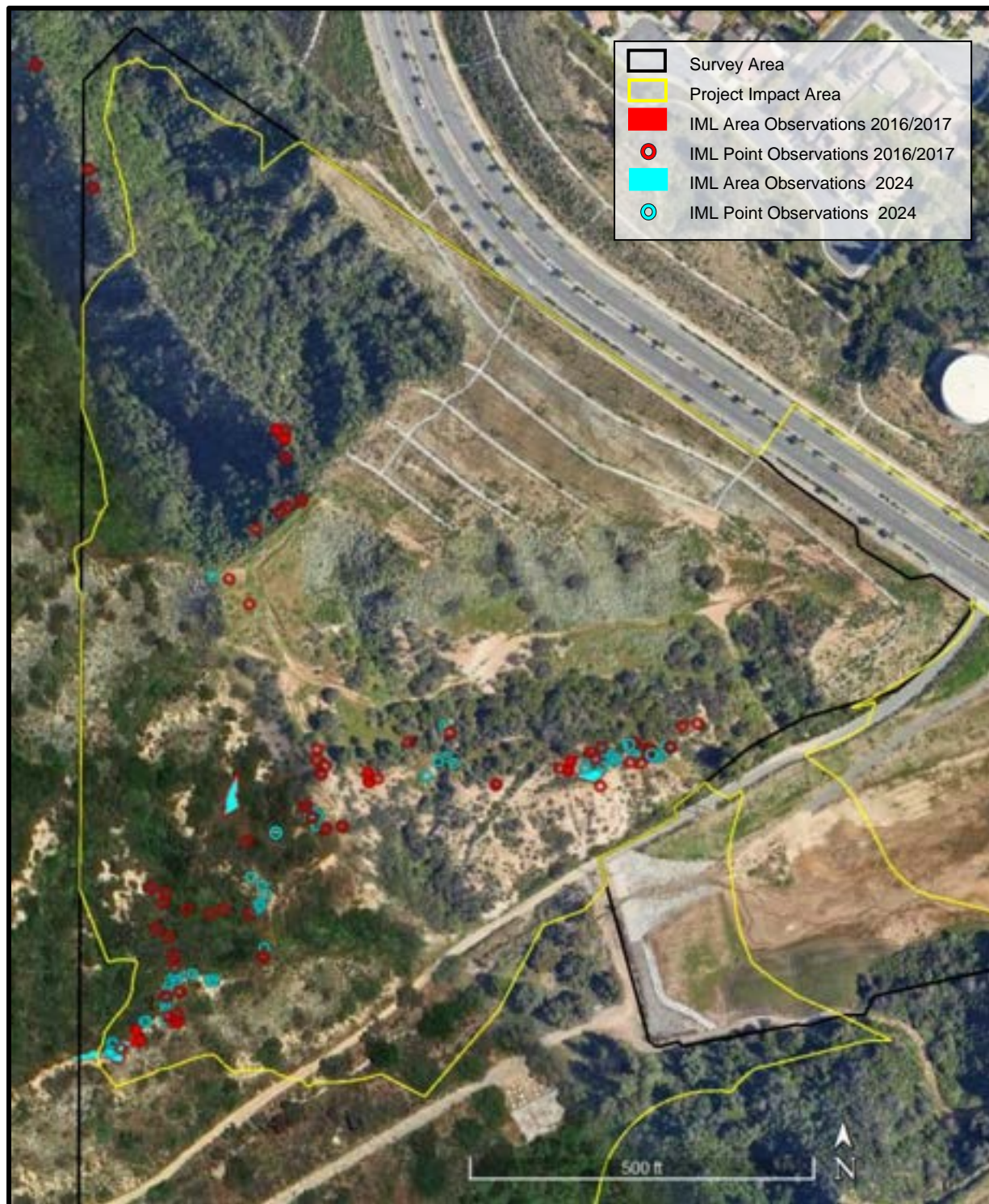
Paniculate Tarplant: Paniculate tarplant has a CRPR of 4.2 (watch list). Habitat for paniculate tarplant is vernal mesic or sandy soils in grassland, coastal scrub, open chaparral, and disturbed areas.

Paniculate tarplant was observed in two general locations within the survey area in all three survey years (2016, 2017 and 2024) (Figure 8). However, new plant locations were observed scattered around these areas. The first location is on the ridgeline north of Mabey Canyon Wash. This location consisted of approximately 61 plants in 2016. In 2024 the location appears to extend slightly further to the east. The second location is on a ridgeline approximately 300 feet west of the U.S. Forest Service (USFS) 10-acre parcel that is not a part (NAP) of this Project. This location consisted of approximately 200 plants in 2016. In 2024 several smaller areas of



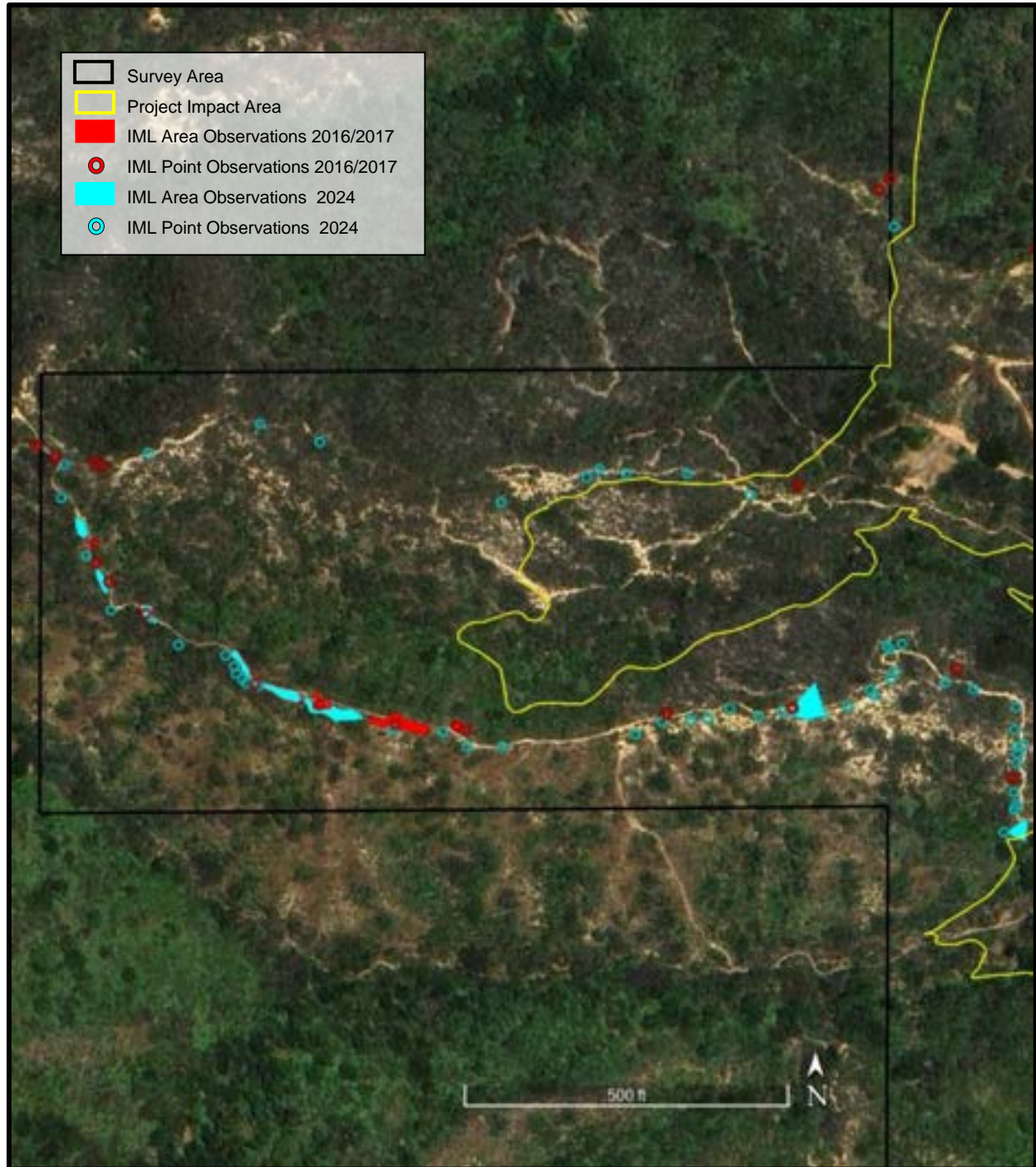
(*Calochortus weedii* var. *intermedius* Overview; Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Intermediate Mariposa Lily Observed 2016-2024 Overview
Figure 7



(*Calochortus weedii* var. *intermedius* Area A; Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Intermediate Mariposa Lily Observed 2016-2024 North
Figure 7a



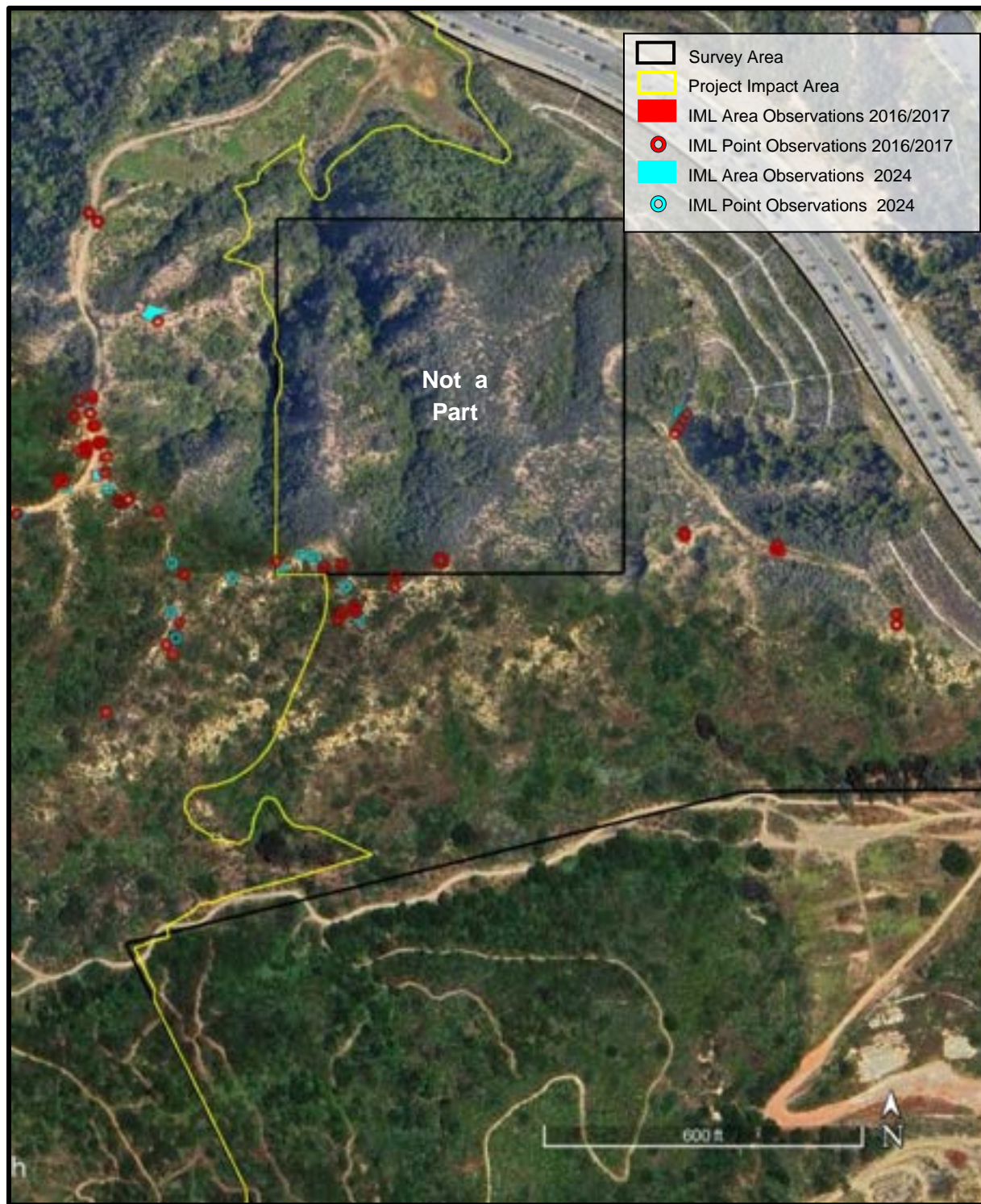
(*Calochortus weedii* var. *intermedius* Area B; Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Intermediate Mariposa Lily Observed 2016-2024 West
Figure 7b



(*Calochortus weedii* var. *intermedius* Area C; Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Intermediate Mariposa Lily Observed 2016-2024 Central
Figure 7c



(*Calochortus weedii* var. *intermedius* Area D; Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Intermediate Mariposa Lily Observed 2016-2024 East
Figure 7d



(*Calochortus weedii* var. *intermedius* Area E; Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Intermediate Mariposa Lily Observed 2016-2024 South
Figure 7e

paniculate tarplant concentrations overlap and extend out from this location. Both locations are mainly within California buckwheat scrub. Paniculate tarplant is not covered under the MSHCP.

Fish's Milkwort: Fish's milkwort has a CRPR of 4.3 (watch list). It is found in foothill chaparral and cismontane and riparian woodlands (including oak woodland), usually in wetlands, but occasionally in non-wetland environments. Fish's milkwort is a shrub that forms thickets less than two meters (about six feet) in diameter.

Fish's milkwort was identified during multiple surveys including the 2024 focused botanical surveys. All observations in 2024 were in the same general areas as previous years. A total of 30 plants were observed (Figure 8). Each location consisted of one or two plants, with two exceptions. Location #633 consisted of six plants and #937 consisted of five plants. All of the Fish's milkwort identified in the survey area is found within Feature 3 and its tributaries and is associated with coast live oak woodland or scrub oak chaparral.

Under the MSHCP, Fish's milkwort conservation requirements have been met and this species is now adequately conserved under the Plan (RCA 2024b).

Brewer's calandrinia: Brewer's calandrinia has a CRPR of 4.2 (watch list). This annual herb is found in disturbed sites and burned areas generally within coastal scrub and chaparral habitats on sandy or loamy substrates. This species is not covered under the MSHCP.

Brewer's calandrinia was identified on site only during the 2017 focused botanical survey. A single plant was observed just southwest of the 10-acre USFS Parcel (NAP) (Figure 8). It was not observed during subsequent surveys.

Chaparral Nolina: Chaparral nolina has a CRPR of 1B.2 (rare, threatened, or endangered in California and elsewhere; moderately threatened in California), and is a USFS sensitive species. Chaparral nolina inhabits dry chaparral and coastal scrub on sandstone or gabbro soils. This species is not covered under the MSHCP.

Chaparral nolina is found mainly in the west portion of the property, occurring on all slope aspects in openings and understory and primarily within a mix of chaparral communities (Figure 9) including chamise, scrub oak, Eastwood manzanita, bush penstemon, and hoaryleaf ceanothus.

Chaparral nolina is scattered over a large area in the westernmost portion of the site. This portion of the site is some of the most rugged terrain in the survey area. Three (3) other locations have also been identified. Two (2) are along the western boundary north of the large population area and south of Mabey Canyon. The third is located within and south of the USFS 10-acre parcel (NAP).



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
**Paniculate Tarplant, Fish's Milkwort, & Brewer's Calandrinia
Observed 2016-2024**
Figure 8



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Chaparral Nolina Observed 2016-2024
Figure 9

Chaparral nolina is a perennial that is relatively conspicuous within the survey area year-round. For this reason, and because the limits of the species were verified, L&L maintained the population estimates from 2016, as described below.

Chaparral nolina is a clonal species and clusters of nolina can be a single individual. For the purpose of this survey, in areas mapped as small concentrations where populations were counted or estimated, biologist Melanie Dicus totaled colonies or clusters of nolina, rather than ramets (a ramet is an individual within a clonal colony). In some places the density of nolina colonies was high enough that it was difficult to separate one clonal colony from another. In those cases, colonies were separated into clusters approximately five (5) feet in diameter. For example, a five-foot wide cluster measuring 15 feet in length would be counted as three clusters. We used this methodology to avoid underrepresenting chaparral nolina within the survey area.

In the areas that supported very dense vegetation, steep terrain, or were otherwise impassable, the habitat was observed with binoculars from adjacent areas and ridgelines. Chaparral nolina was moderately easy to spot with binoculars, but some plants could have been obscured by dense vegetation or available angle of view.

Due to the inaccessibility of steep and heavily vegetated slopes, a portion of the population was sampled and extrapolated to estimate the total population size. L&L biologists walked three transects on three ridgelines located within the population, counting the number of "clusters" (clonal colonies or genets) that fell within a certain distance of the transect. Sample plots 1 and 2 consisted of linear transects with 10 feet on either side; sample plot 3 encompassed 15 feet on either side of the transect. The plot widths were chosen based on the width of the ridges and the ability to see the plants.

The first transect measured approximately 2,175 linear feet. With a total plot width of 20 feet, the area of the plot measured 43,500 square feet, or just under one acre. Within this plot, 249 clusters of nolina were counted, yielding 249 within approximately one acre. The second transect measured approximately 780 linear feet with a plot width of 20 feet, for a total of 15,600 square feet or 0.36 acre. Within this plot, 49 nolina clusters were counted, yielding 136 clusters of nolina per acre. The third transect measured approximately 760 linear feet with a total plot width of 30 feet, for a total of 22,800 square feet, or 0.52 acre. Within this plot, 62 nolina clusters were counted, yielding 119 clusters per acre.

The results from the three plots were averaged for a total of approximately 168 nolina clusters per acre. This estimate was applied to the largest population located in steep terrain and dense chaparral. L&L acknowledges the biases involved in using this method of extrapolating the total population density within the Skyline property, namely that the sample locations are not random or uniform and only measure plant density on the ridges, which may not accurately represent the plant density on north or south-facing slopes. The density of chaparral nolina varies from high to

low within each sample plot, as it does throughout the nolina-occupied portions of the site.

This extrapolation was conducted in an effort to estimate the population size and does not constitute an exact plant count. L&L believes the data are generally representative of the habitat in the survey area. Following this, low level ariel photography over the survey area was used to verify population estimates.

The two (2) populations just south of Mabey Canyon Wash supported 18 and 20 clusters. The fourth population located south of and extending into the USFS 10-acre parcel (NAP) consisted of three (3) small concentrations and a scattering of individual chaparral nolina. The easternmost and largest population in this area supports 58 clusters, including some individuals that cross onto the USFS property. The others support 15 clusters each (Table 15). Two (2) individual plants are located within the center of the property. Total population within the full survey area is estimated at $\pm 5,343$ clusters.

This species is only recorded in the CNDDDB and Calflora in one other location in Riverside County. Chaparral nolina was recorded in the CNDDDB as occurring on north-facing slopes on the south side of Wardlow Canyon. This record crosses within the northern end of the survey area, north of Mabey Canyon Wash. The recorded area is a large oval (a more general area) from 1990, with only a small portion crossing into the survey area. Additional time was spent in this area during the botanical surveys, but nolina was not identified on this portion of the site. Most of the recorded populations closest to the property are on the west side of the Santa Ana Mountains in Orange County.

Coulter's matilija poppy: Coulter's matilija poppy (CMP) has a CRPR of 4.2 (watch list). This distinctive perennial plant is found in sage scrub and chaparral on sandy to coarse sandy substrates. Fourteen (14) locations of CMP were identified in 2008 and again in 2013 in the survey area. Results of the surveys in 2008 found 526 individuals. In 2013, only ± 236 plants were found. No new populations were identified. Plants were found along the high flow level of active Feature 3 (unnamed drainage) and on the unpaved fire road in the middle of the survey area. GPS locations are listed in Tables 17 through 19 (Appendix A).

During the 2016 focused botanical survey, 37 individual CMP and groups were identified and mapped within Feature 3 and its tributaries, which is where most of the CMP were identified in 2008 and 2013. Approximately 691 plants were observed during the 2016 survey within Feature 3, which included locations not previously identified. The plants observed in 2016 were found in 2017 and 2024. Three additional locations were observed in 2017 consisting of a total of 25 plants. No observations of CMP in 2024 occurred outside of the previously identified locations.

Within Feature 3, locations from previous and current surveys were combined where they overlap or are adjacent (Figures 10, 10a, and 10b). Locations with smaller numbers of plants were also identified: one (1) in Feature 1 (approximately 22 plants) and three (3) widely separated locations



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Coulter's Matilija Poppy Observed 2008-2024 Overview
Figure 10



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Coulter's Matilija Poppy Observed 2008-2024 North and West
Figure 10a



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Coulter's Matilija Poppy Observed 2008-2024 South and East
Figure 10b

in Feature 6 (approximately 52 plants). Two (2) previously identified locations (identified in 2013 as populations 12 and 13) were not found during subsequent surveys. Figure 10 combines CMP locations from all survey years within Feature 3.

Under the MSHCP, CMP conservation requirements have been met and this species is now adequately conserved under the Plan (RCA 2024b).

Other Special Status Species with High or Moderate Potential to Occur

Three (3) other special status botanical species, not observed during the survey, have moderate potential to occur in the survey area based on presence of suitable habitat, species range, and proximity to known occurrences. These species, western spleenwort (*Asplenium vespertinum*), intermediate monardella (*Monardella hypoleuca* ssp. *intermedia*) and San Diego County viguiera (*Bahiopsis (Viguiera) laciniata*), have potential habitat in the understory of the steep, dense chaparral slopes on the western half of the survey area. These species are not covered species under the MSHCP.

Western Spleenwort: Western Spleenwort has a CRPR of 4.2 (watch list). Western spleenwort is found in moist, shady, or rocky places such as beneath cliff overhangs in chaparral, coastal sage scrub, and oak woodland habitats.

The California Consortium of Herbaria and Calflora list a record north of Lake Elsinore, approximately 15.5 miles southeast of the survey area. Suitable habitat for western spleenwort is present in the survey area. This species was not observed during field surveys, but due to the density of chaparral, steep terrain, and the relatively small size of this plant, it is possible that the species is present in inaccessible areas that were not observed.

Intermediate monardella: Intermediate monardella has a CRPR of 1B.3 (rare, threatened, or endangered in California and elsewhere; not very threatened in California). It is found in chaparral, cismontane woodland, and sometimes in the lower montane coniferous forest, usually in the understory.

Intermediate monardella is known only from the Santa Ana and Palomar Mountains between about 1,310 and 4,100 feet (400 and 1,250 meters) elevation. The majority of recorded populations occur above about 1,700 feet (520 meters) elevation, but populations below this elevation are not uncommon. The survey area is near the northern limit of the species range. CNDDDB records show an observation 1.3 miles southwest of the survey area, near the intersection of Skyline Drive/Blackstar Canyon Road and Leonard Road. Suitable habitat for intermediate monardella occurs in the survey area. This species was not observed during field surveys, but due to the density of chaparral and steep terrain and the relatively small size of this plant it is possible that the species is present but was not observed.

San Diego County viguiera: San Diego County viguiera has a CRPR of 4.3 (watch list). This species is found in chaparral and coastal sage scrub between about 200 and 2,460 feet (60 and 750 meters) elevation. The survey area appears to be in the northern margin of the species geographic range. There are no records in the CNDDDB. Suitable habitat for San Diego County viguiera is present in the survey area, but this species was not observed during field surveys despite the fact that this species can grow to a maximum height of over one meter. However, due to the density of chaparral and steep terrain it is possible that plants are present in inaccessible areas that were not observed.

Forest Service Sensitive Botanical Species

A review of U.S. Forest Service, Cleveland National Forest, Santa Ana Mountain Area information identified 24 sensitive species within this Forest Service District (Table 14 in Appendix A). Of these, all were included in the CNDDDB, CNPS, and IPaC searches (Table 13), with the exception of Orcutt's brodiaea (*Brodiaea orcuttii*), Orcutt's linanthus (*Linanthus orcuttii*), felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*), southern mountains skullcap (*Scutellaria bolanderi* ssp. *austromontana*), Hammitt's clay-cress (*Sibaropsis hammittii*), southern jewelflower (*Streptanthus campestris*), and Parry's tetracoccus (*Tetracoccus dioicus*). Two (2) species, intermediate mariposa-lily and chaparral nolina, were observed as discussed above. None of the other twenty-two species were observed, and none were determined to have moderate or high potential of occurring within the survey area as discussed above.

3.6) Special Status Wildlife Species

3.6.1) Endangered, Threatened, Candidate and Fully Protected Wildlife Species

Wildlife species listed as endangered, threatened, candidates for listing as endangered or threatened, and fully protected species were evaluated as a part of this assessment. They are briefly described, and potential for occurrence is assessed in Table 13. These species were either documented by the CNDDDB as occurring within the same quadrangle as the survey area or adjacent quadrangles, addressed in previous reports, or were identified by the USFWS, U.S. Forest Service, or other agency as potentially occurring in the area.

Mountain lion (*Puma concolor*) and Crotch bumble bee (*Bombus crotchii*), both candidates for state listing, were detected in the survey area. Three (3) other species, coastal California gnatcatcher (*Polioptila californica californica*), quino checkerspot butterfly (*Euphydryas editha quino*), and golden eagle (*Aquila chrysaetos*), have potentially suitable habitat and high or moderate potential for occurrence within the survey area. Due to the presence of riparian habitat (despite its general lack of suitability) and ponding areas and the requirements for evaluation of riparian/riverine habitats with regard to special status species, least Bell's vireo (*Vireo bellii pusillus*) and fairy shrimp species are also discussed in more detail below.

Mountain lion: The Southern California/Central Coast ESU (evolutionarily significant unit) of mountain lion became a candidate for listing under the California Endangered Species Act (CESA) on April 21, 2020. Under CESA, a candidate species is provided the same protections as a listed species.

Mountain lions are primarily solitary, territorial, and occur in low density. They are mainly active at night and at dusk and dawn. Mountain lions have large home ranges that include heterogeneous habitats including riparian, chaparral, oak woodlands, coniferous forests, grasslands, and occasionally rocky desert uplands. In California, mountain lions can range from near sea level to the higher mountain slopes and some desert areas. Natal dens may be found under rock overhangs, in shallow caves, crevices, thickets, or other protected places (CBD 2019).

Mountain lion is a covered species under the MSHCP and adequately conserved under the Plan.

Crotch Bumble Bee: Crotch bumble bee was originally advanced to candidacy for state listing in June 2019. This status was challenged in court and a trial court decision temporarily removed its candidacy in February 2021. A State Supreme Court ruling reversed this judgement and reinstated its candidacy on September 30, 2022 (Supreme Court Case S275412). The latest information from CDFW indicates that the Crotch bumble bee is a candidate for state listing as endangered (CDFW 2024b). Candidates for state listing receive the same protections as state listed species. Crotch bumble bee is not a covered species under the MSHCP. If the species will be impacted, an Incidental Take Permit from CDFW and associated mitigation is required.

This species primarily nests underground, often using abandoned rodent burrows, but may also use rock piles, tree cavities, etc. Food plants present on the site include *Asclepias*, *Chaenactis*, *Lupinus*, *Medicago*, *Phacelia*, *Salvia*, *Eriogonum*, and others. Focused surveys in 2024 observed Crotch bumble bees. Four CBB were observed during survey round 1, one during survey round 2 and no CBB were observed during survey round 3 (Figure 11).

One queen CBB was observed foraging on deerweed on May 13, 2024, one queen CBB was observed foraging on *Salvia mellifera* on May 14, 2024, and two worker CBB were observed foraging primarily on deerweed on May 16, 2024. One CBB worker was observed foraging on deerweed on June 25, 2024. CBB was documented and identity confirmed through multiple photos (Appendix A).

In addition to CBB, other *Bombus* species were detected during all three survey rounds including black bumble bee (*Bombus melanopygus*), yellow-faced bumble bee (*Bombus vosnesenskii*), Sonoran bumble bee (*Bombus sonoratus*), California bumble bee (*Bombus californicus*). The quantity and species observed during each survey round are provided in the Crotch bumble bee report (Appendix F).

Coastal California gnatcatcher: There are three subspecies of California gnatcatchers. The coastal California gnatcatcher (CAGN) subspecies is listed as Threatened under the Federal Endangered Species Act, and it is a state species of special concern. This small insectivorous songbird occurs almost exclusively in several distinctive sub-associations of the coastal sage scrub plant community (USFWS 1993). The survey area does provide suitable habitat, and the site is immediately adjacent to USFWS designated critical habitat for the species (USFWS 2024b).

CAGN was determined to have moderate potential for occurrence in the survey area. Focused surveys were conducted in 2013 by GEC and the species was not detected. CAGN is a covered species under the MSHCP and adequately conserved under the Plan. There are restrictions on vegetation disturbance during the nesting season in CAGN habitat within the Criteria Area, but the Project site is not within any Criteria Cells. However, the MSHCP does not provide take authorization for nesting birds, including CAGN.

Golden eagle: The golden eagle is a CDFW fully protected species, a California watch list species, and a U.S. Fish and Wildlife Service Bird of Conservation Concern. This species is also protected under the federal Bald and Golden Eagle Protection Act. The typical habitat of golden eagles includes rolling foothills, mountain areas, sage-juniper flats, and deserts. Golden eagles nest on cliffs and in large trees in open areas (Zeiner et al. 1990). The site provides suitable foraging habitat for the species. It has **moderate** potential for presence in the survey area. Golden eagle is a covered species under the MSHCP and adequately conserved under the Plan. However, the MSHCP does not provide take authorization for nesting birds.

Least Bell's vireo: Least Bell's vireo (LBV) is a federal and state endangered species and is restricted to riparian woodlands along streams and rivers with mature, dense stands of willows (*Salix* spp.) or cottonwoods (*Populus* spp.) or smaller spring fed or boggy areas with willows or alders (*Alnus* spp.). Riparian habitat provides both breeding and foraging habitat for the species. Early to mid-successional riparian habitat is typically used for nesting by LBV because it supports dense shrub cover required for nest concealment as well as a structurally diverse canopy for foraging. Vegetation characteristics of riparian stands between 5 to 10 years of age are most suitable for nesting LBV (Goldwasser 1981, Kus 1998, RECON 1989, Franzreb 1989, USFWS 1998).

The survey area is not located within critical habitat for this species. Records for LBV within the Project vicinity are from 2012 and were recorded approximately 2.5 miles north of the survey area along Wardlow Wash where it enters the Santa Ana River (CDFW 2024c). The resident or migrant status of the bird was unknown, but it was detected singing in late June when migrant vireos are typically no longer moving through the area. The FPWE EIR documented a vireo 0.25 miles north of the survey area along Wardlow Wash in an area with California sycamore-coast live oak alluvial scrub, coast live oak woodland, mulefat scrub, and Fremont cottonwood-willow riparian woodland.

LBV was not observed in the survey area and riparian vegetation does not provide suitable territorial or breeding habitat for LBV. Although some scattered willow and cottonwood species are present, vegetation diversity and density is not adequate to support the species.

Stephens' kangaroo rat: Stephens' kangaroo rat is federally listed as endangered, and state listed as threatened. This species is associated with sparse, gently sloping grasslands sometimes at the margins of cultivated or disturbed lands. It is known to exist in western Riverside County and western and central San Diego County. The survey area is outside the geographic range of the species (USFWS 2024) and the majority of the habitat is too steep and dense. Potentially suitable habitat lies primarily within the lowlands on the eastern half of the site and within the wide canyon bottoms. Stephens' kangaroo rat has a low potential to occur on the site.

The Project site is not within the boundaries of the Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP). The MSHCP covers impacts to Stephens' kangaroo rat because the Project site is located within the MSHCP boundaries but is located outside of the boundaries of the SKR HCP. Stephens' kangaroo rat is a covered species under the MSHCP and adequately conserved under the Plan. The MSHCP does not require trapping surveys for Stephens' kangaroo rat.

Quino Checkerspot Butterfly: The quino checkerspot butterfly (QCB) is a federally listed endangered species. QCB is presently known to exist only as several, probably isolated, colonies in southwestern Riverside County, southern San Diego County, and northern Baja California, Mexico. This butterfly is associated with sparsely vegetated or bare areas usually characterized by clay or cryptobiotic soil deposits that develop a hard crust within southern California sage scrub vegetation communities. Low-growing herbaceous annuals, including the QCB's primary larval host plant, dot-seed plantain (*Plantago erecta*), typically inhabit these areas. Other potential QCB host plants (usually secondary) may occupy these areas and include owl's clover and white snapdragon (*Antirrhinum coulterianum*).

Habitat and site condition were determined to be potentially suitable for QCB due to the presence of host plants, white snapdragon, owl's clover, and dot-seed plantain, and suitable hilltopping locations (adults congregate on hilltops and ridgelines and this is referred to as hilltopping). Despite the presence of these host and food plants, the survey area is at the northwestern limit of the species range and the USFWS Recovery Plan (USFWS 2003) indicates that the survey area is located well outside of the recovery units for the species (the closest extant recorded QCB location being approximately 14 miles southeast of the survey area in the Hartford Springs Reserve). QCB is a covered species under the MSHCP and adequately conserved under the Plan.

Listed Fairy Shrimp: No naturally occurring vernal pools were observed in the survey area. Soil types mapped on the site are not consistent with an alkali playa or vernal pool complex (Bauder et al. 2011). No vernal pool indicator species were observed.

The habitat assessment found two features within the survey area with evidence of ponding water potentially suitable to support fairy shrimp within an area which was previously disturbed by the construction of the FPWE. Focused wet and dry season surveys were conducted in these areas in 2024. During the dry season, fifty soil samples were collected from the two features. No fairy shrimp cysts were detected. Four visits were made during the wet season and all sampling results had negative findings for fairy shrimp. While abbreviated the wet season surveys included inundation periods and levels sufficient to support the hatching of fairy shrimp cysts if present.

Both the dry and wet season samplings were negative for any species of fairy shrimp. Neither common nor special status fairy shrimp are currently present in the survey area. Additional details regarding the survey results can be found in the fairy shrimp survey report in Appendix G.

3.6.2) Special Status Species

Special status wildlife species were evaluated as a part of this assessment because they are known from or expected to occur within the Project vicinity. They are briefly described and their potential to occur in the survey area is detailed in Table 13 (Appendix A). These species were either documented by the CNDDDB as occurring within the same quadrangle as the survey area or adjacent quadrangles, addressed in previous reports of the survey area, or were identified by the USFWS, USFS, or other agency as potentially occurring in the area.

Several special status wildlife species were observed during biological surveys: orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), red-diamond rattlesnake (*Crotalus ruber*), Cooper's hawk, southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Vaux's swift (*Chaetura vauxi*), California horned lark (*Eremophila alpestris actia*), Lawrence's goldfinch (*Spinus lawrencei*), black-chinned sparrow (*Spizella atrogularis*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) (Figure 11).

A number of other special status wildlife species were determined to have high or moderate potential to occur in the survey area based on presence of suitable habitat, species range, and proximity to known occurrences. These species are: American bumble bee (*Bombus pensylvanicus*), southern California legless lizard (*Anniella stebbinsi*), California glossy snake (*Arizona elegans occidentalis*), San Bernardino ringneck snake (*Diadophis punctatus* ssp. *modestus*), California mountain kingsnake (*Lampropeltis zonata*), coast horned lizard (*Phrynosoma blainvillii*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), Bell's sage sparrow (*Artemisiospiza belli belli*), oak titmouse (*Baeolophus inornatus*), pallid bat (*Antrozous pallidus*), Dulzura pocket mouse (*Chaetodipus californicus femoralis*), hoary bat (*Lasiurus cinereus*), and San Diego desert woodrat (*Neotoma lepida intermedia*).

Of these species, the following are covered under the MSHCP and adequately conserved under the Plan: orange throated whiptail, coastal whiptail, red-diamond rattlesnake, coast horned lizard, California horned lark, Cooper's hawk, southern California rufous-crowned sparrow, Bell's sage



(Aerial obtained from Google Earth, May 2024)

Note: Some observed species do not have GPS locations and are not depicted here

Skyline Heights, City of Corona, Riverside County, California
Special Status Wildlife Observed 2016-2024
Figure 11

sparrow, San Diego desert woodrat, San Diego black-tailed jackrabbit. However, the MSHCP does not provide take coverage for nesting birds.

Burrowing owl (*Athene cunicularia*) is covered under the MSHCP but not adequately conserved under the Plan. It is an MSHCP Additional Needs Species for the property.

The California mountain kingsnake (San Diego population) is covered under the MSHCP but is not adequately conserved. It will be adequately conserved under the Plan once a Memorandum of Understanding is executed with the USFS that addresses management for this species on Forest Service Land.

The remaining species are not covered under the MSHCP: American bumble bee, southern California legless lizard, California glossy snake, San Bernardino ringneck snake, coast patch-nosed snake, oak titmouse, Vaux's swift, Lawrence's goldfinch, black-chinned sparrow, pallid bat, Dulzura pocket mouse, and hoary bat.

Special Status Species Descriptions (Species not Adequately Conserved Under the MSHCP)

American bumble bee: American bumble bee is a CDFW Special Animal and CNDDDB S2 species (imperiled). This is a large bee that has historically occurred across most of North America. Its numbers have collapsed, and it is strongly suspected that one reason is that the American bumble bee was infected with a virus (USFS 2024c). It is still commonly found in the southern parts of its historic distribution including most of the southern United States. Habitat for this bee is a wide variety of open fields with flowers including vetches (*Vicia*), clovers (*Trifolium*), goldenrods (*Solidago*), St. John's wort (*Hypericum perforatum*), and boneset (*Eupatorium*) (USFS 2024c). The American bumble bee was historically recorded in the City of Corona (1920), but the closest recent CNDDDB record is 7.25 miles west near Deer Canyon Park in Orange County. Suitable habitat for this species occurs in the survey area mainly within the grasslands and it has a high potential to occur.

California glossy snake: California glossy snake is a CDFW Species of Special Concern and CNDDDB S2 species (imperiled). It occurs in arid scrub, rocky washes, grasslands and chaparral with open areas and loose soil for easy burrowing (CalHerps 2024). This species ranges from the San Francisco Bay Area south to northwestern Baja California. No CNDDDB records fall within 10 miles of the survey area, but suitable habitat for the species occurs in the survey area and it has a moderate potential to occur.

Southern California legless lizard: Southern California legless lizard is a CDFW Species of Special Concern, a CNDDDB S3 species (vulnerable), and a USFS Sensitive species. This species is a snake-like limbless burrowing lizard that occurs from central California to northern Baja California, Mexico. Habitat for this lizard includes sparsely vegetated washes, beaches,

chaparral, and certain woodlands. Legless lizards require loose soil (such as sand, loam, or leaf litter) for burrowing and are most commonly found in washes, beach sand dunes, and loose alluvium near streams.

The closest record is located seven (7) miles to the northeast of the survey area. CNDDDB Element Occurrence (EO) #139 was observed in the La Sierra Hills area of Riverside in 2016. Suitable habitat for the species occurs in the survey area, mainly within and adjacent to portions of the dry drainage where soils are loose, and it has a moderate potential to occur.

San Bernardino ringneck snake: San Bernardino ringneck snake is a CDFW Special Animal, CNDDDB S2? species (more than vulnerable, but not imperiled with certainty), and a USFS Sensitive species. It occurs in relatively rocky areas within valley, foothill, chaparral, and grassland habitats. No CNDDDB records fall within ten miles of the survey area, but suitable habitat for the species occurs in the survey area and it has a moderate potential to occur.

California mountain kingsnake: California mountain kingsnake is a USFS Sensitive Species. It has no other state or federal conservation status. This species can occur in a wide variety of habitats, from moist chaparral or sage scrub to woodlands, riparian zones, or wet meadows. It is not tracked in the CNDDDB database. California mountain kingsnake was recorded on the west side of the Santa Ana River valley, approximately six (6) miles from the survey area (SDNHM 2024). Suitable habitat for this species is present throughout the survey area in the canyons and alluvial areas where drainages and the canopy create moist areas, and it has a moderate potential to occur.

Coast patch-nosed snake: The coast patch-nosed snake is a CDFW Species of Special Concern and a CNDDDB S3 species (vulnerable). This snake is an active diurnal resident of shrublands with open sandy areas. The coast patch-nosed snake can be found from Santa Barbara County through southwestern California to Baja California. The nearest CNDDDB record for coast patch-nosed snake is 6.4 miles west of the survey area. Suitable habitat for the species occurs in the survey area in open areas of chaparral and sage scrub habitats and it has a moderate potential to occur.

Burrowing owl: Burrowing owl (BUOW) is a USFWS Bird of Conservation Concern, CDFW Species of Special Concern, and a CNDDDB S2 species (imperiled). BUOW is covered under the MSHCP and considered a species requiring “Additional Survey Needs.” BUOW historically occurred throughout much of California; however, many former populations have vanished.

A petition to list burrowing owl as endangered or threatened under CESA was submitted to the California Fish and Game Commission in March 2024. In August 2024, CDFW determined that there is sufficient scientific information to indicate that the petitioned action to list burrowing owl as threatened or endangered under CESA may be warranted. As of this time (August 2024), the Fish and Game Commission has not yet taken action on the petition. Since burrowing owl is a

covered species under the MSHCP, listing of the species would not affect the survey and mitigation requirements for this species in the survey area. The MSHCP requires a protocol survey if suitable habitat is present and a 30-day preconstruction survey. If the species is present, additional mitigation is required as described in Mitigation Measure BIO-MM12 (Burrowing Owl).

BUOW occurs as a resident in open areas of the lowlands across much of the southern California region (Garrett and Dunn 1981). It may also occur in forb and open shrub stages of pinyon-juniper and ponderosa pine habitats (Zeiner et al. 1990). It requires large open expanses of sparsely vegetated areas on gently rolling or level terrain with rodent or other burrows for roosting and nesting cover. Burrowing owls may also dig their own burrows in soft, friable soil and may also use pipes, culverts, and other materials where burrows are scarce (CBOC 1993). One burrow is typically selected for use as the nest; however, satellite burrows are usually found in the immediate vicinity of the nest burrow within the defended territory of the owl.

A focused study conducted in 2013 on the Project site found no BUOW or BUOW sign. A habitat assessment and burrow survey conducted in 2016 found no BUOW, no BUOW sign and no suitable burrows. An updated habitat assessment and burrow survey conducted in 2024 found no BUOW, no BUOW sign and no suitable burrows. BUOW is not expected to occupy large portions of the site due to high vegetation density and steep-walled canyons.

Oak titmouse: The oak titmouse is a USFWS Bird of Conservation Concern. It is found in warm, dry oak woodland, oak-pine woodlands, or mixed woodlands with sufficient oaks present. The oak titmouse nests in tree cavities and was documented on ebird.org just south of Skyline Drive in 2014 and 2015, between 0.25 miles and 0.35 miles south of the survey area (Ebird 2024). Ebird.com sightings are a valuable resource, but data can be supplied by any member of the public, which includes unknown or unverifiable skillsets, consequently other contributing factors (habitat, location, records, etc.) must be analyzed when considering data. Suitable habitat for the species occurs in oak woodland habitats in the survey area and it has a high potential to occur.

Lawrence's goldfinch: Lawrence's goldfinch is USFWS Bird of Conservation Concern and a CNDDDB S4 species (apparently secure in California). This species typically nests in arid, open woodlands near chaparral, weed fields, and small bodies of water (Davis 1999). The species feeds mostly on seeds of annual plants, with a preference for fiddlenecks (*Amsinckia* spp.) in its breeding range. In winter its diet varies by region. These birds generally travel in pairs or flocks. Its breeding range is confined to the Central Valley and coastal foothills of California, as well as the northern portion of Baja California. Suitable habitat for the species occurs in the chaparral, sage scrub, and woodland habitats of the survey area and it was observed during surveys.

Black-chinned sparrow: The black-chinned sparrow is a USFWS Bird of Conservation Concern. It occurs in the southwestern U.S., typically in dry, brushy chaparral in rocky, rugged landscapes in habitats characterized by sagebrush, greasewood, chamise, mesquite, cactus, and other arid

scrub plants. It prefers tall brush on slopes and can be found between 1,500 and 8,200 ft. in elevation. The species was observed during surveys.

Pallid bat: The pallid bat is a CDFW Species of Special Concern, a CNDDDB S3 species (vulnerable), and a USFS Sensitive species. This species roosts in cliff faces and rock outcrops but can also be found in man-made structures or trees. Roosting and foraging locations are common in dry, open shrubland habitat, typically near water and below 6,000 feet in elevation. This species occurs in much of California, except the high mountains. CNDDDB records place the closest observation of this species approximately 5 miles southwest of the survey area, north of Irvine Lake. Potentially suitable roosting habitat occurs on and adjacent to the survey area and it has a high potential to occur.

Dulzura pocket mouse: Dulzura pocket mouse is a CDFW Species of Special Concern and a CNDDDB S3 species (vulnerable). It is usually found along the border of grass/chaparral edges and in coastal sage, chaparral, and grassland. Distribution is mostly in San Diego County, so the survey area is at the northern limit of the range of this species. No CNDDDB records for Dulzura pocket mouse fall within 10 miles of the survey area. Suitable habitat for the species occurs in chaparral and sage scrub habitats in the survey area and it has a high potential to occur.

Hoary bat: Hoary bat is a CDFW Special Animal and CNDDDB S4 species (apparently secure). This species roosts beneath clusters of leaves in trees. It is tolerant of colder temperatures and often migrates southward. It forages mainly on flying insects. This species is one of the most widespread of all American bats. It is found throughout the western United States, including most of California, with the exception of the Mojave and Colorado Desert regions. Optimal habitats are woodlands, mainly coniferous forests, for roosting with open areas or lakes for foraging. No CNDDDB records for hoary bat fall within ten miles of the survey area; however, the FPWE EIR documents hoary bats as being observed in Mabey Canyon. Suitable roosting and foraging habitat for this species occurs on and adjacent to the survey area and it has a high potential to occur.

Forest Service Sensitive Species

A review of U.S. Forest Service (USFS), Cleveland National Forest (CNF) (USFS 2013) identified twenty (20) sensitive wildlife species within this Forest Service District (Table 14, Appendix A). Of these, all were included in the CNDDDB search (Table 13), with the exception of fringed myotis (*Myotis thysanodes*). Two of the twenty (20) species, orange-throated whiptail and red-diamond rattlesnake were observed during surveys. Four (4) other species, southern California legless lizard, San Bernardino ringneck snake, California mountain kingsnake, and pallid bat, were determined to have moderate or high potential for occurrence within the survey area.

In addition, five (5) Management Indicator Species (MIS) were identified by the USFS for the Cleveland National Forest. They are briefly described, and occurrence probability is determined in Table 8.

Table 8. U.S. Forest Service Management Indicator Species

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Anaxyrus californicus</i> Arroyo toad	Washes and intermittent streams of semi-arid regions, with consistent water flow in spring and early summer that create shallow pools in slow moving streams. Sandy-banked rivers, riparian woodlands, and loose gravel. Southern CA to tip of Baja Ca. Desert population along Mojave River.	Fed: END Calif: SSC, S2 MSHCP: AC c FS: MIS	No habitat; edge of mapped range, No potential.
<i>Melospiza melodia</i> Song sparrow	Open scrub habitats often on the margins of grassland, riparian, woodland, streams or ponds. Most occurrences are associated with riparian habitat or areas near riparian.	Fed: None Calif: SSC* *Modesto population FS: MIS	Occurs (observed by GEC)
<i>Strix occidentalis occidentalis</i> California spotted owl	In so. CA. Montane hardwood and conifer forests at mid-high el. Coast oak woodland, valley foothill riparian at lower el. Less common pinyon juniper woods. Breeds/roosts in forests with large old trees and snags, dense canopy, multiple canopy layers. Needs more large trees than generally available. Spread through So. Cascade Range of No.CA south along the W slope of the Sierra Nevada and in Mts. of central and so CA nearly to the Mexico border.	Fed: BCC Calif: SSC, S2 MSHCP: NAC f USFS: S, MIS BLM: S	No habitat (woodlands generally not large enough); out of mapped range, No potential.
<i>Puma concolor</i> Mountain lion	Wide variety of habitats; coniferous forest, lowland woodland, grassland, scrub. Areas with dense vegetation, caves, and/or rocky crevices	Fed: None Calif: CAN FS: MIS	Occurs Suitable habitat, widespread, Evidence of occupation in 2013.
<i>Odocoileus hemionus</i> Mule deer	Wide variety of habitats; coniferous forest, alpine forest, woodlands, shrublands, grassland and desert.	Fed: None Calif: None FS: MIS	High- Suitable habitat, known in the general vicinity, reported by the public on or near the survey area.

Song sparrows are widely distributed within California and are often permanent residents of riparian thickets and wet brush generally in lower mountain areas in southern California. They can also utilize open scrub habitat on the edge of grassland, woodlands, riparian, or water habitats. This species is usually in areas associated with riparian habitats and it breeds near water resources. The survey area has limited suitable riparian habitat but does support some riparian habitat adjacent to chaparral and woodland habitats and this species was observed during biological surveys for the FPWE EIR.

Mountain lions are typically found in scrub and woodland habitats. They also utilize dense vegetation and rocky outcrops. Mountain lions have very large home ranges, typically between 20 and 100 square miles, but can be as much as 370 square miles, which keeps populations low. In southern California, populations of mountain lions are becoming fragmented and constricted

by urbanization. Human presence may have adverse effects on mountain lion behavior, range use, and foraging activities. Increased access to the CNF increases potential for disturbance, poaching, and animal mortality from vehicles. In addition, new and larger roadways create barriers to movement. Mountain lion population depends largely on the abundance of prey, of which mule deer make up most of the diet (USFS 2016).

The survey area contains dense and moderately dense scrub, woodlands, and rocky outcrops, all of the features that support mountain lion and the site is adjacent to the Cleveland National Forest that was reported to support 20 adults in 1993 (Beier 1993). Mountain lion was detected in the survey area during the 2013 surveys. Mountain lion is covered under the MSHCP and adequately conserved under the Plan.

Mule deer utilize a wide variety of habitats, with the exception of developed and desert habitats. The species prefers areas of transitioning habitats, which provide a mix of both habitats (woodland, scrub, and open grasslands) and vegetation densities. Often fire plays a key role in habitat for this species by reducing the canopy, increasing accessibility, and providing new, young, tender vegetation preferred by deer. Accessible water resources are important during fawning and if the species is a year-round resident. According to the 2005 Land Management Plan (USFS 2005a), the Santa Ana Mountains support approximately 950 mule deer. The mule deer population in the National Forest is affected negatively by the distribution of vegetation and age classes, private land development, recreational use in key areas, recreational target shooting and poaching, lack of frequent small fires, and increased predation by mountain lions. Mule deer have been reported in the general survey area.

3.7) Jurisdictional Delineation and Riparian/Riverine

The nearest Traditional Navigable Water (TNW) is the Pacific Ocean, which is located 18.31 miles away from the Project site. The nearest Relatively Permanent Water (RPW) is the Santa Ana River, which is located 2.25 miles away from the site.

Riparian/riverine corridors in the form of sycamore woodland, mulefat, scrub, and SBS are located within Features 1, 3, and 6. Several debris basins are present at lower elevations across the hillside and these areas are capable of slowing and containing large amounts of water, resulting in the reduction of energy, reduced erosion, and increased water quality of hillside runoff.

L&L found six (6) main jurisdictional ephemeral drainage features with 56 tributaries, for a total of 62 drainage features, of which three (3) are USGS mapped blue line streams (Table 22 in Appendix A). Water flow that occurs during or for a short period following rain events is not permanent or present seasonally for long periods. Soon after rainfall ends, flow ceases and is absorbed into the sandy soils or runs off to downstream city-maintained flood control basins.

Figure 12a shows all 62 Non-Relatively Permanent Water (Non-RPW) drainage features and tributaries (i.e., ephemeral carriers of periodic rainfall). Each tributary was given an identifier that includes the main drainage feature number (1 through 6) followed by a letter (assigned in order from a to z). For example, all the tributaries that flow into Feature 1 begin with the number 1.

Because of the variance in drainage widths and the size of the exhibits in the report, some drainage widths may not be to scale in order to make them visible on the page. Figure 12b more accurately depicts the feature widths, but many of the tributaries are not visible at this scale. The widths displayed in Table 22 (Appendix A) provide the most accurate information.

Vegetation in and adjacent to jurisdictional features includes coastal live oak woodland, sycamore woodland, mulefat scrub, SBS, coastal sage scrub, chaparral, California annual grassland, eucalyptus/pepper grove, and disturbed areas. Where riparian habitats fell within or adjacent to drainages that habitat, to the outermost dripline edge, was considered part of the CDFW jurisdiction. Under the current guidance, the drainages in the survey area are all ephemeral, non-RPW. Even though at the time of the earlier writing the definition of federal waters was different, and a 404 permit was issued by the USACE, currently, federal waters and wetlands are not present. The area previously considered to be federal waters is now only waters of the state (RWQCB) under Porter-Cologne.

L&L identified ± 19.3 acres of CDFW jurisdiction (± 18.1 acres onsite, ± 1.2 acres offsite) of this, ± 10.43 acres are considered CDFW wetlands. Included in the ± 19.3 acres, ± 2.48 acres (± 2.22 acres onsite, ± 0.26 acres offsite) were also identified as RWQCB jurisdiction, state waters. No federal waters or wetlands were identified. Jurisdictional feature information is detailed in Table 22 (Appendix A).

The area identified as CDFW jurisdiction was also determined to fulfill the requirements of MSHCP Riparian/Riverine habitat. Therefore, ± 19.3 acres are also considered riparian/riverine habitat (± 8.87 acres riverine and ± 10.43 acres riparian).

No naturally occurring vernal pools were observed in the survey area. No vernal pool indicator species were observed. Soil types mapped on the site are not consistent with an alkali playa or vernal pool complex (Bauder et al 2011). Two areas of seasonal ponding were observed and were inundated for a short period of time during the 2024 rainy season. CNDDDB records the closest special status fairy shrimp species at more than twenty miles from the Project. Wet and dry season protocol level survey conducted in 2024 had negative findings for fairy shrimp species and no other vernal pool species was observed (see Section 3.6). The areas of ponding are believed to have resulted from an interim condition between the recent development footprint of the FPWE and the ultimate condition of the Skyline Heights Project. These seasonal ponding areas within man-made low points will be resolved once the Skyline Heights Project infrastructure is in place.



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
RWQCB State Waters
Figure 12a



(Aerial obtained from Google Earth, May 2024) Skyline Heights, City of Corona, Riverside County, California
CDFW Jurisdiction Drainages & MSHCP Riparian/Riverine
Figure 12b

3.8) Wildlife Corridors

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. Various studies have concluded that in the absence of habitat linkages that allow movement to adjoining open space areas, some wildlife species (especially the larger and more mobile mammals) will not likely persist over time. Such fragmented or isolated habitat areas hinder the transfer of new individuals and genetic information.

Corridors mitigate the effects of this fragmentation by:

- Allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange;
- Providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (fire, disease, etc.) will result in population or local species extinction; and
- Serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources.

Wildlife movement activities usually fall into one of three movement categories: dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions), seasonal migration, and movements related to home range activities (e.g., foraging for food or water, defending territories, or searching for mates, breeding areas, or cover). A number of terms such as “wildlife corridor”, “travel route”, “habitat linkage”, and “wildlife crossing” have been used in various wildlife movement studies to refer to areas where wildlife moves from one area to another. To clarify the meaning of these terms and facilitate the discussion of wildlife movement in this analysis, these terms are defined as follows:

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

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

Wildlife Crossing – A small, narrow area, relatively short in length and generally constricted in nature that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are man-made and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent “choke points” along a movement corridor that may impede wildlife movement and increase the risk of predation. It is important to note that in a large open space area where there are few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors as defined above may not yet exist.

Given an open space area that is both large enough to maintain viable populations of species and provide a variety of travel routes (e.g., canyons, ridgelines, trails, riverbeds, and others), wildlife will use these “local” routes while searching for food, water, shelter, and mates and will not need to cross into other large open space areas. Based on their size, location, vegetative composition, and availability of food, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water, and cover, particularly for small and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles, such as roads and highways, the remaining landscape features or travel routes that connect the larger open space areas can “become” corridors as long as they provide adequate space, cover, food, and water, and do not contain obstacles or distractions (e.g., manmade noise, lighting) that would generally hinder wildlife movement. When these wildlife movement corridors provide connections between protected open space areas that have no other linkage, wildlife movement corridors become locally or even regionally important.

Small tracts of land or larger relatively undisturbed land masses play an increasingly critical role in connecting fragmented populations of plant and animal species. The basic framework of corridor analysis consists of identifying areas of habitat that are suitable for the wildlife species in question. Habitat suitability depends upon the needs of a given species. It can be approximated by overlaying layers such as current vegetation, topography (aspect, slope, and elevation), distance to water, and perhaps climatic variables such as average temperature and precipitation. Because different wildlife species vary in their sensitivity to human disturbance, habitat suitability is constrained by disturbance variables such as distance to roads, distance to towns, traffic volumes, hunting status, etc. Generally, coverage of known distribution of a species (sightings, radio-telemetry locations, hunter-kill, and road-kill sites) is also developed. A probability contour is finally developed from the convergence of these coverages to indicate the likelihood of a given area being suitable for a given species. Where this probable habitat connects areas of known population centers, it is often termed a corridor.

3.8.1) Survey Area

The survey area is bordered by dense urban development to the north and east, a few parcels of low-density residential development and open space to the west; and open space to the northwest, west and south. The survey area is north and east of MSHCP Core B (Cleveland National Forest).

The survey area includes native habitat that supports a variety of wildlife species and likely contributes generally to the Corona-Temecula Foothills linkage. However, it does not constitute a wildlife corridor (i.e., a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another), as movement on a regional scale is not confined within a specific corridor in this area. Rather, it is comprised of open space at the interface with urban development and is contiguous with a large expanse of open space within Core B and the Cleveland National Forest. Thus, wildlife currently moves freely throughout the survey area and surrounding areas via existing travel routes^[1] such as drainages, ridgelines, and existing dirt roads.

It should be noted that Wardlow Wash, just offsite to the north of the survey area, was identified by BonTerra Consulting as a regional wildlife corridor that facilitates movement between the Cleveland National Forest and Prado Basin, as referenced by the FPWE EIR (RBF Consulting 2008). However, Wardlow Wash is relatively constrained by development on either side, road crossings at three locations (Paseo Grande, Serfas Club Drive, and Palisades Drive), and State Route 91, which is a significant barrier to wildlife movement. Wardlow Wash will not be impacted by the proposed development. A recognized connection between the Santa Ana Mountains and the Chino Hills area is farther to the west via Coal Canyon (Beier 1993). The MSHCP also proposes a connection between Existing Core A (Prado Basin/Santa Ana River) with Existing Core B (Cleveland National Forest) via Constrained Linkages 1 and 2, which are also farther to the west (but east of Coal Canyon). The survey area also currently provides for movement on a smaller, local scale for species that live within the survey area.

^[1] A landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is frequently used by wildlife to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas, and provides a relatively direct link between target habitat areas.

4.0) ANALYSIS OF POTENTIAL EFFECTS

For the purposes of this discussion, we considered direct impacts of the proposed Project as temporal and proximal in nature and clearly traceable to Project activity. These result from the immediate effects caused directly from construction or operations and in this analysis include ground-disturbing activities (i.e., vegetation removal, grading, paving, building of structures, installing landscaping, creating the fuel modification zone, etc.) associated with the Skyline Heights Project designs. Beyond the Project impact design a 12-foot buffer was added, reduced to ten feet offsite at Trudy Way, to the Project impact calculations to allow for movement of the heavy equipment within topographic constraints and for temporary impacts associated with construction. Therefore, impact totals include the Project design, a 12-foot construction buffer (generally), and fuel modification zones.

A haul road is needed during the earth moving phase of the Project to transport dirt during the excavation and compaction of soils and will run from the northern development area, south across Mabey Canyon Basin to the central development area. The haul road will be temporary, and the area will be restored after completion of construction (see Section 4.1.1).

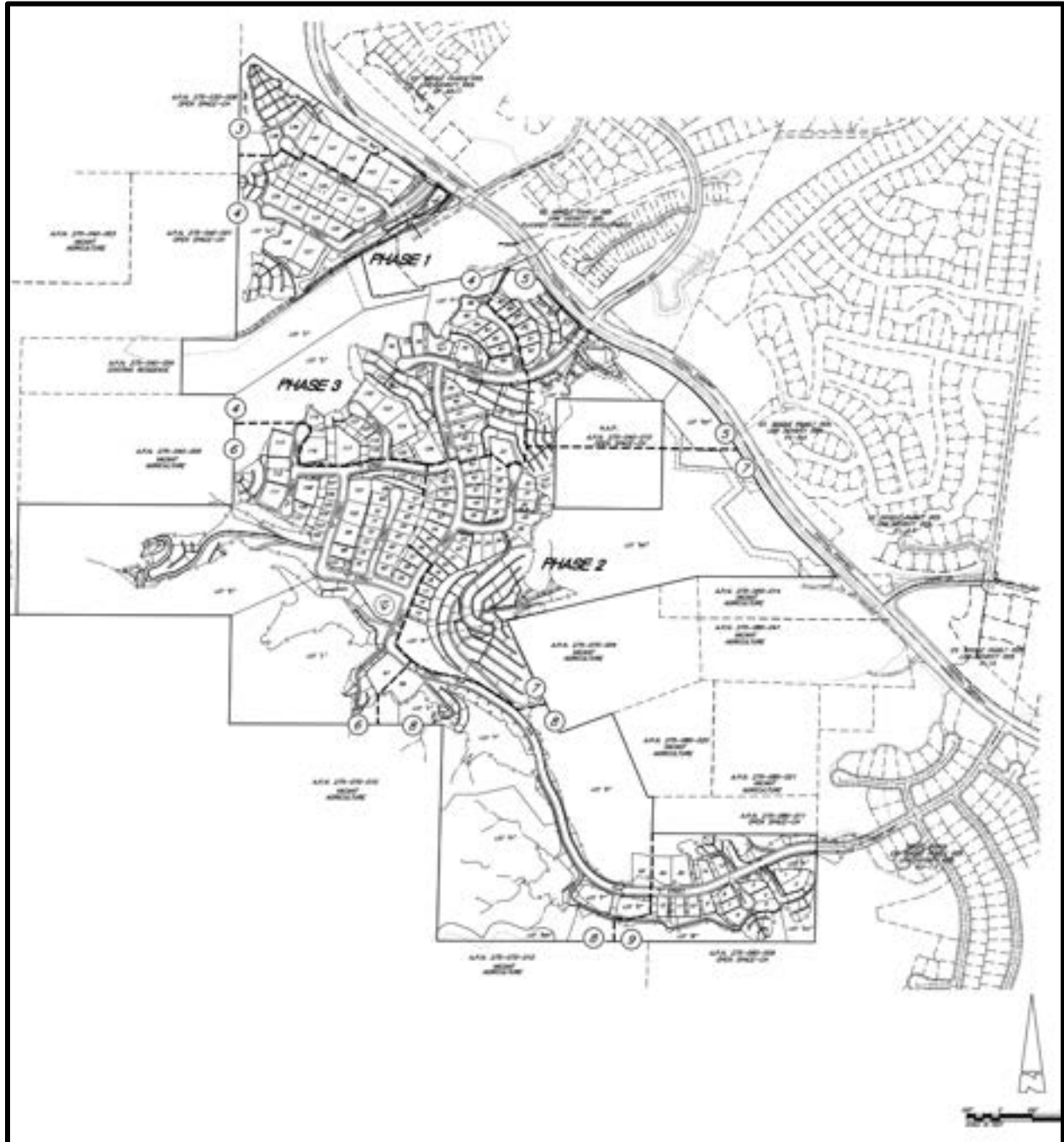
Impacts were calculated based on Project designs by KWC Engineering (August 30, 2024) (Figure 13). Direct impacts were evaluated with respect to general biological resources, state and federal listed endangered or threatened species, special status species, and sensitive habitats. Direct impacts to jurisdictional features, including drainages and wetlands, and issues of local concern, such as the Riverside County MSHCP and City of Corona General Plan, were also evaluated.

For the purpose of this assessment we considered Indirect Impacts to be secondary or reasonably foreseeable consequences of the Project that could occur later in time or be geographically removed from the project including adverse “edge effects” that can result from artificial lighting introduced by the proposed Project into native habitats, increased noise dust, trash and vibrations, introduction of invasive plants, and intrusion into native vegetation after construction and Project development.

Project impacts are significant if they have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

4.1) Vegetation Communities

This section includes impacts to vegetation communities present in the Project area. Long-term effects result mainly from permanent removal of habitat and direct and indirect impacts by construction and personal vehicles associated with the development.



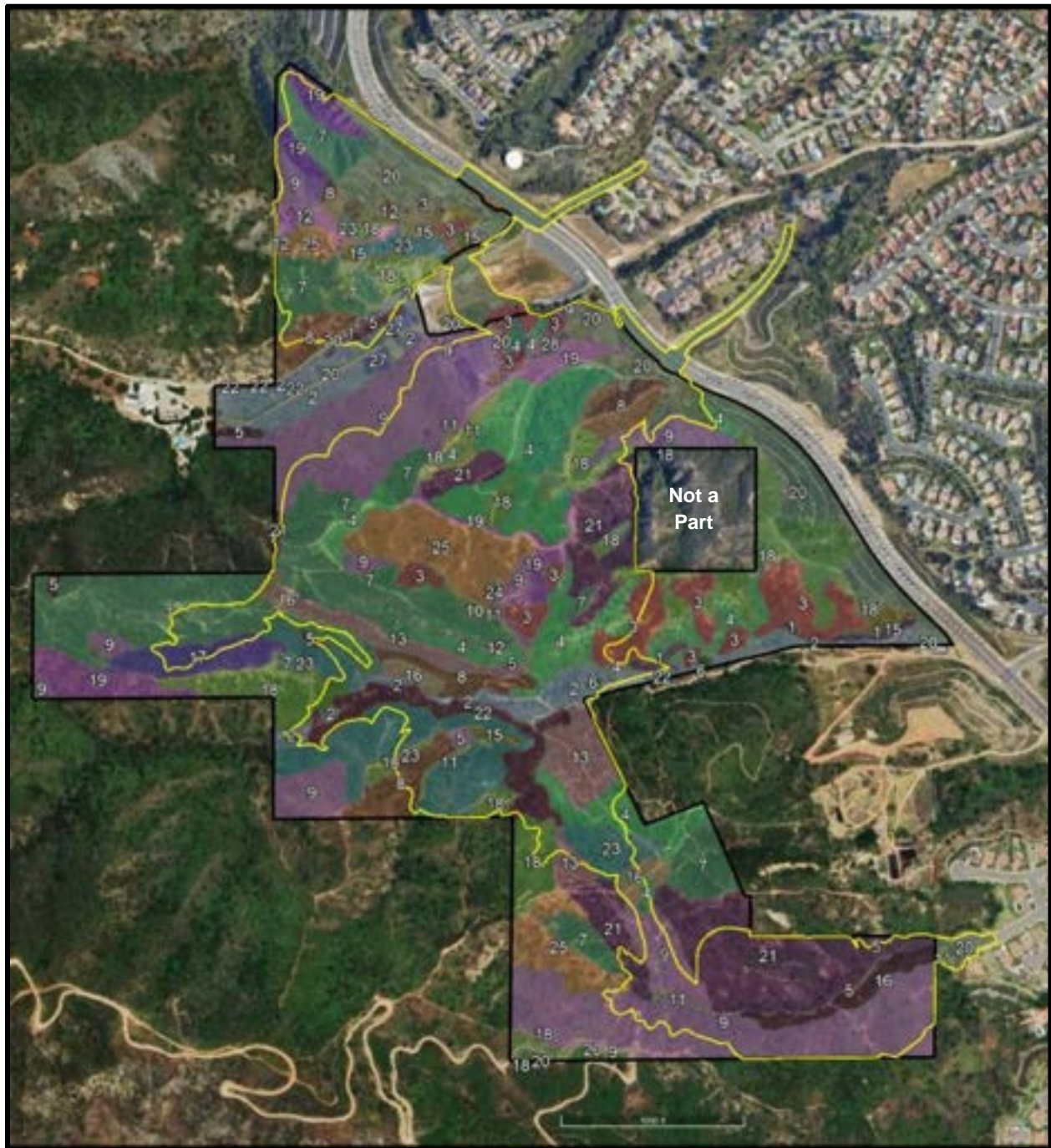
(KWC Engineers, August 30, 2024)

Skyline Heights, City of Corona, Riverside County, California
Revised Tentative Tract Map No. 36544
Figure 13

- **Direct Effects:**

General Vegetation Impacts: Implementation of the proposed Project would result in the estimated direct permanent loss of approximately 151.8 acres onsite and ± 5.3 offsite of native and non-native habitat (Figure 14a - d, Table 9). An additional ± 1.7 acres offsite will be temporarily impacted within the proposed haul road.


The ± 157.1 acres of permanently impacted habitat adds to the reduction in the availability of nesting, denning, and roosting sites and foraging habitats for species that utilize woodlands, shrublands, grasslands, riparian, and disturbed habitats. The ± 1.7 acres offsite will be restored to jurisdictional drainage, but habitat is currently identified as disturbed. Approximately 97.6 acres will be avoided and will remain and continue to provide habitat to local species that utilize the site.



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Vegetation Community Impacts Overview
Figure 14a

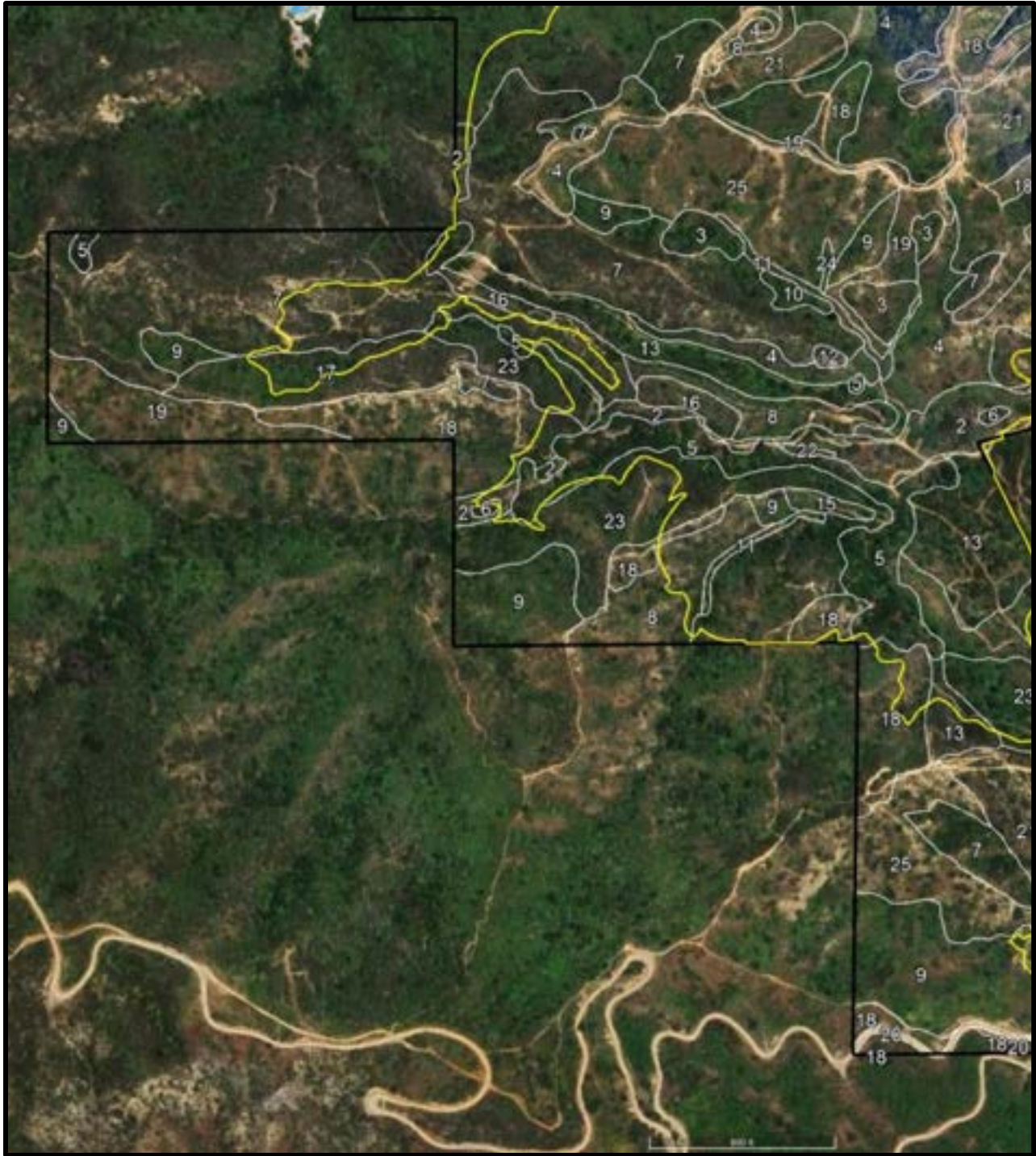
Figure 14a and 14d Legend:

Coastal Sage Scrub		Chaparral	
Black Sage Scrub	4	Hoaryleaf Ceanothus Chaparral	7
Ca. Sagebrush – Ca. Buckwheat Scrub	8	Toyon Chaparral	10
California Sagebrush Scrub	11	Scrub Oak Chaparral	13
Brittle Bush Scrub	12	Eastwood Manzanita Chaparral	17
Ca. Sagebrush – Black Sage Scrub	15	Chamise Chaparral	18
California Buckwheat Scrub	19	Chamise-Black Sage Chaparral	21
California Brittle Bush Scrub	24	Scrub Oak – Chamise Chaparral	23
		Chamise-Buckwheat-Chaparral	25
Coastal Sage Scrub/Chaparral			
Laurel Sumac Scrub	3	Riparian/Riverine/Woodland Alliances	
Bush Penstemon Scrub	9	Coast Live Oak Woodland	5
Deerweed Scrub	26	Sycamore Woodland	6
		Mulefat Scrub	22
Grassland Alliances		Scale Broom Scrub	2
Needle Grass Grassland	16		
Ca. Annual Grassland	28	Developed/Disturbed	
		Eucalyptus Alliance	1
		Disturbed	20
Impact Area		Pepper Alliance	27



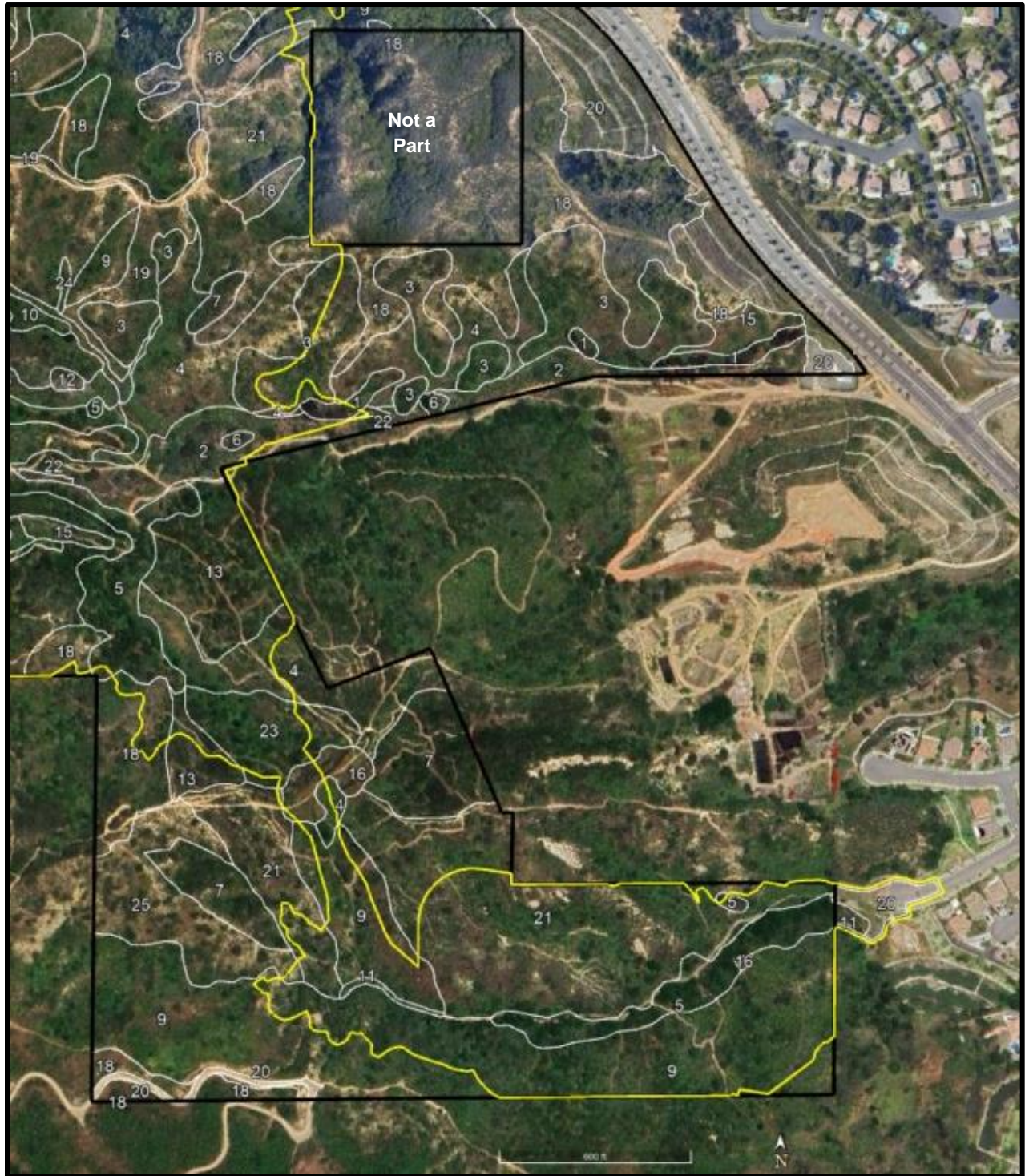
(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Vegetation Community Impacts on Aerial North
Figure 14b



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Vegetation Community Impacts West
Figure 14c



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Vegetation Community Impacts South
Figure 14d

Table 9. Direct Impacts to Vegetation Communities by the Proposed Project

Vegetation Community	2024 Survey Area (acres)	Avoided Onsite (acres)	Project Impacts Onsite (acres)	Impacts Offsite (acres)	Riparian/Riverine Impacts (acres)
Coastal Sage Scrub					
California Sagebrush Scrub	1.81	0	1.81	0.14	
Ca. Sagebrush – Ca. Buckwheat Scrub	8.81	2.22	6.59		
California Buckwheat Scrub	9.25	3.13	6.12	0.01	
Ca. Sagebrush – Black Sage Scrub	2.09	0.61	1.48	0.16	
Black Sage Scrub	21.94	4.33	17.61	0.002	
California Brittle Bush Scrub	0.09	0	0.09		
Brittle Bush Scrub	2.04	0	2.04		
Deerweed Scrub	0.30	0	0.30		
Total CSS Alliances	46.33	10.29	36.04	0.31	
Coastal Sage Scrub/Chaparral					
Laurel Sumac Scrub	10.28	6.08	4.20	0.29	
Bush Penstemon Scrub	41.61	18.38	23.23	0.02	
Total CSS/Chaparral Alliances	51.89	24.46	27.43	0.31	
Chaparral					
Chamise Chaparral	21.66	13.96	7.70		
Chamise-Buckwheat-Chaparral	11.05	3.45	7.60		
Chamise-Black Sage Chaparral	21.06	5.72	15.34	0.03	
Hoaryleaf Ceanothus Chaparral	32.38	13.91	18.47		
Scrub Oak Chaparral	6.79	0.65	6.14	0.04	
Scrub oak – Chamise Chaparral	13.74	5.27	8.47		
Eastwood Manzanita Chaparral	3.34	2.39	0.95		
Toyon Chaparral	0.31	0	0.31		
Total Chaparral Alliances	110.33	45.35	64.98	0.07	
Grasslands					
Ca. Annual Grassland	0.43	0	0.43		
Needle Grass Grassland	2.32	0.50	1.82		
Total Grassland Alliances	2.75	0.5	2.25		
Riparian/Riverine/Woodlands					
Coast Live Oak Woodland	8.57*	0.84	7.73		4.61
Sycamore Woodland	0.27	0.16	0.11		0.11
Mulefat Scrub	0.27	0.18	0.09		0.09
Scale broom scrub	9.87	6.27	3.60	0.01	3.61
Total Riparian/Riverine/Woodlands Alliances	18.98	7.45	11.53	0.01	8.42
Developed/Disturbed/Ornamental					
Eucalyptus Alliance	1.26	0.87	0.39		
Pepper Alliance	1.03	0.87	0.16		
Disturbed	16.83	7.81	9.02	6.31	
Total Developed/Disturbed	19.12	9.55	9.57	6.31	
GRAND TOTAL	249.4	97.6	151.8	7.0	

*Only ±5.71 acres are within the drainage and therefore designated riverine

Sensitive Vegetation Communities

Riparian/Riverine Impacts: The proposed Project will avoid ± 7.74 acres (40 percent) of the ± 19.30 acres of riparian/riverine habitat in the survey area including the offsite impact area. Included in the habitat impacts are permanent impacts to ± 10.51 acres of MSHCP Riparian/Riverine area, including sycamore woodland (± 0.11 acre), mulefat scrub (± 0.09 acre), scale broom scrub (± 3.61 acres), and within upland habitats, coast live oak woodland (± 4.61 acres) and unvegetated or other upland habitats (± 2.09 acres). Impacts will include pad development, drainage improvements, and primary ingress/egress into the Project site. Additionally, ± 1.13 acres of temporary impacts will be created to provide a haul road between the two development areas and in one portion of the site where a detention basin will be located after development.

Avoidance of Feature 3, the largest drainage in the survey area, is not feasible because of the need for dual access points, cut and fill calculations, and the extensive cost of bridge development. Impacts to riparian/riverine habitat requires mitigation to replace habitat at equal or greater value. Although permanent impacts to ± 10.51 acres and temporary impacts to ± 1.13 acre of riparian/riverine habitat are considered significant, Mitigation Measures BIO-MM6 (Oak Tree Replacement), BIO-MM7 (Riparian/Riverine), and BIO-MM21 (Restoration) would result in biologically equivalent or superior preservation and reduce impacts to less than significant.

Coast Live Oak Impacts: The Project will result in direct permanent impacts to ± 7.73 acres of coast live oak woodlands. Of this, ± 4.61 acres of coast live oak woodlands are located within riverine areas, while the remaining ± 3.12 acres are located within upland areas. Impacts to oaks are considered significant, but BIO-MM6 (Oak Tree Replacement) will reduce impacts to coast live oak trees by replacing impacted trees. Replacement values for oaks will be consistent with the City of Corona oak tree conservation policy, at a value of 2:1. The proposed Project provides for the conservation of ± 0.84 acres of existing oak woodlands. Impacts to this community are considered less than significant with mitigation.

Scale Broom Scrub Impacts: The Project will result in permanent impacts to ± 3.61 acres of SBS. L&L mapped ± 9.87 acres of SBS in the survey area, of which ± 6.27 acres will not be impacted and will remain as open space that will be deed restricted from future development. CDFW ranks SBS as S3 (vulnerable) and it is considered sensitive. Impacts to SBS are considered significant, but BIO-MM4 (Designate Unimpacted Areas as Open Space) will conserve avoided habitat (including SBS) and prevent future impacts. SBS will also be mitigated for as riparian/riverine habitat. BIO-MM7 (Riparian/Riverine) would reduce impacts to riparian/riverine habitat by replacing habitat at a value of 2:1. Impacts to SBS communities are adverse but less than significant with mitigation.

Needle Grass Grassland Impacts: Needle grass grassland was observed in four (4) locations (generally within the center of the survey area) totaling ± 2.32 acres, of which ± 1.82 acres will be impacted. Needle grass grassland is a form of the valley and foothill grasslands identified in the MSHCP that are distributed over approximately 2,700 acres within the Plan Area on the Santa Rosa Plateau (Dudek 2003). Core F consists of the Santa Rosa Plateau Ecological Reserve and Subunit 6: Santa Rosa Plateau will add additional reserve lands adjacent to the Core. Therefore, conservation lands that comprise the MSHCP reserve assembly include this habitat. Any potential impact would be addressed through consistency with the MSHCP. Impact to these communities is considered adverse, but not regionally significant. Therefore, no additional mitigation is required.

Coastal Sage Scrub: Included in the habitat impacts are permanent impacts to ± 36.04 acres of coastal sage scrub onsite and ± 0.31 acres offsite. Coastal sage scrub is identified in the MSHCP that are distributed over approximately 156,450 acres of the Plan Area (Dudek 2003). The conservation lands that comprise the MSHCP reserve assembly include this habitat, therefore, any potential impact would be addressed through consistency with the MSHCP, as this habitat has been conserved on a regional level. Impact to these communities is considered adverse, but the impact is considered less than significant under the MSHCP. Therefore, no additional mitigation is required.

Vegetation: Use of heavy equipment, exposing soils, and accessing the site on dirt roads will all result in higher than usual fugitive dust and emission levels during clearing, which can affect the health of local wildlife and plants. Dust particles settling directly on vegetation can affect vegetation by physical shading, thereby reducing photosynthesis, blocking leaf stomata, and/or uptake into leaf tissues (Farmer 1993). These impacts can most notably reduce vegetation growth rates. Long-term impacts are expected to be similar to current levels. Standard best management practices (BMPs) require watering, as necessary, to reduce fugitive dust. BIO-MM19 (Speed Limits) recommends limiting vehicle/truck speeds within the active construction site and on unpaved roads to 15 miles per hour or less.

- ***Indirect Effects:*** Indirect impacts to habitat and plants in the immediate Project vicinity could potentially occur as a result of “edge effects.”

A potential increase in non-native species over time, which could impact native plant species, could occur along the Project margins where newly exposed soils, not developed or landscaped, could provide fertile ground. Invasive species occur within the impact area and could, therefore, disperse seed to newly turned soil. Invasive and noxious weed species seed could be spread or introduced into the area by vehicles or machinery. Mitigation Measures 15-17 (Invasive Vegetation Control) reduce the potential spread of noxious and non-native species by not utilizing any prohibited species within the Project design, washing equipment

prior to arriving at the Project site, and limiting staging of equipment to areas not occupied by noxious weeds.

Human and pet encroachment into surrounding habitat areas may increase over time due to its proximity to increased occupied residential units and recreational use of the natural environment, including off-road vehicle (ORV) and pedestrian uses. Encroachment will be reduced by the incorporation of barriers between avoided areas and development in the Project design, signage requesting that people remain on the existing trails, and Homeowner education materials. BIO-MM20 (Urban/Wildlands Interface) requires the incorporation of MSHCP measures that address this Urban/Wildlands Interface.

4.2) Botanical Species

The site was evaluated for potential presence or absence of suitable habitat to support state and/or federally listed plant species. Braunton's milk-vetch, Munz's onion, San Diego ambrosia, slender-horned spineflower, Santa Ana River woollystar, and thread-leaved brodiaea were determined to have potentially suitable habitat in the survey area. These species were not observed during surveys in 2013, 2016, 2017 or 2024 and have low probability of occurrence in the survey area. No impacts to federal or state-listed plants are anticipated and no mitigation is proposed.

Six (6) special status species, intermediate mariposa lily (IML), paniculate tarplant, chaparral nolina, Fish's milkwort, Coulter's matilija poppy (CMP) and Brewer's calandrinia, were observed in the survey area during L&L's focused surveys. Three (3) other special status species have suitable or potentially suitable habitat in the survey area and the species were determined to have moderate or high potential of occurrence: western spleenwort, intermediate monardella and San Diego County viguiera. No occurrences of these additional plants were previously documented within the survey area, nor were they observed during surveys, but the species may occur in inaccessible areas.

The California Rare Plant Rank (CRPR) was used to evaluate the significance of impacts for special status plants. The CNPS, in coordination with CDFW, has cataloged California's rare and endangered plants into lists according to population distributions and viability. These lists are numbered and indicate the following CRPRs: (1A) presumed extinct in California; (1B) rare, threatened, or endangered throughout their range; (2A) presumed extirpated in California, but more common in other states; (2B) threatened or endangered in California, but more common in other states; (3) more information is needed to establish rarity; and (4) plants of limited distribution in California (i.e., naturally rare in the wild), but whose populations do not appear to be susceptible to threat. A CRPR may also have an extension (e.g., 1B.x) that indicates current level of threat: seriously threatened (x.1), moderately threatened (x.2), or not very threatened (x.3).

- **Direct Effects:** No state or federally listed plant species were observed in the survey area during surveys. There are no recorded occurrences of listed plant species and no designated critical habitat for federally listed plant species occurs in the survey area. No impacts are expected to listed plant species as a result of the proposed Project.

As described below, special status plant species are present or potentially present on the site. General mitigation measures to avoid and minimize impacts include BIO-MM1 (Flag or Fence Disturbance Areas), BIO-MM3 (Compensation Parcel), BIO-MM4 (Designate Unimpacted Areas as Open Space), BIO-MM14 (Biological Monitoring), BIO-MM15 through 17 (Invasive Vegetation Control), BIO-MM19 (Speed Limit), and BIO-MM23 (Workers Environmental Awareness Program).

Observed

The proposed Project design will impact 14 of the 25 (56 percent) observed Fish's milkwort, all 342 (100 percent) paniculate tarplant, the one (100 percent) Brewer's calandrinia, 463 of the 676 (71 percent) observed intermediate mariposa lily (IML), 316 of the 716 (44 percent) Coulter's matilija poppy (CMP), and ±2,180 of the estimated 5,343 (41 percent) chaparral nolina based on the number of individuals recorded in Table 15 (Appendix A).

IML, Fish's milkwort, and CMP are covered species under the MSHCP and adequately conserved under the Plan. The MSHCP does not require surveys or mitigation for these species. Project-related impacts to IML, Fish's milkwort, and CMP are a covered impact under the MSHCP, and no additional mitigation is proposed.

Brewer's calandrinia has a CRPR of 4.2. It is not a covered species under the MSHCP. The species has a wide range in California from Sacramento south, largely near the coast, continuing all the way to Mexico (CNPS 2024). Calflora identifies 47 records within the Santa Ana Mountains. All but one are located within Public/Quasi-Public (PQP) conserved lands (GreenInfo Network 2024). Impacts to a single Brewer's calandrinia would be considered adverse but less than significant and no additional mitigation is proposed.

Paniculate tarplant has a CRPR of 4.2. It is not a covered species under the MSHCP. The species has a wide range in southern California from San Luis Obispo south through Orange and Riverside County and continuing into San Diego County (CNPS 2024). Calflora identifies over 317 records within western Riverside County. Numerous populations are located within PQP and RCA conserved lands. Project-related impacts would not be expected to substantially affect regional populations of paniculate tarplant. Also, although this species is not covered under the MSHCP, the conservation lands that comprise the MSHCP reserve assembly include habitat suitable to support this species. Therefore, any potential impact would be addressed through consistency with the MSHCP, as suitable habitat for these species has been conserved on a regional level. Based on the wide distribution, number of

locations within western Riverside County, and known locations of this species within MSHCP conservation areas, impacts to paniculate tarplant would be considered adverse but less than significant and no additional mitigation is proposed.

Chaparral nolina has a CRPR of 1B.2 (plants rare, threatened, or endangered in California and elsewhere, moderately threatened in California). This species is not covered under the MSHCP. Chaparral nolina is recorded over a wide area in the coastal mountains from Ventura County south through San Diego County. The majority of populations are recorded in the Cleveland National Forest and/or on the western slopes of the Santa Ana Mountains. Often these populations include numerous individuals. Half of the CNDDDB records document populations over 50 individuals or identify the population as common or abundant. Thirteen (13) populations are between 100 and 900 plants, six (6) populations are over 1000 plants, and one (1) is recorded as over 10,000. The Santa Ana Mountains appear to support the largest population of chaparral nolina and, according to the CNPS, the principal populations of this species are found in the northern Santa Ana Mountains. Chaparral nolina is, however, represented by few occurrences within Riverside County, having only two (2) recorded populations in the CNDDDB.

The population within the survey area is estimated at $\pm 5,343$ plants. Impacts to chaparral nolina are estimated based on acres impacted for the three (3) largest populations. The chaparral nolina population south of the 10-acre USFS Parcel (NAP) is not proposed for impact. Due to the rarity of this species in Riverside County, impacts would be considered significant and mitigation measures are proposed to avoid and minimize impacts to chaparral nolina.

BIO-MM2 requires preparation of a Chaparral Nolina Planting Plan and collection of nolina seed from the Project site with propagation to an onsite or offsite preserved property. BIO-MM3 (Compensation Parcel) conservation in perpetuity of an area that supports approximately $\pm 1,396$ chaparral nolina. BIO-MM4 (Designate Unimpacted Areas as Open Space) will preserve an area that supports $\pm 1,767$ chaparral nolina and deed restrict it to prevent future development. In total, an estimated 3,163 chaparral nolina will be conserved, preserving the largest recorded population in Riverside County. Implementation of Mitigation Measures BIO-MM2 (Special Status Botanical Species), BIO-MM3 (Compensation Parcel), and BIO-MM4 (Designate Unimpacted Areas as Open Space) will reduce impacts to chaparral nolina to less than significant.

Potential to Occur

Special status plants western spleenwort, intermediate monardella and San Diego County viguiera have not been observed during surveys but have a moderate potential to occur in the survey area. If present, these species may be impacted by the proposed Project.

Western spleenwort is distributed over the foothills and mountains of southern California in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties into Baja California, Mexico. Calflora records 21 locations within the Cleveland National Forest. There are also several locations within western Riverside County, Santa Ana Mountains, and MSHCP identified PQP lands. Although this species is not covered under the MSHCP, the conservation lands that comprise the MSHCP reserve assembly include habitat suitable to support this species. Therefore, any potential impact would be addressed through consistency with the MSHCP, as suitable habitat for this species has been conserved on a regional level. If western spleenwort is present, impacts would be adverse but not significant and no additional mitigation is proposed.

Intermediate monardella is restricted to the Santa Ana and Palomar Mountains. It is recorded in 38 locations spread throughout the Santa Ana Mountains and into the adjacent foothills in Orange, Riverside, and San Diego Counties. There are also a few records from the northwestern foothills of the Palomar Mountains. Nineteen (19) of the 38 records are located within the Cleveland National Forest, three (3) are within parks or preserves, and two (2) are on tribal lands. Although this species is not covered under the MSHCP, the conservation lands that comprise the MSHCP reserve assembly include habitat suitable to support this species. Therefore, any potential impact would be addressed through consistency with the MSHCP, as suitable habitat for this species has been conserved on a regional level. If intermediate monardella is present, impacts would be adverse but not significant and no additional mitigation is proposed.

San Diego County viguiera is identified as locally common in southern San Diego County but shows limited records north of San Diego County. Calflora shows only two recorded observations in the Santa Ana Mountains north of Ortega Highway, one located in the CNF. The closest record is approximately 7.2 miles southwest, in Santiago Canyon. CNPS (2024) indicates that all occurrences outside of San Diego County are introduced. If this species is present on the site, individuals may be impacted but the natural distribution of the species would not be affected. Impacts would be less than significant, and no additional mitigation is proposed.

- **Indirect Effects:** Indirect impacts to special status botanical species in the immediate Project vicinity would result from long term “edge effects” similar to that outlined under vegetation above, with two additions.

Changes that occur within impacted areas of Feature 3 could cause downstream impacts and will require special design features to reduce changes to the flood regime. Post-development changes to flooding and water flow through the drainage and its alluvial terraces could negatively impact downstream habitat and individual species, such as Coulter’s matilija poppy.

Design features will ensure post-development flow volume and energy levels are consistent with pre-project levels to prevent impacts to avoided resources.

Cultivated and hybrid breeds of matilija poppy can change the wild populations of Coulter's matilija poppy with an influx of the gene material from these cultivars. In order to prevent these changes, BIO-MM5 (Other Species to Avoid in Landscaping) proposes to add the White Cloud matilija poppy to the list of species to be avoided in the Project area by the developer and to be included in information materials distributed to homeowners.

4.3) Wildlife Species

Mountain lion and Crotch bumble bee, both candidates for state listing, were observed in the survey area. No other listed wildlife was detected in the survey area. Three (3) listed or fully protected wildlife species (golden eagle, CAGN, and QCB) have been determined to have a high or moderate potential for occurrence in the survey area. Focused coastal California gnatcatcher surveys in 2013 were negative.

Habitat potentially suitable to support Stephen's kangaroo rat (SKR) is present in the survey area. The Project site is not within the boundaries of the Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP). The MSHCP covers impacts to Stephens' kangaroo rat because the Project site is located within the MSHCP boundaries but is located outside of the boundaries of the SKR HCP. Stephens' kangaroo rat is a covered species under the MSHCP and adequately conserved under the Plan. Project-related impacts (if any) to Stephens' kangaroo rat would be a covered impact under the MSHCP and no mitigation is proposed.

Ten (10) special status wildlife species were observed or detected during biological surveys: coastal whiptail, orange-throated whiptail, red-diamond rattlesnake, Cooper's hawk, southern California rufous-crowned sparrow, Vaux's swift, black-chinned sparrow, California horned lark, Lawrence's goldfinch, and San Diego black-tailed jackrabbit.

Thirteen (13) other special status wildlife species were not observed during surveys but have a high or moderate potential for occurrence in the survey area: American bumble bee, southern California legless lizard, California glossy snake, San Bernardino ringneck snake, California mountain kingsnake, coast horned lizard, coast patch-nosed snake, Bell's sage sparrow, oak titmouse, pallid bat, Dulzura pocket mouse, hoary bat, and San Diego desert woodrat.

Two (2) USFS Management Indicator Species (mountain lion and song sparrow) were observed and one (1) was determined to have a high potential to occur (mule deer).

- **Direct Effects:** As described below, listed and special status wildlife species are present or potentially present on the site. General mitigation measures to avoid and minimize impacts include BIO-MM1 (Flag or Fence Disturbance Areas), BIO-MM3 (Compensation Parcel), BIO-

MM4 (Designate Unimpacted Areas as Open Space), BIO-MM14 (Biological Monitoring), BIO-MM15 through 17 (Invasive Vegetation Control), BIO-MM18 (Refuse Collection), BIO-MM19 (Speed Limit), and BIO-MM23 (Workers Environmental Awareness Program).

Crotch bumble bee was observed during focused surveys in 2024 and could be impacted by loss of individuals or colonies. In the event the Crotch bumble bee is listed as endangered or threatened by the CDFW, Mitigation Measure BIO-MM22 (Crotch Bumble Bee) would be implemented. BIO-MM22 (Crotch Bumble Bee) requires clearing/ground disturbing activities be prohibited from February 1 through September 30 within suitable habitat. For construction between October 1 and January 31, a pre-construction survey is required within suitable habitat to confirm that no nests occur on site. Should any nests be identified, the Project biologist to consult with CDFW to determine if a permit is required. In addition, BMP measures during construction would be employed to prohibit the use of pesticides considered to be harmful to the Crotch bumble bee. BIO-MM4 (Designate Unimpacted Areas as Open Space) will also conserve the unimpacted portions of the survey area and prevent the development of avoided Crotch bumble bee habitat. Impacts to Crotch bumble bee would be less than significant with implementation of proposed mitigation.

Mountain lion was detected on the site during surveys. Mountain lion is a covered species under the MSHCP and adequately conserved under the Plan. The MSHCP does not require surveys or mitigation for this species. Mitigation Measure BIO-MM13 (Mountain Lion Program) is proposed to avoid and minimize human-lion interactions. However, any Project-related impacts to mountain lion are a covered impact under the MSHCP and no additional mitigation is proposed.

CAGN, QCB, and golden eagle were not observed during surveys but have high or moderate potential for occurrence within the survey area. These species are covered under the MSHCP and adequately conserved under the Plan. The MSHCP does not require surveys or mitigation for these species (since the Project site is not within Criteria Cells, restrictions on vegetation clearing during the CAGN nesting season do not apply). Project-related impacts to these species, if any, are a covered impact under the MSHCP and no additional mitigation is proposed. However, the MSHCP does not provide take authorization for nesting birds (see Section 4.5 below).

Of the special status species that occur or potentially occur in the impact area, the following are covered under the MSHCP and adequately conserved under the Plan: orange throated whiptail, coastal whiptail, red-diamond rattlesnake, coast horned lizard, California horned lark, Cooper's hawk, southern California rufous-crowned sparrow, Bell's sage sparrow, San Diego desert woodrat, San Diego black-tailed jackrabbit. The MSHCP does not require surveys or mitigation for these species. Project-related impacts to these species are a covered impact

under the MSHCP and no additional mitigation is proposed. However, the MSHCP does not provide take authorization for nesting birds (see Section 4.5 below).

The Project is located in the MSHCP required survey area for BUOW. No BUOW or BUOW sign was observed in the survey area during the 2013 focused survey nor any of the other biological studies. Supplemental habitat assessments and burrow surveys were performed in 2016 and 2024. No BUOW, BUOW sign or suitable burrows were observed in the survey area. This species is migratory and has potential to relocate to the site. Potentially suitable habitat for BUOW is present on the site and the MSHCP requires a protocol survey. Also, consistent with MSHCP requirements, BIO-MM12 (Burrowing Owl) requires a 30-day preconstruction survey for BUOW to be conducted to prevent impacts to the species and details actions to be taken if BUOW are observed. Impacts would be less than significant with implementation of mitigation.

The remaining species are not covered under the MSHCP: American bumble bee, southern California legless lizard, California glossy snake, San Bernardino ringneck snake, coast patch-nosed snake, oak titmouse, Vaux's swift, Lawrence's goldfinch, black-chinned sparrow, pallid bat, *Dulzura* pocket mouse, and hoary bat. The California mountain kingsnake is covered under the MSHCP but is not adequately conserved.

In evaluating the rarity of these species, the CNDDDB ranks species from S1 to S5 and 0.1-0.3 with the rarest as S1.1 and most common as S5. The definitions of these rankings identify S4 and S5 as secure in California and S3 as vulnerable, but not currently rare. Species ranked S4 and S5 typically exhibit relatively widespread distribution and species ranked S3 have not reached a level of threat and numbers or populations have not declined to a point that would cause them to be considered "rare". S3 species are either uncommon or require more data to monitor their status.

These species utilize a wide variety of habitats with specialized, but generally available, microhabitats (moisture, loose soil nectar plants). The wide range and diversity of habitats utilized indicates the development of the proposed Project would not substantially decrease available habitat or reduce regional populations for the species. Large tracts of suitable habitat will remain adjacent to and in the Project vicinity, including ±97.6 acres of avoided habitats. Although these species are not covered under the MSHCP, the conservation lands that comprise the MSHCP reserve assembly include habitat suitable to support these species. Therefore, any potential impact would be addressed through consistency with the MSHCP, as suitable habitat for these species has been conserved on a regional level. Project-related impacts to these species are not expected to appreciably affect overall population or range. Impacts would be considered adverse, but not significant and no additional mitigation is proposed.

Loss of foraging habitat for wildlife species would add to cumulative regional loss of habitat for these species. This is considered an adverse, but less than significant, impact because of extensive foraging habitat available in the Project vicinity.

With the mitigation measures incorporated, impacts to special status wildlife species would be **less than significant**.

- **Indirect Effects:** Habitat fragmentation will consist of the permanent loss of ±157.1 acres and temporary loss of 1.7 acres of habitats and isolation of habitats east of the Project from the larger Core B habitat area. The Project will incorporate barriers to prevent both common and special status wildlife species from entering the residential development, thereby decreasing the potential for impact by humans, vehicles, pets, or other urban hazards. The barriers would also prevent human and pet encroachment and reduce potential for direct impacts by those means. These preventative measures, while incorporated for the safety of wildlife and adjacent habitat, also restrict wildlife movement and add to habitat fragmentation.

Movement restriction and habitat fragmentation can be especially important for large mammals, like the mountain lion population. Beier (1993) studied mountain lions in the Santa Ana Mountains and Chino Hills and found the population is in danger if movement corridors are not sustained to allow immigration from Palomar Mountain. The proposed Project will not remove movement corridors but will reduce the overall habitat and further constrict the available range habitat for this species. Impacts to mountain lions are addressed above. Management of “edge effects” under Urban/Wildland Interface Section 8.5 (BIO-MM20) will reduce indirect impacts to all wildlife species, including mountain lions.

Amphibian, reptile, avian, mammal, and insect species may experience impacts from construction, including increases in noise, chemical emissions, and vibration, resulting in avoidance and abandonment of the area. Movement of species could concentrate populations, increase competition for resources in adjacent habitats, and leave displaced individuals vulnerable to predation. Those species that may use the Project area for foraging will still have access to large expanses of relatively undisturbed habitat in the Project vicinity, including Cleveland National Forest lands to the west.

In addition, the MSHCP considers development throughout the county and balances development with conservation of contiguous blocks of native habitats. The MSHCP determined the survey area is not a Conservation Area or Criteria Area.

A potential increase in invasive species could occur along the perimeter of the impact area, where newly exposed soils could provide fertile ground. Invasive species that may occur along the current roadway and within the impact area could disperse seed to newly turned soil. Mitigation Measures BIO-MM15 through 17 (Invasive Vegetation Control) are incorporated to avoid and minimize introduction and spread of invasive vegetation.

After completion of construction, noise levels adjacent to the site will be increased over current conditions but are not expected to exceed residential noise standards. In addition, barriers are proposed between residential development and conservation areas, and they will reduce the amount of noise, chemical emissions, and fugitive dust from the development crossing into or affecting wildlife in the conservation areas after completion of construction.

4.4) Jurisdictional Drainages/Hydrology

No aquatic or naturally occurring vernal pool habitats were observed within the survey area. Six (6) main jurisdictional features occur within the survey area, containing 56 tributaries, for a total of 62 Non-Relatively Permanent Water (Non-RPW) drainage features (i.e., ephemeral carriers of periodic rainfall).

- **Direct Effects:** The proposed Project will impact ± 10.51 acres of CDFW jurisdiction (Figure 15), of which ± 3.81 acres are CDFW wetlands and ± 6.7 acres are CDFW streambeds. The proposed Project will also impact ± 1.48 acres of RWQCB jurisdiction state waters (Figure 15). An additional ± 1.13 acres of CDFW streambeds and ± 0.25 acres of RWQCB state waters will be temporarily impacted. Impacts to the individual drainage features are summarized below in Table 10. Feature details, including length, average width, and impacts to each drainage and tributary, are provided in Table 22 (Appendix A).

Impacts from earthmoving or other construction activities in a drainage or area of sheet-flow could result in discharge of toxic materials, silt, debris, or excessive erosion into Waters of the U.S. drainage features during Project construction. Because drainages and habitat are identified downstream from the Project it will be important to reduce any discharge that may reach those streambeds. Use of BMPs [BIO-MM8 (SWPPP)], including erosion control measures, restrictions on vehicle maintenance, and the disposal of toxic materials, is incorporated to minimize impacts to drainage features to the extent possible. This will also minimize impacts downstream. With the Mitigation Measures implemented, sedimentation would be reduced over the long-term and erosion and toxic material discharge will be reduced.

Table 10. Drainage Impact Summary

Drainage/ Feature*	Total Combined Impacts to CDFW Jurisdictional Areas			Breakdown of Jurisdiction						
				Impacts to State (CDFW) Wetlands & MSHCP Riparian		Impacts to State (CDFW) Streambeds & MSHCP Riverine		Impact to State Waters (RWQCB)		
	Sq. ft.	Acres	Length	Sq. ft.	Acres	Sq. ft.	Acres	Sq. ft.	Acres	Length
Permanent Impacts										
F-1	71,746	1.65	4,179	0	0	71,746	1.65	34,421	0.790	4,043
F-1 Offsite	6,332	0.15	131	0	0	6,332	0.15	2,600	0.060	131
F-2	0	0	0	0	0	0	0	0	0	0
F-3	346,410	7.95	11,394	158,110	3.63	188,300	4.32	24,918	0.572	10,013
F-4	0	0	0	0	0	0	0	0	0	0
F-5	12,407	0.28	2,433	0	0	12,407	0.28	2,317	0.053	1,974
F-6	21,203	0.48	497	8,061	0.18	13,142	0.30	100	0.002	112
Total	458,098	10.51 ac	18,634	166,171	3.81ac	291,927	6.7ac	64,356	1.48ac	16,273
Temporary Impacts										
F-5	3,568	0.08	222	0	0	3,568	0.08	2,206	0.05	219
F-6 Offsite	45,787	1.05	222	0	0	45,787	1.05	8,647	0.20	222
Total	49,355	1.13ac	444	0	0	49,355	1.13ac	10,853	0.25 ac	441

*including tributaries; Difference in some totals is the result of rounding.

Where feasible, a 100-foot buffer was incorporated between the Project and the outer limits of the dripline of avoided riparian habitat. The proposed Project has been designed to avoid approximately ±7.66 acres of CDFW jurisdiction and MSHCP Riparian/Riverine habitat (±6.62 acres of CDFW wetlands, ±1.04 acres of CDFW streambeds) and ±0.75 acres of RWQCB state waters. The majority of avoidance will occur in Feature 3 (unnamed blueline, ±2.9 acres) and Feature 6 (Mabey Wash, ±4.44 acres).

Mitigation Measures have been incorporated to minimize direct impacts to jurisdictional features. Mitigation Measures BIO-MM7 (Riparian/Riverine) and BIO-MM21 (Restoration) are for the mitigation of riparian/riverine impacts at a value of 2:1 for permanent impacts and restoration of temporary impacts, as determined through consultation with the City of Corona and wildlife agencies based on an MSHCP evaluation of functions and values analysis. The proponent proposes mitigation in the form of offsite mitigation with the Riverside-Corona Resource Conservation District (RCRCD). BIO-MM9 and 10 (RWQCB Permit and CDFW Permit) require the Project Applicant to enter into agreements with the appropriate agencies to mitigate impacts to jurisdictional waters at a value of 2:1 for permanent impacts and restoration of temporary impacts. Based on mitigating impacts to ±10.51 acres of riparian/riverine habitat at a value of 2:1, and the restoration of ±1.13 acres of temporary impacts would ensure there is no net loss of functions and values of riparian/riverine habitat.



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
RWQCB State Waters Impact Map
Figure 15



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
**CDFW Drainage Features & MSHCP Riparian/Riverine
Impact Map
Figure 16**

Indirect Effects: Long term downstream impacts could occur from inadvertent discharges released from occupied residential units, park or open space areas and roadways. This could include organic debris and chemicals from landscaped areas and household chemicals. Use of BMPs [BIO-MM8 (SWPPP)], including water quality basins and homeowner education will minimize impacts downstream. With the Mitigation Measures implemented long-term impacts to downstream habitat will be reduced.

4.5) Nesting Birds

There is potential habitat for nesting birds, including raptors, on and adjacent to the site. Adult birds will typically avoid or flee from construction activities and other disturbance and the potential for physical harm would be limited to nests, eggs, and dependent juveniles.

General mitigation measures to avoid and minimize impacts include BIO-MM1 (Flag or Fence Disturbance Areas), BIO-MM3 (Compensation Parcel), BIO-MM4 (Designate Unimpacted Areas as Open Space), BIO-MM14 (Biological Monitoring), BIO-MM18 (Refuse Collection), BIO-MM19 (Speed Limit), and BIO-MM23 (Workers Environmental Awareness Program).

- **Direct Effects:** If active nests are present in the impact area at the time of construction, there could be direct impacts to eggs and juveniles. Mitigation Measure BIO-MM11 (Nesting Birds) requires that the Project either avoid clearing habitat between January 1 and September 1 or conduct a nesting bird survey and establish avoidance buffers for active nests. Implementation of mitigation will avoid and minimize impacts to nesting birds, eggs, and dependent juveniles.
- **Indirect Effects:** Increased human presence, noise and vibration, chemical emissions, and predator subsidies could result in impacts to nesting birds' long term within the residential development. With Urban/Wildlands Interface measures in place (see Section 8.5), indirect impacts will be minimized.

4.6) Wildlife Corridors

The Project does not contain any movement corridors for native resident migratory fish or wildlife species beyond local movement.

- **Direct Effects:** Wildlife currently move freely throughout the surveyed and surrounding areas. Upon build-out of the proposed Project, wildlife species are anticipated to continue to use open space areas adjacent (west and south) to the Project. Thus, potential impacts to regional movement would be less than significant and no mitigation is proposed. It should be noted that Wardlow Wash, which crosses just north of the survey area, was identified by BonTerra Consulting as a regional wildlife corridor that facilitates movement between the Cleveland National Forest and Prado Basin, as referenced by the FPWE EIR (RBF Consulting 2008).

Wardlow Wash will not be impacted, and the proposed Project impacts are approximately 300 feet south of the wash. The Project would not inhibit wildlife movement along the drainage; thus, impacts to regional wildlife movement are less than significant.

- **Indirect Effects:** Human presence, noise, lighting, and predator subsidies could generally hinder wildlife movement and could result in avoidance and abandonment of the area. With Urban/Wildlands Interface measures in place (see Section 8.5), indirect impacts will be minimized.

5.0) MITIGATION MEASURES

The following Mitigation Measures (MM) have been developed for the Skyline Heights Project to minimize and mitigate potential impacts to natural resources in the Project area. Most measures are consistent with those developed under the previous Project design and included in the 2017 Final EIR.

Vegetation

BIO-MM1. Flag or Fence Disturbance Areas

The Project impact areas and avoidance areas shall be flagged or fenced prior to clearing to prevent incursion into unsurveyed or avoided areas.

BIO-MM2. Special Status Botanical Species

Mitigations shall be provided for impacts to Coulter's matilija poppy, chaparral nolina, and intermediate mariposa lily shall be minimized and avoided to the extent feasible.

- Impacts shall be minimized and avoided to the extent feasible. Coulter's matilija poppy and intermediate mariposa lily plants within the development footprint shall be salvaged for use in the Project area, avoidance area, or reuse in local restoration projects. In addition, a qualified botanist shall collect seeds from plants within the grading impact area during the spring or summer before grading commencement.
- Impacts to chaparral nolina shall be mitigated through translocation and seed collection with propagation to an on-site or off-site preserved property acceptable to the City. The property shall be composed of habitat characteristics suitable to support chaparral nolina, including but not limited to appropriate soils, elevation, and supporting chaparral or coastal sage scrub (or a combination thereof) habitat. The property shall be conserved via recordation of a conservation easement or deed restriction in favor of a California Department of Fish and Wildlife (CDFW)-due diligence approved local conservation entity to protect chaparral nolina on the property in perpetuity. Alternatively, the land may be transferred in fee title to a CDFW approved local conservation entity. A management fund shall be established by the Applicant and will consist of an interest-bearing account with the amount of capital necessary to generate sufficient interest and/or income to fund all monitoring, management, and protection of the conservation area(s), including but not limited to, reasonable administrative overhead, biological monitoring, invasive species and trash removal, signage replacement and repair, law enforcement measures, long-term management reporting (as described below), and other actions designed to maintain and improve the habitat of the conserved land(s), in perpetuity.

A Property Analysis Record, or substantially equivalent analysis, shall be conducted by the Applicant and approved by the City to determine the management needs and costs described above, which then will be used to calculate the capital needed for the management of the fund. This management

fund shall be held and managed by a CDFW-approved local conservation entity. To protect the mitigation area(s), the Applicant shall place appropriate signage around the perimeter of each site. Except for uses appropriate to a habitat conservation area, the public shall not have access to the mitigation area(s), and no activities shall be permitted within the site, except maintenance of habitat, including the removal of nonnative plant species, trash, and debris, and the installation of native plant materials.

Prior to any ground disturbance, the Applicant shall prepare a Chaparral Nolina Planting Plan (Plan) for chaparral nolina. The Plan shall require a replacement ratio of 1:1 by area and ensure a minimum 90 percent survivorship at the end of a five-year monitoring period, which shall be verified by the monitoring biologist (minimum qualifications of the monitoring biologist are specified below). At a minimum, the five-year plan shall include the following information:

1. a description of the existing conditions of the receiver site(s) characterizing the suitability of the site(s) for chaparral nolina, and documenting the acreage of the site,
2. a description of how the site will be preserved in perpetuity, e.g., conservation easement, deed restriction, etc., and the name of the CDFW-approved due diligence entity that will hold the easement/deed restriction, etc.,
3. qualifications of the monitoring biologist. At a minimum the monitoring biologist will possess a minimum of five-year's experience conducting habitat restoration projects in coastal sage scrub and/or chaparral habitat in Riverside County, California,
4. receiver site preparation for transplanting,
5. goals for success,
6. schedule,
7. propagation techniques,
8. transplant and seedling installation methods,
9. plant spacing,
10. performance criteria for success, including provision for control of non-native and invasive species,
11. monitoring and reporting procedures for each of the five years of the monitoring period,
12. adaptive management strategies, including a contingency plan should the site fail to meet the specified success criteria, and
13. maintenance requirements that will be reviewed and approved by the City. The Plan shall also ensure a mixture of both male and female plants.

BIO-MM3. Compensation Parcel

Prior to issuance of a grading permit, the Project Applicant shall preserve a minimum of 10 acres (a 1:1 ratio) of natural habitat, biologically equivalent or superior to the

PQP land the Project site surrounds, adjacent to U.S. Forest Service land. The compensation parcel shall either be:

1. Deeded in fee title to the USFS or RCA to ensure appropriate protection and permanent habitat management in perpetuity, or
2. Conserved via recordation of a conservation easement or deed restriction in favor of a CDFW due diligence approved local conservation entity.

BIO-MM4. Designate Unimpacted Areas as Open Space

Those areas of the survey area not impacted by the Project footprint, including riparian/riverine and excluding the minimum 10-acre preservation area identified in BIO-MM3, shall be conserved in perpetuity via the recordation of a conservation easement or deed restriction in favor of a CDFW-approved local conservation entity. The avoided Riparian/Riverine areas shall be conserved prior to issuance of a grading permit. The CDFW-approved local conservation entity shall manage the conservation areas to protect the long-term conservation, functions and values in-perpetuity.

BIO-MM5. Other Species to Avoid in Landscaping

The Project Applicant shall add more common cultivar forms of Coulter's matilija poppy to the list of plants to be avoided in site landscaping, including White Cloud matilija poppy. Additional non-native plants to be avoided in any onsite mitigation or landscaping include coyote brush (*Baccharis pilularis*) and fourwing saltbush (*Atriplex canescens*). To ensure these non-native plants are not used in landscaping within the Project site, the Project Applicant shall include a list of plant species to avoid within the CC&Rs for the development. The Project applicant shall also develop and distribute a suitable homeowner education package to residents / new owners covering the species to avoid.

City of Corona General Plan Oak Tree Avoidance

BIO-MM6. Oak Tree Replacement

The Project Applicant shall replace oak trees impacted by the Project at a ratio consistent with the City of Corona oak tree conservancy policy (10.10.5), at no less than a 2:1 ratio. Replacement trees shall be located in undeveloped natural areas suitable to support these trees or in onsite mitigation areas where possible. If spacing requirements limit the number of replacement trees in these areas additional plantings may be located in landscaped areas as close to open space as feasible. All replacement trees shall be planted prior to issuance of the Certificate of Occupancy.

Riparian/Riverine, MSHCP Section 6.1.2

BIO-MM7. Riparian/Riverine

Prior to issuance of a grading permit, the Project Applicant shall provide mitigation for ± 10.51 acres of riparian/riverine impacts at a 2:1 basis, as determined through consultation with the City of Corona and wildlife agencies based on an MSHCP evaluation of functions and values. The Project Applicant proposes mitigation in the form of offsite mitigation with the Riverside-Corona Resource Conservation District (RCRCD) or other suitable approved organization with available credits. Currently, mitigation in banks is favored to preserve large areas of habitat where it is needed to fulfill the conservation goals of the MSHCP. In the event mitigation with the RCRCD is not finalized for any reason, the Project Applicant shall provide equal or greater value mitigation in one or more of the following forms: offsite acquisition and preservation, participation in an approved mitigation bank, onsite creation, offsite creation, enhancement, or reestablishment. If offsite mitigation is incorporated, the preferred choice shall be to find mitigation within or adjacent to the Santa Ana Watershed and in or adjacent to Corona if possible. In addition, some avoided resources shall be preserved in an open space area and deed restricted.

If onsite mitigation is proposed as an alternative, the Project Applicant shall prepare a Habitat Mitigation and Monitoring Plan for review and approval by local and regulatory agencies, which shall include the following components:

- Quantitative success criteria (vegetation cover and species richness);
- Recommendations for soil preparation;
- A plant palette to include native species occurring on the site, such as coast live oak and Coulter's matilija poppy;
- Planting methods;
- Irrigation and maintenance requirements; and
- A long-term mitigation maintenance and monitoring plan with remedial measures.

BIO-MM8. Storm Water Pollution Prevention Plan (SWPPP)

Prior to the first ground disturbance, the Project Applicant shall prepare and implement a Storm Water Pollution Prevention Plan or SWPPP, employing all standard best management practices (BMPs) to prevent discharges from entering jurisdictional drainages during construction. BMPs shall include but not be limited to:

- Use of erosion control or sedimentation prevention methods, such as fiber rolls, sand bags, rice mats, straw wattles, or similar measures, where appropriate; and
- Proper use and disposal of oil, gasoline, diesel fuel, antifreeze, and other toxic substances will be enforced.

Permits/Agreements

BIO-MM9. Regional Water Quality Control Board (RWQCB) Permit

Prior to the issuance of a grading permit, to mitigate for the permanent loss of ± 1.48 acres and temporary loss of ± 0.25 acres of RWQCB state waters due to Project construction, Project Applicant shall enter into an agreement with the California Regional Water Quality Control Board (via issuance and implementation of a Clean Water Act Section 401 Certification) to replace affected state waters as specified by the California Regional Water Quality Control Board, but at not less than a 2:1 basis for permanent impacts, through offsite acquisition and preservation, participation in an approved mitigation bank, and/or on or offsite creation, enhancement, or reestablishment of state waters or a combination of these options and restoration of temporary impacts. The exact ratio shall be based on a functions and values assessment.

BIO-MM10. California Department of Fish and Wildlife (CDFW) Permit

Prior to the issuance of a grading permit, to mitigate for the permanent loss of ± 10.51 acres of streambed and wetlands and temporary loss of ± 1.13 acres of streambeds due to Project construction, Project Applicant shall enter into an agreement with the California Department of Fish and Wildlife (via issuance and implementation of a Streambed Alteration Agreement, Section 1600) to replace affected streambed at not less than a 2:1 for permanent impacts and restoration of temporary impacts, as specified by the California Department of Fish and Wildlife, through a combination of offsite acquisition and preservation, participation in an approved mitigation bank, and/or on or offsite creation, enhancement, or reestablishment of the streambed. The exact ratio shall be based on a functions and values assessment.

Wildlife

BIO-MM11. Nesting Birds

To prevent impacts to sensitive, migratory, and nesting birds (including raptors), clearing, or other work in native habitats, should be avoided during the critical nesting period of January 1 – September 1. If work cannot be avoided during this timeframe, a nesting bird survey shall be conducted by a qualified biologist within three (3) days prior to initiation of clearing and/or grading. If nesting birds are present, a nesting bird plan will be developed and implemented and include appropriate measures to mitigate potential impacts, including maintaining a buffer area until fledging has occurred. Active bird nests should be mapped utilizing a hand-held global positioning system (GPS) (getting as close as possible without disturbing the nest) and a buffer will be flagged around the nest (typically 300 feet for most species, 500-foot buffer for raptor nests), as determined appropriate by the biologist. Construction should not be permitted within the buffer area while the nest continues to be active (eggs, chicks, etc.). Once fledging has occurred no further avoidance is required.

BIO-MM12. Burrowing Owl

A pre-construction burrowing owl clearance survey shall be conducted by a qualified biologist no more than 30 days before earth disturbance (construction). The survey will be conducted as close to the actual construction initiation date as possible. If owls are present, the project biologist will consult with local and state agencies, as appropriate, and develop a mitigation plan. Mitigation will be based on the following goals and requirements included in the MSHCP:

1. If the site contains or is part of an area supporting less than 35 acres of suitable habitat or the survey reveals that the site and the surrounding area supports fewer than three (3) pairs of burrowing owls, the onsite burrowing owls will be passively or actively relocated following accepted protocols.
 - a. Occupied nests shall be avoided during the nesting season (February 1 to August 31) and a buffer of 300 to 500 feet shall be employed, depending on the level of disturbance surrounding the burrow.
 - b. Burrow exclusion shall be utilized outside of the nesting season by installing a one-way door in burrow openings. The burrow shall be closed following verification burrows are empty (through site monitoring and scoping).
2. If the site (including adjacent areas) supports three (3) or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat, and is noncontiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and burrowing owl pairs will be conserved onsite.

BIO-MM13. Mountain Lion Program

A mountain lion (*Puma concolor*) program shall be developed by the Project Applicant for City review and approval in an effort to reduce likelihood of human-lion conflicts. The program shall include the following components:

1. A suitable homeowner education package for distribution to residents / new owners;
2. A suitable road sign program warning of the presence of mountain lions and the need for reduced speeds and increased caution;
3. A suitable CC&R provision limiting unsupervised outdoor pets and pet feeding practices that may encourage mountain lions to enter residential yards in search of food; and
4. A suitable mountain lion safety plan.

BIO-MM14. Biological Monitoring

A qualified biologist shall monitor clearing and grubbing activities as they impact vegetation on the site. A qualified biologist shall inspect debris piles, pipes, burrows, vegetation, leaf litter piles, and other potential refugia for sensitive wildlife species

prior to initiation of clearing, grubbing, grading, or any other Project activity that may injure or kill sensitive wildlife species. If wildlife is discovered, the qualified biologist shall move it out of harms way or allow it to move safely out of the work area prior to initiation of Project activities.

Potential day roosts for pallid bat (e.g., caves, crevices, mines, hollow trees, buildings, etc.) shall be inspected by a qualified bat biologist prior to initial ground disturbance. If bats are roosting, a bat exclusion plan shall be prepared and submitted to CDFW for review prior to impacts. If a colony is discovered during the breeding season (March 1 -October 1), the biologist shall determine appropriate avoidance measures, including, but not limited to sound walls, buffers, and Project phasing/timing, to prevent disturbance to the colony until all young are weaned and capable of foraging independently.

Invasive Vegetation Control

BIO-MM15. Invasive Vegetation Control – Landscaping

Design guidelines for the proposed Project shall provide the new homeowners with a list of native landscaping materials permitted within the development area. These materials have been selected for their contribution to the Project theme, adaptability to local climatic and soil conditions, and for their compatibility with the unique natural environment in the area. None of the plants listed in Section 6.1.4 of the MSHCP will be utilized in the development and their use by future homeowners will be prohibited. The MSHCP has identified invasive plants that should be removed from open space areas. This list is included in Table 6-2 of the MSHCP and here in Appendix C and shall be included in the CC&Rs prepared for the subdivision.

BIO-MM16. Invasive Vegetation Control – Heavy Equipment

All heavy equipment used onsite shall be washed, particularly the wheels and under carriage, prior to bringing it onto the Project site from other construction sites to prevent the spread of weedy species.

BIO-MM17. Invasive Vegetation Control – Staging Areas

Staging areas shall be placed in areas that have been previously disturbed or have degraded habitat within the Project footprint but do not show an infestation of non-native species. Staging areas shall be maintained in a weed/noxious weed-free condition.

Construction Site

BIO-MM18. Refuse Collection

All refuse created or brought onsite by clearing personnel or contractors shall be placed in covered containers, removed from the site daily, and disposed of properly.

BIO-MM19.Speed Limit

Field crews shall maintain the speed limit on posted roads and limit vehicle/truck speeds on unpaved surfaces to 15 miles per hour or less.

MSHCP Urban/Wildlands Interface

BIO-MM20.Urban/Wildlands Interface

The proposed Project shall incorporate measures to meet MSHCP Urban/Wildlands Interface guidelines and requirements. These measures will address Drainage, Toxics, Lighting, Noise, Barriers, Access, Pets, and Grading/Land Development (See Section 8.5).

Additional measures that have been included in this 2024 Biological Assessment based on current site conditions and changes to biological regulations and standards include:

BIO-MM21.Restoration

Temporary impact areas associated with the haul road shall be restored to their former condition upon completion of the construction program.

BIO-MM22.Crotch Bumble Bee

If the Crotch bumble bee is listed as threatened or endangered by the CDFW the following measures shall be implemented.

- Clearing/ground-disturbing activities would be prohibited from February 1 through September 30 within suitable habitat. As part of this requirement, if construction is proposed during this period, a qualified biologist must go out and mark all of the suitable habitat on site, which must be avoided until at least September 30. Construction activities may commence in areas outside of suitable habitat for the bee.
- For construction between October 1 and January 31, a pre-construction survey is required within suitable habitat to confirm that no nests occur on site. Should any nests be identified, the Project biologist shall consult with CDFW to determine if permits are required. Clearance within that portion of the property determined by the biologist to support a nest and a suitable buffer will be avoided until consultation with the CDFW determines activities can resume or the site is no longer occupied. If the pre-construction survey identifies no nests, then construction activities may proceed as normal.
- Pesticides considered harmful to the Crotch bumble bee shall be prohibited during construction.

BIO-MM23. Workers Environmental Awareness Program

All persons employed or otherwise working on the Project site during the vegetation clearing and grading phase of construction shall attend a Workers Environmental Awareness Program (WEAP) training. All workers must attend WEAP training prior to performing any work on-site.

The WEAP shall consist of a presentation (either provided in person by the biological monitor or a recorded training session) that includes a discussion of the biology of the habitats and species that may be present at the site. The WEAP shall also include information about the special status plant and wildlife species that may be present, legal protections for those species, penalties for violations, and mitigation measures. The WEAP shall include but not be limited to burrowing owl, nesting birds, and other special status species.

The WEAP shall also include information on weed control practices, appropriate trash disposal, fire prevention and procedures for smoking, spill prevention and procedures, jurisdictional waters and SWPPP, BMPs, biological monitors and compliance responsibilities, and other issues such as pets, firearms, etc.

Attendance at training shall be documented and construction workers provided with a hardhat sticker. Supporting materials shall be provided to all personnel during the training program, including contact information for the biological monitor and/or other compliance personnel. Informal or formal refresher training shall be conducted as needed to maintain compliance.

6.0) MSHCP CONSISTENCY ANALYSIS

6.1) Conservation Areas/Reserve Assembly

This section of the report is intended to analyze the proposed Project's relationship to Cores and Linkages and MSHCP Cell Criteria. The overall goal of this section is to determine if the proposed Project is consistent with the Reserve Assembly objectives for the MSHCP.

- 1) **Cores and Linkages:** The Project is not located within an MSHCP designated Core or Linkage and will not impact overall Reserve Assembly goals. The Project will minimally affect MSHCP Core B, as the survey area is immediately adjacent to (east of) Core B; however, in most areas Core B is separated from the proposed impact area by undeveloped land and topographic changes.
- 2) **Biological Objectives of Temescal Canyon Area Plan Subunit:** Species surveys for Burrowing owl are required if appropriate habitat is present. None of the identified Planning Species have been located as part of the habitat assessment and other surveys for this Project.
- 3) **Cell Criteria:** There are no Cell Criteria established for the Project site.

As the Project site is not located within a Criteria Cell it is not targeted for conservation under the MSHCP. The development of the property for other appropriate uses will not impact the overall Reserve Assembly goals.

6.2) Vegetation

The MSHCP mapped vegetation layer (1994 baseline) depicts the site as entirely chaparral (RCA 2024), but this is not entirely consistent with the L&L vegetation mapping. Based on L&L vegetation mapping, implementation of the Project will result in the permanent loss of ± 92.79 acres of chaparral, ± 36.35 acres of coastal sage scrub, ± 2.25 acres of grasslands, ± 0.09 acre of mulefat scrub, ± 0.11 acre of sycamore woodland, ± 7.73 acres of coast live oak woodland, and ± 3.61 acres of scale broom scrub, and ± 14.18 acres of disturbed/developed areas (Table 9). An additional ± 1.7 acres of disturbed habitat will be impacted as a result of the proposed temporary haul road.

The permanent loss of chaparral and coastal sage scrub on the Project site would not have a substantial effect on the extent of these vegetation communities in the region. Impacts would be less than significant, and no mitigation is proposed.

Coast live oak woodland is not a sensitive vegetation community. The loss of this area would have a less-than-significant impact on the extent of native vegetation communities in the region and no mitigation is proposed.

California sycamore woodland is a sensitive vegetation community ranked as S3 (vulnerable) by CDFW. Scale broom scrub is a sensitive vegetation community ranked as S3 (vulnerable) by CDFW. Mulefat scrub is not a sensitive vegetation community. The extent of these vegetation communities is consistent with areas mapped as CDFW/State wetlands and MSHCP riparian habitat. Proposed mitigation requires regulatory permitting and compensation for impacts at a value of 2:1. Project-related impacts to California sycamore woodland, scale broom scrub and mulefat scrub on the site would be less than significant with implementation of proposed mitigation.

Purple needle grass grassland is a sensitive vegetation community ranked as S3 (vulnerable) by CDFW. Foothill needle grass grassland is a sensitive vegetation community ranked as S2 (imperiled) by CDFW. Needle grass grasslands are located on ridgelines that were previously cleared, as evidenced in historic aerial photographs. Native shrubs are intermixed in this community. This community is addressed in the MSHCP and is conserved on the Santa Rosa Plateau. Needlegrass grassland is present within the avoidance areas and with the incorporation of BIO-MM4 (Designate Unimpacted Areas as Open Space) 22% will be conserved and future impacts prevented. Impact to these communities is considered adverse, but not regionally significant with implementation of proposed mitigation.

Disturbed/developed areas are not a native vegetation community. Impacts to disturbed/developed areas would have no impact on the extent of native vegetation communities in the region and no mitigation is proposed.

6.3) Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (MSHCP Section 6.1.2)

6.3.1) Riparian/Riverine

Streambed/wetland delineation studies identified ± 19.3 acres of riparian/riverine area (sycamore woodland [± 0.27 acre], mulefat scrub [± 0.27 acre], coast live oak woodland [± 5.71 acres], SBS [± 9.87 acres], and streambeds within unvegetated or upland habitats [± 3.18 acres]) in the survey area, including offsite impact areas.

MSHCP Section 6.1.2 impacts include permanent impacts to ± 10.51 acres riparian/riverine habitat (sycamore woodland [± 0.11 acre], mulefat scrub [± 0.09 acre], coast live oak woodland [± 4.61 acres], SBS [± 3.61 acres], and streambeds within upland habitats [± 2.09 acres]). An additional ± 1.13 acres of riverine habitat will be temporarily impacted.

Mitigation

The Project proposes mitigation on and/or offsite at a value of 2:1 for permanent impacts, BIO-MM7 (Riparian/Riverine), and restoration for temporary impacts, BIO-MM21 (Restoration), to MSHCP riparian/riverine resources via the purchase of mitigation credits with the Riverside-Corona Resource Conservation District (RCRCD) or other suitable approved organization. Credits will be obtained prior to issuance of a grading permit or commencing ground-disturbing activities that would impact MSHCP riparian/riverine resources. Project-related impacts to riparian/riverine resources on the site would be less than significant with implementation of proposed mitigation.

6.3.2) Vernal Pools

No naturally occurring vernal pools were observed in the survey area. No vernal pool indicator species were observed. Soil types mapped on the site are not consistent with an alkali playa or vernal pool complex (Bauder et al 2011). Two areas of seasonal ponding were observed and were inundated for a short period of time during the 2024 rainy season. The areas of ponding are believed to have resulted from an interim condition between the recent development footprint of the FPWE and the ultimate condition of the Skyline Heights Project. These seasonal ponding areas within manmade low points will be resolved once the Skyline Heights Project infrastructure is in place.

Mitigation

No naturally occurring vernal pools are present on the site and none would be impacted. The Project would have no impact to naturally occurring vernal pools and no mitigation is proposed.

6.3.3) Fairy Shrimp

No naturally occurring vernal pools were observed in the survey area. Two areas of seasonal ponding were observed in 2024 and were inundated for a short period of time during the 2023-2024 rainy season. Focused surveys for listed fairy shrimp species were negative for all species of fairy shrimp, both common and listed. The areas of ponding are believed to have resulted from an interim condition between the recent development footprint of the FPWE and the ultimate condition of the Skyline Heights Project. These seasonal ponding areas within manmade low points will be resolved once the Skyline Heights Project infrastructure is in place.

Mitigation

No naturally occurring fairy shrimp habitat is present on the site and none would be impacted. No common or listed fairy shrimp species were observed on the site and none would be impacted. The Project would have no impact on fairy shrimp and no mitigation is proposed.

6.3.4) Riparian Birds

Habitat suitable to support the southwestern willow flycatcher and western yellow-billed cuckoo is absent from the site. Surveys in 2013 included protocol surveys for least Bell's vireo (LBV) conducted by GEC. LBV was not observed in the survey area and riparian vegetation suitable to provide territorial or breeding habitat for LBV is not present. Although some scattered willow and cottonwood species are present, vegetation diversity and density is not adequate to support the species. See the LBV survey report included in Appendix K for additional details.

No suitable LBV breeding habitat is present on the site and none would be impacted. No LBV were observed on the site, and none would be impacted. The Project would have no impact on LBV, and no mitigation is proposed.

No habitat suitable to support the southwestern willow flycatcher and western yellow-billed cuckoo is present on the site and none would be impacted. The Project would have no impact on southwestern willow flycatcher and western yellow-billed cuckoo and no mitigation is proposed.

6.3.5) Other Section 6.1.2 Species

Other Section 6.1.2 species are either absent, not expected to occur, or have a low potential for occurrence, with the exception of Coulter's matilija poppy (Table 15).

Coulter's matilija poppy

Coulter's matilija poppy (*Romneya coulteri*) is found in mildly disturbed chaparral and coastal scrub and in along rocky drainages, often on burn areas. It occurs in dry washes and canyons from approximately 65 to 3,940 feet elevation. It reproduces through seeds and also spreads through underground stems (rhizomes). This species is fire-adapted, resprouting in response to burn conditions, and the seeds require fire conditions to stimulate germination (CNPS 2024, Dudek 2003).

Coulter's matilija poppy is not state or federally listed; it has a CRPR of 4.2 (limited distribution with moderate degree and immediacy of threat). It is a covered species under the MSHCP and adequately conserved under the Plan.

Coulter's matilija poppy was observed on the site during surveys from 2008 through 2024 (see details in Table 15, Appendix A). Fourteen (14) locations of CMP were identified in 2008 and again in 2013 in the survey area. Results of the surveys in 2008 found 526 individuals. In 2013, only ±236 plants were found. Plants were found along the high flow level of active Feature 3 (unnamed drainage) and on the unpaved fire road in the middle of the survey area. In 2016, 37 individual CMP and groups were identified and mapped within Feature 3 and its tributaries, which is where most of the CMP were identified in 2008 and 2013. Approximately 691 plants were

observed during the 2016 survey within Feature 3, which included locations not previously identified. The plants observed in 2016 were found again in 2017 and 2024. Three additional locations were observed in 2017 consisting of a total of 25 plants.

Coulter's matilija poppy is covered under the MSHCP and adequately conserved under the Plan. Implementation of the Project would impact these plants through loss of habitat and loss of individuals or populations within the disturbance area. Since Coulter's matilija poppy is covered under the MSHCP and adequately conserved under the Plan, Project-related impacts to Coulter's matilija poppy would be a covered impact under the MSHCP and no mitigation is proposed.

Fish's milkwort

It is found in foothill chaparral and cismontane and riparian woodlands (including oak woodland), usually in wetlands, but occasionally in non-wetland environments. Fish's milkwort is a shrub that forms thickets less than two meters (about six feet) in diameter. Fish's milkwort has a CRPR of 4.3 (watch list). It is a covered species under the MSHCP and adequately conserved under the Plan.

Fish's milkwort was identified during multiple surveys including the 2024 focused botanical surveys. A total of 25 plants were observed (Figure 8). Each location consisted of one or two plants, with two exceptions. Location #633 consisted of six plants and #937 consisted of five plants. All of the Fish's milkwort identified in the survey area is found within Feature 3 and its tributaries and is associated with coast live oak woodland or scrub oak chaparral.

Under the MSHCP, Fish's milkwort conservation requirements have been met and this species is now adequately conserved under the Plan. Implementation of the Project would impact these plants through loss of habitat and loss of individuals or populations within the disturbance area. Since Fish's milkwort is covered under the MSHCP and adequately conserved under the Plan, Project-related impacts to Fish's milkwort would be a covered impact under the MSHCP and no mitigation is proposed.

6.4) Protection of Narrow Endemic Plant Species

The Project site is not located in an MSHCP Section 6.1.3 designated survey area for narrow endemic plant species (RCA 2024). Section 6.1.3 species are either absent, not expected to occur, or have a low potential for occurrence. The Project would have no impact on narrow endemic plant species and no mitigation is proposed.

6.5) Additional Survey Needs and Procedures (Section 6.3.2)

Additional Survey Needs species are either absent, not expected to occur, or have a low potential for occurrence, with the possible exception of burrowing owl. The Project site is located in an MSHCP designated survey area for the burrowing owl (RCA 2024).

The MSHCP Information Map (RCA 2022a) indicates that the proposed Project falls within a mapped survey area for burrowing owl (*Athene cunicularia*) and a habitat assessment is required. If suitable habitat is present, focused surveys are required. A 2024 habitat assessment and burrow survey found no BUOW, no BUOW sign, nor suitable burrows present; consistent with an earlier focused study for the Project conducted in 2013. A 30-day preconstruction clearance survey will be required. If BUOW is identified in the Project impact area or buffer zone prior to or during construction, avoidance of any active burrows and a buffer determined by the Project biologist is required as well as development of a mitigation plan and consultation with the California Department of Fish and Wildlife (CDFW). Impacts to burrowing owl would be less than significant with implementation of proposed mitigation BIO-MM12 [Burrowing Owl].

6.6) Public Quasi-Public (PQP) Lands

The proposed Project is outside of PQP lands. The survey area adjoins PQP (public quasi-public) properties to the north, west, and south. As a part of implementation of the Project a single ± 10 acre PQP parcel is surrounded by the survey area and is bordered to the west, north, and east by the proposed development and the Foothill Parkway. Although not all of the land surrounding the ± 10 acre parcel is proposed for development, this parcel and adjacent habitat avoided by the proposed Project will be isolated from the larger MSHCP Core B area to the west by the proposed Project.

The MSHCP (Section 3.2.1) requires that if an MSHCP permittee alters PQP land in such a way that it no longer contributes to the reserve assembly the permittee will replace the land at a value of at least 1:1 and the replacement must be biologically equivalent or superior. Ten (10) acres of habitat adjacent to Forest Service land (Figure 17) will be avoided as compensation for the isolation of the 10 acre PQP parcel and will be deed restricted to prevent future impacts [BIO-MM3 (Compensation Parcel, 10 Acres)].

The existing PQP parcel is ± 10 acres in the foothills east of the proposed Project and would remain undeveloped in perpetuity. The parcel supports two jurisdictional features and approximately 10 acres of dry scrub habitat: ± 0.95 acres of coastal sage scrub/chaparral intergrade and ± 9.05 acres of chaparral Alliances. The parcel was not specifically surveyed for botanical species, but incidentally observed within the edge of the PQP parcel were eight (8) intermediate mariposa lilies and an estimated 15 chaparral nolina. The parcel is crossed on the east side by a dirt access road and is a part of the general area being used for recreational purposes. The site is on the edge of development, approximately 525 feet from agricultural



(Aerial obtained from Google Earth, May 2024)

Skyline Heights, City of Corona, Riverside County, California
Compensation Parcel
Figure 17

development to the southeast, 650 feet from medium density residential development to the east and is immediately adjacent to the FPWE impact area.

The ± 10 acre parcel proposed for compensation is in the far west portion of the survey area, very close to the isolated parcel and in the same area of the Santa Ana foothills. The compensation parcel supports ± 2.5 acres of coastal sage scrub, ± 0.79 acre of coastal sage scrub-chaparral intergrade, ± 6.54 acres of chaparral, ± 0.17 acre of coast live oak woodland, and two (2) jurisdictional features. In addition, the compensation parcel supports approximately $\pm 1,396$ chaparral nolina and 205 intermediate mariposa lilies. There are no access roads on the property. The proposed development is adjacent to the compensation parcel, but only a narrow east/west band comes close to the parcel. Another ± 23 acres of contiguous natural land will be avoided adjacent to this compensation parcel by the development and will remain undeveloped. The proposed ± 10 acre parcel is immediately adjacent to PQP land and MSHCP Core B and would add to the total acreage of permanent contiguous land within the Core.

BIO-MM3 (Compensation Parcel, 10 Acres) and BIO-MM4 (Designate Unimpacted Areas as Open Space) will increase the size of natural land associated with Core B of the MSHCP Conservation Areas and will provide a larger area to be utilized by a wide variety of species for dispersal, seasonal migration, and home range connectivity. There would be no loss of overall acreage or quality of PQP lands.

6.7) Urban/Wildlands Interface

Core B (Cleveland National Forest) lies immediately west and south of the Project site. Indirect impacts that result from development, including lighting, urban runoff, toxics, and domestic predators, will be minimized through Project design. This section is intended to identify actions that will minimize effects to MSHCP Core Conservation area that could adversely affect biological resources.

6.7.1) Drainage

The Project incorporates streets, open channels, and natural drainage courses as well as a comprehensive system of underground storm drains to handle storm runoff from the Project site. Storm water from the Project site and offsite areas will be directed to storm drains. The design and operation of the drainage channel shall be adequate to preclude discharge of untreated urban runoff into open space areas. The proposed development shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES), to ensure that quantity and quality of runoff discharged to open space area is not altered in an adverse way when compared to existing conditions. Measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into open space areas. Storm water systems shall be designed to prevent the release of toxins, chemicals, petroleum products, invasive plant materials, or other elements that might degrade or harm biological

resources or ecosystem wide processes within open space areas. This will be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

6.7.2) Toxics

The proposed Project is designed to utilize natural drainage patterns for the flow of surface water. Water Quality BMPs include education, storm drain stenciling, and street sweeping in compliance with City of Corona requirements. The earthen channel shall be designed to filter potential toxics in storm water prior to its discharge into open space areas. These BMPs will be implemented as part of the storm water pollution prevention measures for the Project, in accordance with all appropriate NPDES requirements.

The Project would result in the additional use of hazardous materials in limited quantities associated with normal residential activity, such as cleaning products, solvents, herbicides, and insecticides. However, compliance with regulations will reduce the potential risk of hazardous material exposure to a level that is less than significant. An information pamphlet will be prepared for each homeowner and will include avoidance of discharging toxins to downstream waters.

6.7.3) Lighting

Outdoor lighting of residences will be designed so that all direct beams are confined to dwelling sites. Project lighting will not intrude into avoided or adjacent open space areas. Street lighting, parking lot lighting, and other project-related illumination sources will be positioned, directed, and shielded so as to avoid “light spill” into conserved areas. The proposed Project will avoid any night lighting adjacent to open space areas. Night lighting will not be used during the course of construction unless absolutely necessary. If necessary, the lights will be directed and shielded to minimize lighting of surrounding habitat. The level of offsite lighting and lighting fixtures would comply with applicable requirements and policies of the City of Corona.

6.7.4) Noise

The proposed Project incorporates landscape elements, including trees, shrubs, and groundcover, which will assist in noise reduction in native habitats adjacent to the Project. In addition, a noise analysis prepared for the Project found that no proposed onsite or surrounding sensitive resources would experience long-term noise levels in excess of 65 dBA during daytime hours under build out of the Project. Nighttime levels will not be greater than 45 dBA. Therefore, no noise created on the Project site would exceed residential noise standards.

6.7.5) Barriers

The proposed Project would include theme walls along Project perimeter streets adjacent to public streets. The Project will include walls and fencing located where public view and/or important interfaces are of concern. The Project will incorporate special edge treatments designed to separate development areas from open space areas. These areas of native landscaping and fencing will serve to minimize unauthorized public access, domestic animal predation, and illegal trespass and dumping. Access restrictions will be placed at key points where development abuts avoided and adjacent open space areas. The exclusion fence will be a minimum of eight (8) feet in height and will be installed and maintained for the purpose of controlling human and pet access (cats and dogs) to open space area and be in compliance with MSHCP requirements. Fencing will be permanent and maintained in perpetuity. Approval of the fencing design will be required by the City of Corona prior to Project initiation.

6.7.6) Invasive Vegetation Control

Design guidelines for the Project will provide homeowners with a list of native landscaping materials permitted within the Project area. These materials have been selected for their contribution to the Project theme, adaptability to local climatic and soil conditions, and for their compatibility with the unique natural environment in the Project vicinity. None of the plants listed in Section 6.1.4 will be utilized for the Project and their use by future homeowners will be prohibited. The MSHCP has identified invasive plants that should be removed from open space areas. This list is included in Table 6-2 of the MSHCP (Appendix C).

6.7.7) Access

Access points between native habitats and the Project development will be posted with signage asking residents to stay on the trails and not disturb habitat. Yard fencing with no back gate will reduce access to native habitats adjacent to the Project.

6.7.8) Pets

Uncontrolled pets, feral dogs, and cats can prey upon native wildlife species. The following additional steps shall be taken to prevent predation of native species by dogs and cats.

Appropriate signage will be posted requesting residents leash their pets. Homeowner Educational pamphlets will be used to inform them of potential impacts of uncontrolled pets on native habitats and request residents to be good stewards of the land and prevent or limit their domestic cats from openly hunting in the avoidance area.

6.7.9) Grading/Land Development

All manufactured slopes associated with site development will be within the Skyline Project and there will be no impact to the MSHCP Conservation Area. All manufactured slopes that abut natural open space will be retained as open space buffer zones. All manufactured slopes and areas disturbed by construction of these slopes will be revegetated with buffer species during Project construction.

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APPENDIX A: TABLES

Table 11. Plants Species Observed

Plant species observed during surveys from 2005 to 2024. One asterisk (*) indicates a non-native species; two asterisks (**) indicates a special status species; a question mark indicates uncertainty regarding identification or status.

NOTE: Two species observed in 2016 and included in the species list were determined during 2017 field surveys to be a different species. The list below has been corrected. The originally identified species, Japanese hedge-parsley (*Torilis arvensis*) and red willow (*Salix laevigata*), were removed from this species list.

Scientific Name	Common Name
VASCULAR PLANTS	
DICOTYLEDONS	
Lycophytes	
SELAGINELLACEAE	SPIKE-MOSS FAMILY
<i>Selaginella bigelovii</i>	Bigelow spike moss
Ferns	
FILICALES	FERN FAMILIES (SEVERAL INCLUDED TOGETHER)
<i>Adiantum jordani</i>	California maidenhair
<i>Aspidotis californica</i> (<i>Cheilanthes californica</i>)	California lace fern
<i>Dryopteris arguta</i>	Wood fern
<i>Pellaea andromedifolia</i>	Coffee fern
<i>Pellaea mucronata</i>	Bird's-foot fern, bird's beak fern
<i>Pentagramma (Pityrogramma) triangularis</i>	Goldback fern
<i>Polypodium californicum</i>	California polypody
Gymnosperms	
PINACEAE	PINE FAMILY
<i>Pinus jeffreyi</i>	Jeffrey pine (planted)
Angiosperms	
ADOXACEAE	MUSKROOT FAMILY
<i>Sambucus mexicana</i> (<i>S. nigra</i> ssp. <i>cerulea</i>)	Mexican elderberry, blue elderberry
AMARANTHACEAE	AMARANTH FAMILY
* <i>Amaranthus albus</i>	Tumbleweed, tumbling pigweed
ANACARDIACEAE	SUMAC or CASHEW FAMILY
<i>Malosma laurina</i> (<i>Rhus laurina</i>)	Laurel sumac
<i>Rhus aromatica</i> (<i>R. trilobata</i>)	Skunk bush, basketbush
<i>Rhus integrifolia</i>	Lemonade berry
<i>Rhus ovata</i>	Sugar bush
* <i>Schinus molle</i>	Peruvian pepper tree
<i>Toxicodendron diversilobum</i>	Western poison oak

Scientific Name	Common Name
APIACEAE	CELERY FAMILY
* <i>Anthriscus caucalis</i> (A. <i>scandicina</i> , A. <i>neglecta</i>)	Bur-chervil
* <i>Apiastrum angustifolium</i>	Mock-parsley
* <i>Conium maculatum</i>	Poison hemlock
* <i>Daucus pusillus</i>	Rattlesnake weed, wild carrot
* <i>Foeniculum vulgare</i>	Fennel
<i>Lomatium lucidum</i>	Shiny lomatium
<i>Sanicula arguta</i>	Sharp-toothed sanicle
<i>Sanicula crassicaulis</i>	Pacific sanicle
APOCYNACEAE	DOGBANE FAMILY
<i>Asclepias fascicularis</i>	Narrow-leaf milkweed
<i>Funastrum (Sarcostemma) cynanchoides</i> <i>ssp. hartwegii</i>	Climbing milkweed
ASTERACEAE	ASTER FAMILY
<i>Acourtia (Perezia) microcephala</i>	Scapellote, perezia
<i>Ambrosia acanthicarpa</i>	Annual bur-sage, annual sandbur
<i>Ambrosia confertiflora</i>	Weak-leaved burweed
<i>Ambrosia psilostachya</i>	Western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia douglasiana</i>	Douglas mugwort
<i>Baccharis pilularis</i>	Coyote brush
<i>Baccharis pilularis ssp. consanguinea</i>	Coyote brush
<i>Baccharis salicifolia ssp. salicifolia</i> (<i>B. glutinosa</i>)	Mulefat
<i>Bebbia juncea var. aspera</i>	Sweetbush
<i>Brickellia californica</i>	California brickellbush
<i>Carduus pycnocephalus ssp. pycnocephalus</i>	Italian thistle
* <i>Centaurea melitensis</i>	Tocalote
* <i>Chaenactis artemisiifolia</i>	White pincushion, wormwood pincushion
<i>Cirsium occidentale var. occidentale</i>	Cobwebby thistle
* <i>Cirsium vulgare</i>	Bull thistle
<i>Corethrogyne filaginifolia</i>	California-aster, sand-aster
<i>Deinandra (Hemizonia) fasciculata</i>	Fascicled tarplant, slender tarweed
** <i>Deinandra (Hemizonia) paniculata</i>	Paniculate tarplant, San Diego tarplant
* <i>Dittrichia graveolens</i>	Stinkwort
<i>Encelia californica</i>	California encelia
<i>Encelia farinosa</i>	Brittlebush
<i>Ericameria palmeri var. pachylepis</i>	Thickbracted goldenbush, grassland goldenbush
* <i>Erigeron (Conyza) bonariensis</i>	Flax-leaved horseweed
<i>Erigeron (Conyza) canadensis</i>	Horseweed, mare's tail
<i>Erigeron foliosus var. foliosus</i>	Leafy daisy
<i>Erigeron sumatrensis</i>	Tropical horseweed
<i>Eriophyllum confertiflorum var. confertiflorum</i>	Golden-yarrow
* <i>Gazania linearis</i>	Treasure flower, ornamental gazania

Scientific Name	Common Name
<i>Gutierrezia californica</i> (<i>G. bracteata</i>)	California matchweed
<i>Hazardia squarrosa</i> var. <i>grindelioides</i> (<i>Haplopappus squarrosus</i> ssp. <i>grindelioides</i>)	Saw-toothed goldenbush
* <i>Hedypnois cretica</i>	Crete weed, Crete hedypnois
<i>Helianthus annuus</i>	Western sunflower
<i>Helianthus gracilentus</i>	Slender sunflower
* <i>Helminthotheca echioides</i> (<i>Picris echioides</i>)	Bristly ox-tongue
<i>Heterotheca grandiflora</i>	Telegraph weed
* <i>Hypochaeris glabra</i>	Smooth cat's-ear
* <i>Lactuca serriola</i>	Prickly lettuce
<i>Lasthenia gracilis</i>	Common goldfields
<i>Lepidospartum squamatum</i>	Scale-broom
<i>Logfia filaginoides</i> (<i>Filago californica</i>)	California filago
* <i>Logfia gallica</i> (<i>Filago gallica</i>)	Daggerleaf cottonrose
<i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>	Slender-leaved malacothrix
<i>Matricaria discoidea</i> (<i>Chamomilla suaveolens</i> , <i>M. matricarioides</i>)	Pineapple weed
* <i>Oncosiphon pilulifer</i> (<i>Matricaria globosa</i>)	Stinknet
<i>Osmadenia tenella</i> (<i>Calycadenia tenella</i>)	Osmadenia, Southern rosinweed
<i>Porophyllum gracile</i>	Odora
<i>Pseudognaphalium biolettii</i> (<i>Gnaphalium bicolor</i>)	Bicolored cudweed
<i>Pseudognaphalium californicum</i> (<i>Gnaphalium californicum</i>)	California everlasting
* <i>Pseudognaphalium luteoalbum</i> (<i>Gnaphalium luteoalbum</i>)	Pearly everlasting, fragrant everlasting cudweed
<i>Pseudognaphalium microcephalum</i>	White cudweed
<i>Pseudognaphalium stramenium</i> (<i>Gnaphalium stramenium</i>)	Cotton batting
* <i>Pulicaria paludosa</i> (<i>P. hispanica</i>)	False flea-bane, Spanish sunflower
<i>Rafinesquia californica</i>	California chicory
* <i>Senecio vulgaris</i>	Common groundsel
* <i>Silybum marianum</i>	Milk thistle
<i>Solidago velutina</i> ssp. <i>californica</i> (<i>S. californica</i>)	California goldenrod
* <i>Sonchus asper</i>	Prickly sow thistle
* <i>Sonchus oleraceus</i>	Common sow thistle
<i>Stephanomeria diegensis</i>	San Diego wreath plant
<i>Stephanomeria virgata</i> ssp. <i>virgata</i>	Virgate wreath plant
<i>Tetradymia comosa</i>	Hairy horsebrush, cotton-thorn
<i>Uropappus lindleyi</i> (<i>Microseris lindleyi</i> , <i>M. linearifolia</i>)	Silverpuffs
BORAGINACEAE	BORAGE OR WATERLEAF FAMILY
<i>Amsinckia intermedia</i> (<i>A. menziesii</i> var. <i>intermedia</i>)	Large flower rancher's fiddleneck

Scientific Name	Common Name
<i>Amsinckia menziesii</i> (incl. <i>A. m. var. menziesii</i>)	Common fiddleneck, rancher's fiddleneck
<i>Cryptantha intermedia</i>	Common cryptantha
<i>Cryptantha microstachys</i>	Tejon cryptantha
<i>Cryptantha muricata</i> var. <i>jonesii</i>	Jones' cryptantha
<i>Emmenanthe penduliflora</i>	Whispering bells
<i>Eriodictyon crassifolium</i> var. <i>crassifolium</i>	Thick-leaved yerba santa
<i>Eucrypta chrysanthemifolia</i> var. <i>chrysanthemifolia</i>	Common eucrypta
<i>Nemophila menziesii</i>	Baby blue-eyes
<i>Nemophila menziesii</i> var. <i>menziesii</i>	Menzies's baby blue-eyes
<i>Pectocarya linearis</i> ssp. <i>ferocula</i>	Narrow-toothed pectocarya
<i>Phacelia cicutaria</i> var. <i>hispida</i>	Caterpillar phacelia
<i>Phacelia distans</i>	Common phacelia
<i>Phacelia minor</i>	Wild Canterbury bells
<i>Pholistoma auritum</i> var. <i>auritum</i>	Blue fiesta flower
BRASSICACEAE	MUSTARD FAMILY
* <i>Brassica nigra</i>	Black mustard
* <i>Brassica rapa</i>	Field mustard
* <i>Brassica tournefortii</i>	Sahara mustard, wild turnip
<i>Caulanthus heterophyllus</i> (<i>C. h. pseudosimulans</i>)	Buck's jewelflower
* <i>Hirschfeldia incana</i> (<i>Brassica geniculata</i>)	Shortpod mustard
* <i>Lepidium didymum</i> (<i>Coronopus didymus</i>)	Lesser swine cress, lesser wort-cress
* <i>Sisymbrium irio</i>	London rocket
* <i>Sisymbrium orientale</i>	Wild mustard, hare's ear cabbage
<i>Thysanocarpus laciniatus</i>	Fringepod
CACTACEAE	CACTUS FAMILY
? <i>Echinocereus</i> (<i>Cereus</i>) <i>species</i>	Columnar cactus
<i>Cylindropuntia californica</i>	California cholla
<i>Opuntia littoralis</i> (includes <i>O. occidentalis</i>)	Coast prickly pear
<i>Opuntia vaseyi</i>	Vasey's prickly-pear
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY
<i>Lonicera subspicata</i> var. <i>denudata</i> (<i>L. s. var. johnstonii</i>)	Southern honeysuckle
CARYOPHYLLACEAE	PINK FAMILY, CARNATION FAMILY
* <i>Cerastium glomeratum</i>	Sticky mouse-ear chickweed
<i>Polycarpon tetraphyllum</i> var. <i>tetraphyllum</i>	Four-leaved allseed, four-leaved polycarp
* <i>Silene gallica</i>	Small-flower catchfly, windmill pink
<i>Silene laciniata</i> ssp. <i>laciniata</i>	Mexican pink
* <i>Spergularia bocconii</i>	Boccone's sand-spurrey
* <i>Stellaria media</i>	Common chickweed
* <i>Stellaria pallida</i>	Lesser chickweed

Scientific Name	Common Name
CHENOPODIACEAE	GOOSEFOOT FAMILY
* <i>Atriplex rosea</i>	Tumbling orach, redscale
* <i>Atriplex semibaccata</i>	Australian saltbush
* <i>Chenopodium album</i>	Lamb's quarters, common goosefoot
<i>Chenopodium berlandieri</i>	Pitseed goosefoot
<i>Chenopodium californicum</i>	California goosefoot
* <i>Salsola australis</i>	Russian thistle
* <i>Salsola tragus</i>	Russian thistle
CISTACEAE	ROCK-ROSE FAMILY
<i>Cistus incanus (C. creticus, C. villosus,</i>	
* <i>C. incanus creticus)</i>	Rock-rose (ornamental)
<i>Crocanthemum (Helianthemum) scoparium</i>	
<i>var. vulgare</i>	Peak rush-rose, rock rose
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia ssp. intermedia</i>	Short-lobed morning-glory
* <i>Convolvulus arvensis</i>	Common bindweed
<i>Cuscuta californica</i>	Chaparral dodder, witch's hair
<i>Cuscuta subinclusa (C. ceanothi)</i>	Dodder
CRASSULACEAE	STONECROP FAMILY
<i>Crassula connata (C. erecta)</i>	Pygmy-weed, pygmy stonecrop
<i>Dudleya lanceolata</i>	Lance-leaved dudleya
CUCURBITACEAE	GOURD FAMILY, CUCUMBER FAMILY
<i>Cucurbita palmata</i>	Coyote melon
<i>Marah macrocarpa</i>	Chilicothe, wild cucumber
ERICACEAE	HEATH FAMILY, MANZANITA FAMILY
<i>Arctostaphylos glandulosa ssp. glandulosa</i>	Southern Eastwood manzanita
EUPHORBIACEAE	SPURGE FAMILY
<i>Croton setiger (C. setigerus, Eremocarpus</i>	
<i>setiger, E. setigerus)</i>	Turkey-mullein, doveweed
<i>Euphorbia (Chamaesyce) albomarginata</i>	Rattlesnake sandmat, rattlesnake weed
* <i>Euphorbia (Chamaesyce) maculata</i>	Spotted spurge
<i>Euphorbia (Chamaesyce) polycarpa</i>	Smallseed sandmat
* <i>Ricinus communis</i>	Castor bean
FABACEAE	LEGUME FAMILY, PEA FAMILY
* <i>Acacia redolens</i>	Freeway acacia, vanilla-scented wattle
<i>Acmispon americanus var. americanus</i>	
<i>(Lotus purshianus)</i>	"Spanish" clover
<i>Acmispon glaber (Lotus scoparius)</i>	Deerweed
<i>Acmispon glaber var. glaber</i>	
<i>(Lotus scoparius ssp. scoparius)</i>	Deerweed

Scientific Name	Common Name
<i>Acmispon maritimus</i> (<i>Lotus salsuginosus</i>)	Alkali lotus
<i>Acmispon micranthus</i> (<i>Lotus hamatus</i>)	Grab lotus
<i>Acmispon strigosus</i> (<i>Lotus strigosus</i>)	Strigose lotus
<i>Acmispon tomentosus</i>	Heermann's lotus
<i>Acmispon wrangelianus</i> (<i>Lotus wrangelianus</i>)	California lotus
<i>Amorpha fruticosa</i>	False indigo
<i>Astragalus gambelianus</i>	Gambel milkvetch, Gambel locoweed
<i>Lathyrus vestitus</i> var. <i>alefeldii</i>	San Diego pea
<i>Lathyrus vestitus</i> var. <i>vestitus</i>	Chaparral sweet pea
<i>Lupinus bicolor</i>	Miniature lupine, dove lupine
<i>Lupinus hirsutissimus</i>	Stinging lupine
<i>Lupinus sparsiflorus</i>	Coulter's lupine
<i>Lupinus succulentus</i>	Arroyo lupine
<i>Lupinus truncatus</i>	Collar lupine
* <i>Medicago polymorpha</i>	California burclover
* <i>Medicago sativa</i>	Alfalfa
* <i>Melilotus albus</i>	White sweetclover
* <i>Melilotus indicus</i>	Sourclover, India sweetclover
<i>Trifolium ciliolatum</i>	Foothill clover, tree clover
FAGACEAE	OAK FAMILY
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast live oak
<i>Quercus berberidifolia</i> (<i>Q. dumosa</i>)	Scrub oak
GERANIACEAE	GERANIUM FAMILY
* <i>Erodium botrys</i>	Long-beak filaree
* <i>Erodium cicutarium</i>	Redstem filaree
* <i>Erodium moschatum</i>	Greenstem filaree, white-stemmed filaree
GROSSULARIACEAE	GOOSEBERRY FAMILY, CURRANT FAMILY
<i>Ribes speciosum</i>	Fuchsia-flowered gooseberry
HELIOTROPIACEAE	HELIOTROPE FAMILY
<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	Alkali heliotrope, salt heliotrope
JUGLANDACEAE	WALNUT FAMILY
* <i>Carya illinoensis</i>	Pecan (planted)
LAMIACEAE	MINT FAMILY
* <i>Marrubium vulgare</i>	Horehound
<i>Salvia apiana</i>	White sage
<i>Salvia columbariae</i>	Chia
<i>Salvia leucophylla</i>	Coastal purple sage
<i>Salvia mellifera</i>	Black sage
<i>Trichostema lanceolatum</i>	Vinegar weed

Scientific Name	Common Name
LYTHRACEAE	LOOSESTRIFE FAMILY
* <i>Lythrum hyssopifolia</i>	Hyssop-leaved loosestrife
MALVACEAE	MALLOW FAMILY
<i>Malacothamnus densiflorus</i>	Yellow bush-mallow
<i>Malacothamnus fasciculatus</i> var. <i>fasciculatus</i>	Chaparral bush-mallow
* <i>Malva nicaeensis</i>	Bull mallow
* <i>Malva parviflora</i>	Cheeseweed
MONTIACEAE	MINER'S LETTUCE FAMILY, MONTIA FAMILY
** <i>Calandrinia breweri</i>	Brewer's calandrinia
<i>Calandrinia menziesii</i> (C. <i>ciliata</i>)	Red maids
<i>Calyptidium monandrum</i>	Pussypaws, common calyptidium
<i>Claytonia parviflora</i> ssp. <i>parviflora</i>	Narrow-leaved miner's lettuce
<i>Claytonia perfoliata</i>	Miner's lettuce
<i>Claytonia perfoliata</i> ssp. <i>perfoliata</i>	Common miner's lettuce
MYRSINACEAE	MYRSINE FAMILY
* <i>Lysimachia</i> (<i>Anagallis</i>) <i>arvensis</i>	Scarlet pimpernel
MYRTACEAE	MYRTLE FAMILY, EUCALYPTUS FAMILY
* <i>Eucalyptus</i> species	Ornamental eucalyptus, gumtree
* <i>Eucalyptus camaldulensis</i>	River Red Gum
* <i>Eucalyptus citriodora</i>	Lemon scented gum
* <i>Eucalyptus polyanthemus</i>	Silver dollar gum
* <i>Eucalyptus rudis</i>	Desert gum
NYCTAGINACEAE	FOUR O'CLOCK FAMILY
<i>Mirabilis laevis</i> var. <i>crassifolia</i> (M. <i>californica</i>)	Wishbone bush
OLEACEAE	OLIVE FAMILY
<i>Fraxinus dipetala</i>	California ash, flowering ash
<i>Fraxinus velutina</i>	Arizona ash, velvet ash, Modesto ash
* <i>Olea europaea</i>	Russian olive
ONAGRACEAE	EVENING-PRIMROSE FAMILY
<i>Camissoniopsis</i> (<i>Camissonia</i>) <i>bistorta</i>	California sun cup
<i>Clarkia bottae</i> (C. <i>deflexa</i>)	Punchbowl clarkia
<i>Clarkia epilobioides</i>	White clarkia
<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	Four-spot clarkia
<i>Epilobium brachycarpum</i> (<i>E. paniculatum</i>)	Summer cottonweed
<i>Epilobium canum</i> (<i>Zauschnaria californica</i>)	California fuchsia
<i>Eulobus californica</i> (<i>Camissonia californica</i>)	California false mustard, mustard evening primrose
OROBANCHACEAE	BROOMRAPE FAMILY
<i>Castilleja exserta</i> (<i>Orthocarpus</i> <i>purpurascens</i>)	Purple owl's-clover

Scientific Name	Common Name
OXALIDACEAE	OXALIS FAMILY
* <i>Oxalis pes-caprae</i>	Bermuda buttercup
PAEONIACEAE	PEONY FAMILY
<i>Paeonia californica</i>	California peony
PAPAVERACEAE	POPPY FAMILY
<i>Dendromecon rigida</i>	Bush poppy
<i>Ehrendorferia ochroleuca</i>	Yellow bleeding heart
<i>Eschscholzia californica</i>	California poppy
** <i>Romneya coulteri</i>	Coulter's matilija poppy
PHRYMACEAE	LOPSEED FAMILY
<i>Diplacus (Mimulus) aurantiacus</i>	Bush monkeyflower, sticky monkeyflower
<i>Diplacus longiflorus (Mimulus aurantiacus var. pubescens)</i>	Southern bush monkeyflower
<i>Diplacus puniceus</i>	Sticky monkey flower
PLANTAGINACEAE	PLANTAIN FAMILY
<i>Antirrhinum coulterianum</i>	White snapdragon
<i>Antirrhinum kelloggii</i>	Climbing snapdragon
<i>Collinsia heterophylla</i>	Chinese houses
<i>Keckiella antirrhinoides var. antirrhinoides</i>	Yellow bush-penstemon
<i>Keckiella cordifolia</i>	Climbing bush-penstemon
<i>Penstemon spectabilis var. spectabilis</i>	Showy Penstemon
<i>Plantago erecta</i>	California plantain
PLATANACEAE	PLANE-TREE or SYCAMORE FAMILY
<i>Platanus racemosa</i>	Western sycamore
POLEMONIACEAE	PHLOX FAMILY
<i>Gilia angelensis</i>	Chaparral gilia, common gilia
<i>Navarretia atractyloides</i>	Holly-leaved skunkweed
POLYGALACEAE	MILKWORT FAMILY
** <i>Rhinotropis (Polygala) cornuta var. fishiae</i>	Fish's milkwort
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Eriogonum fasciculatum var. foliolosum</i>	Leafy California wild buckwheat, interior California buckwheat
<i>Eriogonum fasciculatum var. polifolium</i>	Mojave Desert California buckwheat
* <i>Polygonum aviculare (P. arenastrum)</i>	Common knotweed
<i>Pterostegia drymarioides</i>	Woodland threadstem, hairnet
* <i>Rumex crispus</i>	Curly dock
RANUNCULACEAE	BUTTERCUP FAMILY
<i>Clematis lasiantha</i>	Chaparral clematis
<i>Clematis pauciflora</i>	Few-flowered clematis, small-leaved clematis

Scientific Name	Common Name
<i>Delphinium cardinale</i>	Scarlet larkspur
<i>Delphinium parryi</i> ssp. <i>parryi</i>	Parry's larkspur
RHAMNACEAE	BUCKTHORN FAMILY
<i>Ceanothus crassifolius</i> var. <i>crassifolius</i>	Hoaryleaf ceanothus
<i>Ceanothus tomentosus</i>	Woollyleaf ceanothus
<i>Frangula californica</i> (<i>Rhamnus californica</i>)	California coffee berry
<i>Rhamnus ilicifolia</i>	Hollyleaf redberry
ROSACEAE	ROSE FAMILY
<i>Adenostoma fasciculatum</i>	Chamise
<i>Cercocarpus betuloides</i> var. <i>betuloides</i>	Birch-leaf mountain-mahogany
<i>Heteromeles arbutifolia</i>	Toyon, Christmas berry
<i>Prunus ilicifolia</i>	Hollyleaf cherry
RUBIACEAE	MADDER FAMILY, COFFEE FAMILY
<i>Galium angustifolium</i> ssp. <i>angustifolium</i>	Narrowly leaved bedstraw
<i>Galium aparine</i>	Goose grass, annual bedstraw
<i>Galium nuttallii</i> ssp. <i>nuttallii</i>	San Diego bedstraw
* <i>Galium parisiense</i>	Wall bedstraw
SALICACEAE	WILLOW FAMILY
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood
<i>Salix gooddingii</i>	Goodding's black willow
<i>Salix lasiandra</i> var. <i>lasiandra</i>	Pacific willow
<i>Salix lasiolepis</i>	Arroyo willow
SAXIFRAGACEAE	SAXIFRAGE FAMILY
<i>Lithophragma affine</i>	Woodland star
SCROPHULARIACEAE	FIGWORT FAMILY, SNAPDRAGON FAMILY
<i>Scrophularia californica</i>	California figwort, coast figwort
SOLANACEAE	NIGHTSHADE FAMILY
<i>Datura wrightii</i> (<i>D. meteloides</i>)	Jimsonweed, tolguaicha
* <i>Nicotiana glauca</i>	Tree tobacco
<i>Solanum douglasii</i>	Nightshade
<i>Solanum xanti</i>	Chaparral nightshade
TAMARICACEAE	TAMARISK FAMILY
* <i>Tamarix ramosissima</i>	Saltcedar, tamarisk
URTICACEAE	NETTLE FAMILY
<i>Urtica dioica</i> ssp. <i>holosericea</i>	Stinging nettle
* <i>Urtica urens</i>	Dwarf nettle

MONOCOTYLEDONS

AGAVACEAE	CENTURY PLANT FAMILY, AGAVE FAMILY
<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Soap plant
<i>Hesperoyucca whipplei</i> (<i>Yucca whipplei</i>)	Chaparral yucca
ALLIACEAE	ONION FAMILY, GARLIC FAMILY
<i>Allium praecox</i>	Early onion
IRIDACEAE	IRIS FAMILY
<i>Sisyrinchium bellum</i>	Western blue-eyed grass
LILIACEAE	LILY FAMILY
<i>Calochortus splendens</i>	Splendid mariposa lily
** <i>Calochortus weedii</i> var. <i>intermedius</i>	Intermediate mariposa lily
MELANTHIACEAE	FALSE-HELLEBORE FAMILY
<i>Toxicoscordion (Zigadenus) fremontii</i>	Death camas, star lily
POACEAE	GRASS FAMILY
<i>Agrostis pallens</i> (<i>A. diegoensis</i>)	Dune bent grass, San Diego bent grass
<i>Aristida purpurea</i> var. <i>purpurea</i>	Purple three-awn grass
* <i>Arundo donax</i>	Giant reed
* <i>Avena barbata</i>	Slender wild oat
* <i>Avena fatua</i>	Wild oat
<i>Bothriochloa barbinodis</i>	Cane bluestem, silver beardgrass
* <i>Bromus diandrus</i> (<i>B. rigidus</i>)	Ripgut brome
* <i>Bromus hordeaceus</i> (<i>B. mollis</i>)	Soft chess
* <i>Bromus rubens</i> (<i>B. madritensis</i> ssp. <i>rubens</i>)	Red brome
* <i>Bromus tectorum</i>	Cheatgrass
* <i>Cynodon dactylon</i>	Bermuda grass
* <i>Echinochloa crus-galli</i>	Barnyard grass
<i>Elymus condensatus</i> (<i>Leymus</i> <i>condensatus</i>)	Giant wild-rye
<i>Festuca microstachys</i> (<i>Vulpia microstachys</i> , <i>F. reflexa</i> , <i>F. pacifica</i> , <i>F. confusa</i>)	Annual fescue
* <i>Festuca myuros</i> (<i>F. megalura</i> , <i>Vulpia</i> <i>myuros</i>)	Rattail sixweeks grass
<i>Festuca octoflora</i> (<i>Vulpia octoflora</i>)	Sixweeks grass, slender fescue
<i>Festuca perennis</i> (<i>Lolium multiflorum</i> , <i>L. perenne</i> , <i>L. p. ssp. perenne</i> , <i>L. p. ssp.</i> <i>multiflorum</i>)	Awned Italian ryegrass
* <i>Gastridium phleoides</i> (<i>G. ventricosum</i>)	Nit grass
* <i>Hordeum murinum</i> ssp. <i>glaucum</i>	Smooth barley
* <i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley
* <i>Lamarckia aurea</i>	Goldentop grass
* <i>Leptochloa fusca</i> ssp. <i>uninervia</i> (<i>L.</i> <i>uninervia</i>)	Mexican sprangletop
<i>Melica imperfecta</i>	Little California melica, common melic
<i>Muhlenbergia microsperma</i>	Littleseed muhly

<i>Muhlenbergia rigens</i>	Deer grass
* <i>Poa annua</i>	Annual blue grass
* <i>Polypogon monspeliensis</i>	Rabbitfoot grass
* <i>Schismus barbatus</i>	Mediterranean grass
<i>Stipa coronata</i> (<i>S. c. ssp. coronata</i> , <i>Achnatherum coronatum</i>)	Crested needle grass, giant needle grass
<i>Stipa lepida</i> (<i>Nassella lepida</i>)	Foothill needle grass, valley needle grass
<i>Stipa miliacea</i> var. <i>miliacea</i> (<i>Piptatherum miliaceum</i> , <i>Oryzopsis</i> <i>miliacea</i>)	Smilo grass
* <i>Stipa pulchra</i> (<i>Nassella pulchra</i>)	Purple needle grass
RUSCACEAE	BUTCHER'S-BROOM FAMILY
** <i>Nolina cismontana</i>	Chaparral nolina, chaparral beargrass
THEMIDACEAE	BRODIAEA FAMILY
<i>Bloomeria crocea</i> var. <i>crocea</i>	Common goldenstar
<i>Dichelostemma capitatum</i> (<i>D. pulchella</i> , <i>Brodiaea pulchella</i>)	Blue dicks, wild hyacinth

Table 12. Wildlife Species Observed

Wildlife species observed during surveys from 2005 to 2024. One asterisk (*) indicates a non-native species; two asterisks (**) indicates a special status species; a question mark indicates uncertainty regarding identification or status.

Scientific Name	Common Name
VERTEBRATES	
Reptiles	
Phrynosomatidae	Spiny Lizards
** <i>Phrynosoma blainvillii</i>	Coast horned lizard
<i>Sceloporus occidentalis longipes</i>	Great Basin fence lizard
<i>Uta stansburiana</i>	Side-blotched lizard
Teiidae	Teiid Lizards
** <i>Aspidoscelis hyperythra</i>	Orange-throated whiptail
** <i>Aspidoscelis tigris stejnegeri</i>	Coastal (western) whiptail
Viperidae	Pit Vipers
<i>Crotalus pyrrhus (C. mitchellii)</i>	Southwestern speckled rattlesnake
** <i>Crotalus ruber</i>	Red-diamond rattlesnake
Birds	
Accipitridae	Hawks, Eagles, and Harriers
** <i>Accipiter cooperii</i>	Cooper's hawk
<i>Buteo jamaicensis</i>	Red-tailed hawk
Aegithalidae	Long-tailed Tits
<i>Psaltriparus minimus</i>	Bushtit
Alaudidae	Larks
** <i>Eremophila alpestris actia</i>	California horned lark
Apodidae	Swifts
<i>Aeronautes saxatalis</i>	White-throated swift
** <i>Chaetura vauxi</i>	Vaux's swift
Cardinalidae	Cardinals
<i>Passerina amoena</i>	Lazuli bunting
<i>Pheucticus melanocephalus</i>	Black-headed grosbeak
<i>Piranga ludoviciana</i>	Western tanager
Cathartidae	Vultures
<i>Cathartes aura</i>	Turkey vulture
Columbidae	Pigeons and Doves
* <i>Columba livia</i>	Rock dove, common pigeon
<i>Zenaida asiatica</i>	White-winged dove

Scientific Name	Common Name
<i>Zenaida macroura</i>	Mourning dove
Corvidae	Crows and Jays
<i>Aphelocoma californica</i>	California scrub jay
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	Common raven
Cuculidae	Cuckoos
<i>Geococcyx californianus</i>	Greater roadrunner
Falconidae	Falcons
<i>Falco sparverius</i>	American kestrel
Fringillidae	Finches
** <i>Spinus (Carduelis) lawrencei</i>	Lawrence's goldfinch
<i>Spinus (Carduelis) tristis</i>	American goldfinch
<i>Haemorhous (Carpodacus) mexicanus</i>	House finch
Hirundinidae	Swallows
<i>Hirundo rustica</i>	Barn swallow
<i>Petrochelidon pyrrhonota</i>	Cliff swallow
<i>Stelgidopteryx serripennis</i>	Northern rough-winged swallow
<i>Tachycineta bicolor</i>	Tree swallow
<i>Tachycineta thalassina</i>	Violet-green swallow
Icteridae	Blackbirds
<i>Agelaius phoeniceus</i>	Red-winged blackbird
** <i>Icterus bullockii</i>	Bullock's oriole
<i>Icterus cucullatus</i>	Hooded oriole
<i>Molothrus ater</i>	Brown-headed cowbird
Mimidae	Mockingbirds
<i>Mimus polyglottos</i>	Northern mockingbird
** <i>Toxostoma redivivum</i>	California thrasher
Odontophoridae	Quail
<i>Callipepla californica</i>	California quail
Paradoxornithidae	Parrotbills
** <i>Chamaea fasciata</i>	Wrentit
Parulidae	Wood Warblers
<i>Cardellina pusilla</i>	Wilson's warbler
<i>Geothlypis tolmiei</i>	MacGillivray's warbler
<i>Leiostyris celata</i>	Orange-crowned warbler
Passerellidae	New World Sparrows
** <i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow
<i>Chondestes grammacus</i>	Lark sparrow

Scientific Name	Common Name
<i>Melospiza melodia</i>	Song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Pipilo maculatus</i>	Spotted towhee
** <i>Spizella atrogularis</i>	Black-chinned sparrow
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
Passeridae	Old World Sparrows
* <i>Passer domesticus</i>	House sparrow
Picidae	Woodpeckers
<i>Colaptes auratus</i>	Northern flicker
** <i>Dryobates (Picoides) nuttallii</i>	Nuttall's woodpecker
<i>Dryobates (Picoides) pubescens</i>	Downy woodpecker
<i>Melanerpes formicivorus</i>	Acorn woodpecker
Ptiliognatidae	Silky-flycatchers
<i>Phainopepla nitens</i>	Phainopepla
Strigidae	Owls
<i>Bubo virginianus</i>	Great horned owl
<i>Megascops kennicottii</i>	Western screech-owl
Sturnidae	Starlings
* <i>Sturnus vulgaris</i>	European starling
Trochilidae	Hummingbirds
<i>Archilochus alexandri</i>	Black-chinned hummingbird
<i>Calypte anna</i>	Anna's hummingbird
** <i>Calypte costae</i>	Costa's hummingbird
Troglodytidae	Wrens
<i>Salpinctes obsoletus</i>	Rock wren
<i>Thryomanes bewickii</i>	Bewick's wren
Turdidae	Thrushes
<i>Sialia mexicana</i>	Western bluebird
Tyrannidae	Tyrant Flycatchers
<i>Empidonax difficilis</i>	Pacific-slope flycatcher
<i>Myiarchus cinerascens</i>	Ash-throated flycatcher
<i>Sayornis nigricans</i>	Black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Tyrannus verticalis</i>	Western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
Tytonidae	Barn Owls
<i>Tyto alba</i>	Barn owl

Scientific Name	Common Name
Mammals	
Canidae	Dogs, Foxes, and Coyotes
* <i>Canis familiaris</i>	Domestic dog
<i>Canis latrans</i>	Coyote
<i>Urocyon cinereoargenteus</i>	Grey fox
Didelphidae	Opossums
* <i>Didelphis virginiana</i>	Virginia opossum
Felidae	Cats
* <i>Felis domesticus</i>	Domestic cat
<i>Lynx rufus</i>	Bobcat
** <i>Puma concolor</i>	Mountain lion
Geomyidae	Pocket Gophers
<i>Thomomys bottae</i>	Botta's pocket gopher
Leporidae	Rabbits
** <i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit
<i>Sylvilagus audubonii</i>	Audubon's cottontail
Pryocyonidae	Raccoons, Ringtails, and Coatis
<i>Procyon lotor</i>	Raccoon
Sciuridae	Squirrels
<i>Spermophilus beecheyi</i>	California ground squirrel

Scientific Name	Common Name
Invertebrates	
Class Insecta	
Cercopoidea	Spittle Bugs
<i>Prosapia bicincta</i>	Two-Lined spittle bug
Apidae	Honey Bees
<i>Apis Mellifera</i>	Honey bee
<i>Bombus californicus</i>	California bumble bee
<i>Bombus crotchii</i>	Crotch bumble bee
<i>Bombus melanopygus</i>	Black-tailed bumble bee
<i>Bombus vosnesenskii</i>	Yellow faced bumble bee
Riodininae	Metalmarks
<i>Apodemia virgulti</i>	Mormon metalmark
Polyommatainae	Blue Gossamer-Winged Butterflies
<i>Brephidium exilis</i>	Pygmy blue butterfly
Pentatomidae	Stink Bugs
<i>Chlorochroa sayi</i>	Say's stinking bug
Coliadinae	Sulphur Butterflies
<i>Colias eurytheme</i>	Orange sulphur
Scarabaeidae	Scarab Beetle
<i>Cotinus mutabilis</i>	Green fruit beetle
Tenebrionidae	Darkling Beetles
<i>Eleodes Acutus</i>	Stink beetle
Aphididae	Aphids
<i>Toxoptera aurantii</i>	Aphids
Culicidae	Mosquitoes
<i>Culex quinquefasciatus</i>	Mosquito
Forficulidae	Earwigs
<i>Forficula auricularia</i>	European earwigs
Bombyliidae	Robber flies
<i>Mallophora faultrix</i>	Robber fly

Scientific Name	Common Name
Muscidae <i>Musca domestica</i>	House Fly Common house fly
Papilionidae <i>Papilio rutulus</i>	Swallowtail Western tiger swallowtail butterfly
Pompilidae <i>Pepsis chrysothymus</i>	Spider Wasps Tarantula hawk
Pieridae <i>Pieris protodice</i> <i>Pieris rapae</i>	Cabbage Butterflies Common white butterfly Cabbage white
Formicidae <i>Pogonomyrmex californicus</i>	Harvester Ant California harvester ant
Vespidae <i>Polistes exclamans</i>	Social Wasp Paper wasp
Acrididae <i>Trimerotropis pallidipennis</i>	Common Grasshopper Pallid band-wing
Nymphalidae <i>Vanessa cardui</i>	Painted Ladys Painted lady
Class Arachnida	Spiders, Mites, Ticks And Scorpions
Ctenizidae <i>Bothriocyrtum californicum</i>	Trap Door Spider California trapdoor spider

Table 13. Listed and Special Status Species Potentials for Occurrence

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
PLANTS				
<i>Abronia villosa</i> var. <i>aurita</i> Chaparral sand verbena	Annual herb. Sandy soils in chaparral, coastal scrub, desert dunes at 75-1600m elev. Riverside, San Bernardino, Imperial, San Diego, Orange Cos. (presumed extirpated in Orange Co.), Arizona, Baja.	(Jan)Mar-Sep	Fed: None Calif: S2 CRPR: 1B.1 BLM: S	Habitat present; Low potential (survey results)
<i>Allium marvinii</i> Yucaipa onion	Perennial bulbiferous herb. Clay soils in openings in chaparral at 760-1065m. Riverside, San Bernardino, Orange, San Diego Cos.	Apr-May	Fed: None Calif: S1 CRPR: 1B.2 MSHCP: AC b USFS: S	Habitat present; below of elevational range, Low potential
<i>Allium munzii</i> Munz's onion	Perennial bulbiferous herb. Mesic, clay soils in chaparral, cismontane woodland, coastal scrub, pinyon juniper woodland, valley and foothill grassland at 297-1070m elevation. Western Riverside Co.	Mar-May	Fed: END Calif: THR, S1 CRPR: 1B.1 MSHCP: AC b	Marginal habitat; margin of range, No potential
<i>Ambrosia pumila</i> San Diego ambrosia	Perennial rhizomatous herb. Sandy or clay soils, often in disturbed areas, sometimes alkaline. Chaparral, coastal scrub, valley & foothill grassland, & vernal pools at 20-415m elevation. Riverside, San Diego Co., Baja.	Apr-Oct	Fed: END Calif: S1 CRPR: 1B.1 MSHCP: AC b	Habitat present; Low potential (survey results)
<i>Asplenium vespertinum</i> Western spleenwort	Perennial rhizomatous fern. Rocky soils and moist, shady areas in chaparral, cismontane woodland, coastal scrub at 180-1000m elevation. LA, Orange, Riverside, San Bernardino, San Diego, and Ventura Cos. and Baja. Not tracked in CNDDB.	Feb-Jun	Fed: None Calif: S4 CRPR: 4.2	Habitat present (shaded areas, rocky chap/css); Moderate (potential on steep slopes in understory)
<i>Astragalus brauntonii</i> Braunton's milk vetch	Perennial herb. Scattered in southern California foothills, usually in chaparral, also coastal scrub, valley and foothill grassland, recent burns or disturbed areas; Ventura, LA, Orange Counties; usually on sandstone with carbonate layers. Elevation 4-640m.	Jan-Aug	Fed: END Calif: S2 CRPR: 1B.1	Habitat present; Low potential (survey results)
<i>Atriplex coulteri</i> Coulter's saltbush	Perennial herb. Sometimes on alkaline or clay soils in coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland at 3-460m elevation. San Bernardino, San Diego, LA, Orange, Ventura, San Luis Obispo, Santa Barbara Cos., Baja. Reports from Riverside Co. are likely misidentified.	Mar-Oct	Fed: None Calif: S2 CRPR: 1B.2	Habitat present; Low potential (survey results)
<i>Baccharis malibuensis</i> Malibu baccharis	Perennial deciduous shrub. Chaparral, cismontane woodland, coastal scrub, riparian woodland at 150-305m elevation. LA, Orange, Ventura Cos.	Aug	Fed: None Calif: S1 CRPR: 1B.1	Habitat present; Low potential (margin or outside of range, survey results)

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Bahiopsis (Viguiera) laciniata</i> San Diego County viguiera	Perennial shrub. Chaparral, coastal scrub at 60-750m elevation. Riverside, Orange, San Diego Cos (occurrences outside of San Diego Co are introduced), Baja and Sonora, Mexico. Not tracked in CNDDDB.	Feb-Jun(Aug)	Fed: None Calif: S4 CRPR: 4.3	Habitat present; Low potential (survey results) Moderate potential within restoration areas (sometimes used in reveg. mix)
<i>Brodiaea filifolia</i> Thread-leaved brodiaea	Perennial bulbiferous herb. Often on clay soils in chaparral openings, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools at 25-1120m elevation. LA, Orange, Riverside, San Bernardino, and San Diego Cos.; scattered in Southern CA foothills & valleys.	Mar-Jun	Fed: THR Calif: END, S2 CRPR: 1B.1 MSHCP: AC d	Habitat present (clay grasslands); Low potential (survey results)
<i>Calandrinia breweri</i> Brewer's calandrinia	Annual herb. Burned areas, disturbed areas, sometimes on loamy or sandy soils, chaparral, coastal scrub at 10-1220m elevation. Coastal southern and central CA, Central Valley, Baja; in southern CA – LA, Orange, Riverside, San Diego, Ventura Cos. Not tracked in CNDDDB.	(Jan)Mar-Jun	Fed: None Calif: S4 CRPR: 4.2	Occurs
<i>California macrophylla</i> Round-leaved filaree	Annual or biennial herb. Clay soils in openings in cismontane woodland, valley and foothill grassland, coastal scrub. 15-1200m. Not tracked in CNDDDB.	Mar - Jul	Fed: None Calif: None CRPR: CBR (too common) MSHCP: AC d	Habitat present; Low potential (survey results)
<i>Calochortus catalinae</i> Catalina mariposa-lily	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland at 15-700m elevation. LA, Orange, Riverside, San Bernardino, Santa Barbara, Ventura Co, some Channel Islands. Not tracked in CNDDDB.	(Feb)Mar-Jun	Fed: None Calif: S3S4 CRPR: 4.2	Habitat present; Low potential (survey results)
<i>Calochortus plummerae</i> Plummer's mariposa lily	Perennial bulbiferous herb. Granitic rocky soils in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland at 100-1700m elevation. LA, Orange, Riverside, San Bernardino, San Diego, Ventura Cos.	May-Jul	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Habitat present; Low potential (survey results)
<i>Calochortus weedii</i> var. <i>intermedius</i> Intermediate mariposa lily	Perennial bulbiferous herb. Rocky, calcareous soils in chaparral, coastal scrub, valley and foothill grassland at 105-855m elevation. LA, Orange, San Bernardino, and western Riverside Co.	May-Jul	Fed: None Calif: S3 CRPR: 1B.2 USFS: S MSHCP: AC	Occurs

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Calystegia felix</i> Lucky morning-glory	Annual rhizomatous herb. Wetland, marsh, possibly silty loam and alkaline soils, meadows and seeps (sometimes alkaline), alluvial riparian scrub at 30-215m elevation. LA, Riverside, San Bernardino Cos. All recent occurrences are in irrigated landscapes.	Mar-Sep	Fed: None Calif: S1 CRPR: 1B.1	Potentially suitable habitat (historic habitat, alluvial); Low potential (survey results)
<i>Calystegia sepium</i> ssp. <i>binghamiaea</i> Santa Barbara morning-glory	Perennial rhizomatous herb. Coastal marshes and swamps at 5m elevation. San Bernardino, Santa Barbara Cos., presumed extirpated in Santa Barbara Co., status uncertain.	Aug	Fed: None Calif: SX CRPR: 1A	No habitat; No potential
<i>Camissoniopsis lewisii</i> Lewis' evening-primrose	Annual herb. Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland at 0-300m elevation. LA, Orange, Riverside, San Diego Cos., presumed extirpated in Orange Co. Not tracked in CNDDB.	Mar-May(Jun)	Fed: None Calif: S4 CRPR: 3	Habitat present; out of known elev. and range; Low potential (survey results)
<i>Caulanthus simulans</i> Payson's jewelflower	Annual herb. Chaparral, coastal scrub at 90-2200m elevation. North-facing slopes and ridgelines on sandy-granitic soils, frequently on steep rocky slopes, in burned areas, or disturbed sites such as streambeds. Orange, western Riverside, San Diego Cos.	(Feb)Mar-May(Jun)	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Habitat present; Low (potential on steep slopes in understory)
<i>Centromadia pungens</i> ssp. <i>laevis</i> Smooth tarplant	Annual herb. Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley / foothill grassland at 0-640m elev. Also fallow fields, drainage ditches; mainly in SW Riverside Co., a few sites in interior valleys of LA, San Bernardino, San Diego Cos.	Apr-Sep	Fed: None Calif: S2 CRPR: 1B.1 MSHCP: AC d	No habitat; No potential
<i>Chorizanthe leptotheca</i> Peninsular spineflower	Annual herb. Granitic soils and alluvial fans in chaparral, coastal scrub, lower montane coniferous forest at 300-1900m elevation. Riverside, San Bernardino, LA, San Diego, Kern, San Luis Obispo Cos., Baja. Not tracked in the CNDDB.	May-Aug	Fed: None Calif: S3 CRPR: 4.2 MSHCP: AC	Habitat present (alluvial fan, granitic css); Low potential (survey results)
<i>Chorizanthe parryi</i> var. <i>fernandina</i> San Fernando Valley spineflower	Annual herb. Sandy soils in coastal scrub and valley and foothill grassland at 150-1220m elevation. LA and Ventura Cos. Presumed extirpated in Orange Co.	Apr-Jul	Fed: None Calif: END, S1 CRPR: 1B.1 USFS: S	Habitat present (sandy css); Out of current known range, Low-No potential (survey results)
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	Annual herb. Sandy or rocky soils and openings in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland at 275-1220m elev. LA, Riverside, San Bernardino Cos.	Apr-Jun	Fed: None Calif: S2 CRPR: 1B.1 USFS: S BLM: S MSHCP: AC	Habitat present; Low potential (survey results)

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> Long-spined spineflower	Annual herb. Often on clay soils in chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools at 30-1530m elevation. Orange, Riverside, San Diego Cos., Baja.	Apr-Jul	Fed: None Calif: S3 CRPR: 1B.2 MSHCP: AC BLM: S	Habitat present (chap, css); Low potential (survey results)
<i>Clinopodium chandleri</i> San Miguel savory	Perennial shrub. Rocky, gabbroic, or metavolcanic soils in chaparral, cismontane woodlands, coastal scrub, riparian woodland, valley and foothill grassland at 120-1075m elevation. Orange, Riverside, San Diego Co., Baja.	Mar-Jul	Fed: None Calif: S2 CRPR: 1B.2 MSHCP: AC b BLM: S USFS: S	No habitat; No potential
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> Summer holly	Perennial evergreen shrub. Chaparral, cismontane woodland at 30-790m elevation. Orange, Riverside, Santa Barbara, San Diego Co., Baja.	Apr-Jun	Fed: None Calif: S2 CRPR: 1B.2 BLM: S	Habitat present (dense chap); Low potential (survey results)
<i>Convolvulus simulans</i> Small-flowered morning-glory	Annual herb. Clay soils, serpentinite seeps, chaparral openings, coastal scrub, valley and foothill grassland at 30-740m elevation. LA, Orange, Riverside, San Bernardino, San Diego Cos. and Central CA, Baja. Not tracked in CNDDDB.	Mar-Jul	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Habitat present; Low potential (survey results)
<i>Deinandra (Hemizonia) paniculata</i> Paniculate tarplant	Annual herb. Usually vernal mesic areas, sometimes sandy. Coastal scrub, valley / foothill grassland, vernal pools at 25-940m el. LA, Orange, Riverside, San Bernardino, San Diego, Ventura, Kern, Santa Barbara, San Luis Obispo Cos., Baja. Not tracked in CNDDDB.	(Mar) Apr-Nov	Fed: None Calif: S4 CRPR: 4.2	Occurs
<i>Diplacus clevelandii</i> Cleveland's bush monkeyflower	Disturbed areas, open borders of woodland, and chaparral habitats, with gabbro soils at an elevation between 915–1465 meters	April - July	Fed: None Calif: S4 CRPR: List 4.2 MSHCP: NAC f	Marginal habitat; chap and woodland, but no gabbro soils, Low potential
<i>Dodecahema leptoceras</i> Slender-horned spineflower	Annual herb. Open, sandy alluvial benches in valleys & canyons. Chaparral, coastal scrub (alluvial fans), cismontane woodland at 200-760m elevation. LA, Riverside, San Bernardino Cos.	Apr-Jun	Fed: END Calif: END, S1 CRPR: 1B.1 MSHCP: AC b	Habitat present (alluvial benches in drainages); Low potential (survey results)
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i> Santa Monica Mountains dudleya	Perennial herb. Volcanic or sedimentary, rocky soils in chaparral, coastal scrub at 150-1675m elevation. Los Angeles, Orange Co. Not recorded in Riverside Co.	Mar-Jun	Fed: THR Calif: S1 CRPR: 1B.1	Habitat present; Low potential (survey results)

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Dudleya multicaulis</i> Many-stemmed dudleya	Perennial herb. Often on clay soils in chaparral, coastal scrub, valley and foothill grassland at 15-790m elevation. LA, Orange, Riverside, San Bernardino, San Diego Cos.	Apr-Jul	Fed: None Calif: S2 CRPR: 1B.2 USFS: S MSHCP: AC b	Habitat present; Low potential (survey results)
<i>Dudleya viscida</i> Sticky dudleya	Perennial herb. Rocky soils in chaparral, coastal scrub, valley and foothill grassland at 15-790m elevation. Orange, Riverside, San Diego Co.	May-Jun	Fed: None Calif: S2 CRPR: 1B.2 MSHCP: NAC f BLM: S	Habitat present; Low potential (survey results)
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> Santa Ana River woollystar	Perennial herb. Sandy or gravelly soils in chaparral, coastal scrub (alluvial fans) at 91-610m elevation. Orange, Riverside, San Bernardino Co., endemic to Santa Ana River watershed. Presumed extirpated in Orange Co.	Apr-Sep	Fed: END Calif: END, S1 CRPR: 1B.1 MSHCP: AC	Habitat present (alluvial benches in drainages); Low potential (survey results)
<i>Erythranthe diffusa</i> Palomar monkeyflower	Sandy washes, disturbed areas at an elevation less than 2100 meters	April - June	Fed: None Calif: S3 CRPR: 4.3 MSHCP: AC	Habitat present (sandy washes); Low potential (survey results)
<i>Harpagonella palmeri</i> Palmer's grapplinghook	Annual herb. Clay soils and open grassy areas within shrubland in chaparral, coastal scrub, valley and foothill grassland at 20-955m elevation. LA, Orange, Riverside, San Diego Co., Catalina Island, AZ, Baja and Sonora, Mexico.	Mar-May	Fed: None Calif: S3 CRPR: 4.2 MSHCP: AC	Habitat present; Low potential (survey results)
<i>Hesperocyparis forbesii</i> Tecate cypress	Perennial evergreen tree. Clay, gabbroic, or metavolcanic soils in closed-cone coniferous forest, chaparral at 80-1500m elevation. Orange, Riverside, San Diego Co., Baja.	Not applicable	Fed: None Calif: S2 CRPR: 1B.1 BLM: S	Habitat present; no soils; No potential
<i>Hesperocyparis goveniana</i> Gowen cypress	Perennial evergreen tree. Closed-cone coniferous forest, maritime chaparral at 30-300m elev. Monterey, Orange Cos., known only from occurrences near Monterey, Orange Co. occurrence may be an error.	Not applicable	Fed: THR Calif: S1 CRPR: 1B.2 USFS: S	No habitat; No potential
<i>Hordeum intercedens</i> Vernal barley	Annual grass. Saline flats and depressions in valley and foothill grassland, vernal pools, coastal dunes, coastal scrub at 5-1000m elevation. LA, Orange, Riverside, San Diego Cos., Central CA, Channel Islands. Not tracked in the CNDDDB.	Mar-Jun	Fed: None Calif: S3S4 CRPR: 3.2 MSHCP: AC	No habitat; No potential

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Horkelia cuneata</i> var. <i>puberula</i> Mesa horkelia	Perennial herb. Sandy or gravelly soils in maritime chaparral, cismontane woodland, coastal scrub at 70-810m elevation. LA, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Ventura Cos. Presumed extirpated in Riverside and San Diego Cos.	Feb-Jul(Sep)	Fed: None Calif: S1 CRPR: 1B.1 USFS: S	Habitat present (sandy/gravelly css, chap.); Low potential (survey results)
<i>Juglans californica</i> Southern California black walnut	Perennial deciduous tree. Alluvial soils in chaparral, cismontane woodland, coastal scrub, riparian woodland at 50-900m elevation. LA, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, Ventura Cos., Central and Northern CA. Not tracked in CNDDB.	Mar-Aug	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Habitat present (css, chap in drainages); Low potential (survey results)
<i>Lasthenia glabrata</i> spp. <i>coulteri</i> Coulter's goldfields	Annual herb. Coastal salt marshes and swamps, playas, vernal pools at 1-1220m elevation. Riverside, San Bernardino, LA, Orange, Ventura Cos., Central and Northern CA, Baja. Presumed extirpated in LA, San Bernardino Cos.	Feb-Jun	Fed: None Calif: S2 CRPR: 1B.1 BLM: S MSHCP: AC d	No habitat; No potential
<i>Lepechinia cardiophylla</i> Heart-leaved pitcher sage	Perennial shrub, fire follower. Closed-cone coniferous forest, chaparral, cismontane woodland, oak woodland at 520-1370m elevation. Santa Ana Mts of Orange and Riverside Co., Iron Mt. in San Diego Co., and coastal mts. of Baja. Most (possible all) pops. in CA are in Cleveland National Forest.	Apr-Jul	Fed: None Calif: S2S3 CRPR: 1B.2 MSHCP: AC d	Habitat present; known elev. range above 1700 ft. site reaches 1700 only on sw. edge; Low potential (survey results)
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper-grass	Annual herb. Chaparral, coastal scrub at 1-885m elevation. LA, Orange, Riverside, San Bernardino, San Diego, Ventura, Santa Barbara, Mono Cos., Channel Islands, Baja.	Jan-Jul	Fed: None Calif: S3 CRPR: 4.3	Habitat present; Low potential (survey results)
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i> Ocellated Humboldt lily	Perennial bulbiferous herb. Openings in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland at 30-1800m elev. LA, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, Ventura Co, some Channel Islands. Lower stream benches in riparian corridors in lower montane coniferous forest and coastal chaparral or shaded, dry slopes beneath a dense oak or conifer canopy. Not tracked in CNDDB.	Mar-Jul(Aug)	Fed: None Calif: S4? CRPR: 4.2 MSHCP: NAC f	Habitat present; Low potential (survey results)
<i>Microseris douglasii</i> ssp. <i>platycarpha</i> Small-flowered microseris	Annual herb. Clay soils in cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools at 15-1070m elevation. LA, Orange, Riverside, San Diego Cos., Channel Islands, Baja. Not tracked in CNDDB.	Mar-May	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC e	Marginal habitat (grassland); Low potential (survey results)

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Monardella australis</i> ssp. <i>jokerstii</i> Jokerst's monardella	Perennial rhizomatous herb. Steep scree or talus slopes, alluvial benches in chaparral, lower montane coniferous forest at 1350-1750m elevation. San Bernardino Co, known only from San Gabriel Mts.	Jul-Sep	Fed: None Calif: S1? CRPR: 1B.1 USFS: S	No habitat; No potential
<i>Monardella hypoleuca</i> ssp. <i>intermedia</i> Intermediate monardella	Perennial rhizomatous herb. Chaparral, cismontane woodlands, sometimes lower montane coniferous forest at 400-1250m elevation. Orange, Riverside, San Diego Co.	Apr-Sep	Fed: None Calif: S2? CRPR: 1B.3	Habitat present; Moderate (potential on steep slopes in understory)
<i>Monardella macrantha</i> ssp. <i>hallii</i> Hall's monardella	Perennial rhizomatous herb. Broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland at 730-2195m elevation. LA, Orange, Riverside, San Bernardino, San Diego Co.	Jun-Oct	Fed: None Calif: S3 CRPR: 1B.3 USFS: S MSHCP: AC	Habitat present; Low potential (survey results)
<i>Nama stenocarpa</i> Mud nama	Annual/perennial herb. Found in marshy habitat on lake margins and riverbanks at 5-500m elevation. S CA, San Clemente Island, central CA, AZ, TX, Baja, Sonora.	Mar-Oct	Fed: None Calif: S1S2 CRPR: 2B.2 MSHCP: AC d	No habitat; No potential
<i>Nolina cismontana</i> Chaparral nolina	Perennial evergreen shrub. Sandstone or gabbro soils in chaparral, coastal scrub at 140-1275m elevation. LA, Orange, Riverside, San Diego, Ventura Co.	(Mar)May-Jul	Fed: None Calif: S3 CRPR: 1B.2 USFS: S	Occurs
<i>Penstemon californicus</i> California beardtongue	Perennial herb. Sandy soils in chaparral, lower montane coniferous forest, pinyon and juniper woodland at 1170-2300m. Orange and Riverside Cos., Baja.	May-Jun(Aug)	Fed: None Calif: S2 CRPR: 1B.2 USFS: S	No habitat; No potential
<i>Pentachaeta aurea</i> ssp. <i>allenii</i> Allen's pentachaeta	Annual herb. Coastal scrub (openings), valley and foothill grassland, oak woodland at 75-520m elevation. Fewer than 20 occurrences in Orange Co.	Mar-Jun	Fed: None Calif: S1 CRPR: 1B.1	No habitat; No potential
<i>Phacelia hubbyi</i> Hubby's phacelia	Annual herb. Chaparral, coastal scrub, Valley and foothill grassland in gravelly, rocky, talus soils. 0-1000m elevation. Orange, LA, Ventura and Santa Barbara Co. Not recorded in Riverside Co.	Apr-July	Fed: None Calif: S4 CRPR: 4.2	Habitat present; Low potential (survey results)
<i>Phacelia keckii</i> Santiago Peak phacelia	Annual herb. Closed-cone coniferous forest, chaparral at 545-1600m elevation. Orange, Riverside, San Diego Co.	May-Jun	Fed: None Calif: S1 CRPR: 1B.3	Habitat present; below elevational range; Low potential (survey results)

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Phacelia stellaris</i> Brand's star phacelia	Annual herb. Coastal dunes, coastal scrub at 1-400m elevation. Sandy openings, sandy benches, dunes, sandy washes, or floodplains. LA, Orange, Riverside, San Bernardino, San Diego Cos. Possibly extirpated in LA Co.	Mar-Jun	Fed: None Calif: S1 CRPR: 1B.1 MSHCP: AC b	No habitat; Little to no sands, No potential
<i>Piperia cooperi</i> Chaparral rein orchid	Perennial herb. Chaparral, cismontane woodland, valley and foothill grassland at 15-1585m elevation. Southern CA and Catalina Island. Not tracked in CNDDB.	Mar-Jun	Fed: None Calif: S3S4 CRPR: 4.2	Habitat present; Low potential (survey results)
<i>Piperia leptopetala</i> Narrow-petaled rein orchid	Perennial herb. Cismontane woodland, upper and lower montane coniferous forest at 380-2225m elevation. Not tracked in CNDDB.	May-Jul	Fed: None Calif: S4 CRPR: 4.3	Habitat present; Low potential (survey results)
<i>Pseudognaphalium leucocephalum</i> White rabbit-tobacco	Perennial herb. Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, riparian woodland at 0-2100m elevation. LA, Orange, Riverside, San Bernardino, San Diego, Ventura Cos., AZ, NM, TX, Baja and Sonora Mex.	(Jul)Aug-Nov(Dec)	Fed: None Calif: S2 CRPR: 2B.2	Habitat present; Low potential (survey results)
<i>Quercus engelmannii</i> Engelmann oak	Perennial deciduous tree. Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland at 50-1300m elevation. Mostly in foothills of Orange, west Riverside, San Bernardino, and San Diego Counties, also southeast San Gabriel Mountain foothills (LA County). Not tracked in the CNDDB.	Mar-Jun	Fed: None Calif: S3 CRPR: 4.2	Habitat present; Low potential (survey results)
<i>Rhinotropis (Polygala) cornuta</i> <i>var. fishiae</i> Fish's milkwort	Perennial deciduous shrub. Chaparral, cismontane woodland, riparian woodlands at 100-1000m elevation. LA, Orange, Riverside, Santa Barbara, San Diego, and Ventura Co., Baja. Not tracked in CNDDB.	May-Aug	Fed: None Calif: S4 CRPR: 4.3 MSHCP: AC	Occurs
<i>Romneya coulteri</i> Coulter's matilija poppy	Large perennial rhizomatous herb. Often in burn areas in chaparral, coastal scrub at 20-1200m elevation. LA, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo Cos. Not tracked in CNDDB.	Mar-Jul(Aug)	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Occurs
<i>Senecio aphanactis</i> Chaparral ragwort	Annual herb. Alkaline soils (sometimes) in chaparral, cismontane woodland, coastal scrub at 15-800m elevation; LA, Orange, Riverside, San Bernardino, San Diego, Ventura Cos., Central and Northern CA, Baja.	Jan-Apr(May)	Fed: None Calif: S2 CRPR: 2B.2	Habitat present (dry, open, rocky areas in CSS); Low potential (survey results)
<i>Sidalcea neomexicana</i> Salt spring checkerbloom	Perennial herb. Alkaline, mesic soils in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas at 15-1530m elevation. Kern, LA, Orange, Riverside, San Bernardino, San Diego, Ventura Cos., western US, Sonora Mex. Presumed extirpated in LA Co.	Mar-Jun	Fed: None Calif: S2 CRPR: 2B.2 USFS: S	No habitat; No potential

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Symphotrichum defoliatum</i> San Bernardino aster	Perennial rhizomatous herb. Near ditches, streams, springs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grasslands (vernally mesic) at 2-2040m elevation. LA, Orange, Riverside, San Bernardino, San Diego, Imperial, Kern, Santa Barbara, San Luis Obispo Cos.	Jul-Nov	Fed: None Calif: S2 CRPR: 1B.2 USFS: S	Habitat present; Low potential (survey results)
<i>Tortula californica</i> California screw-moss	Moss. Sandy soil in chenopod scrub, valley and foothill grassland at 10-1460m elevation. LA, Riverside, San Diego, Ventura Cos., Central and Northern CA, Channel Islands.	Not applicable	Fed: None Calif: S2? CRPR: 1B.2 BLM: S	No habitat; No potential
<i>Yucca brevifolia</i> Western Joshua tree	Evergreen, tree-like plant. Desert flats and slopes at 580-2200m (1900-7200ft), Mojave Desert in CA and NV. Not tracked in the CNDDDB or CNPS.	(Nov)Jan-May	Fed: None Calif: CAN CRPR: None	No habitat; No potential
Plant references: CDFW (2024a, 2024c), Baldwin et al. (2012), Munz (1974), Skinner & Pavlik (1994), USFWS (2024b), CNPS (2024), Calflora (2024).				

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
INVERTEBRATES			
<i>Bombus crotchii</i> Crotch bumble bee	Coastal CA E to Sierra-Cascade crest & S into Mexico. Open grassland and scrub habitats. Food plant genera include <i>Antirrhinum</i> , <i>Asclepias</i> , <i>Chaenactis</i> , <i>Lupinus</i> , <i>Medicago</i> , <i>Salvia</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> . Lives in colonies that may be underground in rodent holes or above ground in rock piles, tree cavities, etc.	Fed: None Calif: CanE, S2	Occurs Focused survey results
<i>Bombus pensylvanicus</i> American bumble bee	Coastal prairie, Great Basin grassland, valley & foothill grassland. Long-tongued; forages on a wide variety of flowers including vetches (<i>Vicia</i>), clovers (<i>Trifolium</i>), thistles (<i>Cirsium</i>), sunflowers (<i>Helianthus</i>), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground.	Fed: None Calif: SA, S2	Habitat present nectar habitat in a variety of communities; High potential
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	Vernal pools or similar vernal habitats, requires cool water pools ($\leq 50^{\circ}\text{F}$ to hatch, $\leq 75^{\circ}\text{F}$ to survive); disjunct locations in Riverside Co. and the Coast Ranges thru Central Valley to Tehama Co., southern Oregon, up to elevation of 1159m.	Fed: THR Calif: SA, S3 MSHCP: AC a	Absent Focused survey results
<i>Branchinecta sandiegonensis</i> San Diego fairy shrimp	Vernal pool complexes; endemic to San Diego and Orange County mesas. One occurrence in Murrieta is a transplant to a mitigation pool outside of native range.	Fed: END Calif: SA, S1	Absent Focused survey results
<i>Ceratochrysis longimala</i> Desert cuckoo wasp	Chaparral, scrub habitats, juniper. LA, Riv, Ventura cos. Possibly extirpated.	Fed: None Calif: SA, S1	Habitat present; Low potential
<i>Danaus plexippus</i> pop. 1 Monarch butterfly	California overwintering population. Most overwintering sites are within 1.5 miles of the coast, but small populations have been reported in Inyo and Kern Counties (Xerces 2024).	Fed: CAN State: SA, S2 USFS: S (Los Padres NF)	Nectaring sources present; Low/Absent potential for overwintering
<i>Eugnosta busckana</i> Busck's gallmoth	Beaches, salt marshes, sand dunes, and coastal scrub dunes, presumed extirpated.	Fed: None Calif: SA, S2S3	No habitat; No potential
<i>Euphydryas editha quino</i> Quino checkerspot butterfly	Coastal scrub, open chaparral, juniper woodland, native grassland. Western Riverside Co., southern San Diego Co., Baja. Flight season from mid-Jan to late May. Host plants are dwarf plantain (<i>Plantago erecta</i>), purple owl's clover (<i>Castilleja exserta</i>), white snapdragon (<i>Antirrhinum coulterianum</i>), wooly plantain (<i>Plantago patagonica</i>), thread-leaved bird's beak (<i>Cordylanthus rigidus</i>). USFWS considers species extirpated in San Bernardino Co.	Fed: END Calif: SA, S1S2 MSHCP: AC	Habitat present (open hilltops, host plant present); Margin of range, Moderate potential
<i>Neolarra alba</i> White cuckoo bee	Cleptoparasitic in the nests of perdita bees. Known only from localities in Southern Calif. All occurrences are historical.	Fed: None Calif: SA, SH	Habitat present; Low potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Rhaphiomidas terminatus abdominalis</i> Delhi sands flower-loving fly	Delhi fine sands, often with unconsolidated dunes present. SW San Bernardino Co. & NW Riverside Co.	Fed: END Calif: SA, S1 MSHCP: AC	No habitat; No potential
<i>Streptocephalus woottoni</i> Riverside fairy shrimp	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Coastal scrub, valley & foothill grassland, vernal pool, wetland. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season. Generally restricted to pools greater than 12 inches deep. All known populations lie between 30 and 415 meters elevation.	Fed: END Calif: SA, S2 MSHCP: AC a	Absent Focused survey results
FISH			
<i>Catostomus santaanae</i> Santa Ana sucker	Small to medium permanent streams. LA & San Gabriel drainage, lower Santa Ana River.	Fed: THR Calif: SSC, S1 MSHCP: AC	No habitat; No potential
<i>Gila orcuttii</i> Arroyo chub	Slow-moving or backwater sections of warm/ cool streams with mud or sand substrates. LA, San Gabriel, San Luis Rey, Santa Ana & Santa Margarita Riv & Malibu & San Juan creeks.	Fed: None Calif: SSC, S2 MSHCP: AC USFS: S	No habitat; No potential
<i>Oncorhynchus mykiss irideus</i> pop. 10 Steelhead – southern California DPS	South coast flowing waters. Fed listing refers to pops from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego Co.)	Fed: END Calif: CanE, S1	No habitat; No potential
<i>Rhinichthys osculus</i> subspecies 8 Santa Ana speckled dace	Headwaters of the Santa Ana & San Gabriel Rivers, May be extirpated from the Los Angeles River system. Santa Ana River populations in lower San Bernardino Mtn. foothills & washes. Requires permanent flowing streams with summer water temps of 17-20C. usually inhabits shallow cobble and gravel riffles.	Fed: None Calif: SSC, S1 USFS: S	No habitat; No potential
AMPHIBIANS			
<i>Anaxyrus californicus</i> Arroyo toad	Washes & intermittent streams of semi-arid regions, sandy-banked rivers, riparian woodlands, & loose gravel. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range, below 4600 ft. Southern California to tip of Baja California. Desert pop. along Mojave River.	Fed: END Calif: SSC, S2 MSHCP: AC c	No habitat; Edge of mapped range, No potential
<i>Lithobates pipiens</i> Northern leopard frog (Native populations only)	Grassland, wet meadows, potholes, forests, woodland, brushlands, springs, canals, bogs, marshes, reservoirs.	Fed: None Calif: SSC, S2	No habitat; No potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Rana draytonii</i> California red-legged frog	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Fed: THR Calif: SSC, S2S3 MSHCP: AC c	No habitat; No potential
<i>Spea hammondi</i> Western spadefoot toad	Cismontane woodland, coastal scrub, valley & foothill grassland, vernal pool. Breeds in quiet streams & vernal pools, burrows beneath sand during dry season. W CA, Central Valley to Baja Calif. From near sea level up to 4,500 ft elev.	Fed: Prop THR Calif: SSC, S3S4 BLM: S MSHCP: AC	No temporary breeding pools; No potential
<i>Taricha torosa</i> Coast Range newt	Valley-foothill hardwood and hardwood-conifer, coastal scrub, chaparral, grassland, mixed conifer. Coast Ranges from N San Diego Co. to central Mendocino Co., southern Sierra Nevada foothills S of Kaweah River. Spends most of the year in subterranean refuges, migrates to aquatic breeding areas in the fall and returns in the spring.	Fed: None Calif: SSC, S4 MSHCP: AC	No habitat; No potential
REPTILES			
<i>Actinemys pallida</i> Southwestern pond turtle	Perennial ponds, streams, marshes, irrigation ditches. Coastal S & cent. CA, NW Baja CA, below about 4800 ft. elev. (few higher elev. pops.). Formerly <i>Emys marmorata</i> (western pond turtle) but now split into <i>Actinemys pallida</i> (southwestern pond turtle) and <i>Actinemys marmorata</i> (northwestern pond turtle).	Fed: Prop THR Calif: SSC, SNR BLM: S USFS: S	No habitat; No potential
<i>Anniella stebbinsi</i> (<i>Anniella pulchra pulchra</i>) Southern California legless lizard	Various habitats, mainly shrublands, <6500 ft. elev. Occurs in moist warm sandy or loose loamy soils. Prefers soils with high moisture content. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Coast Ranges from Bay area to N Baja CA, SW Sierra Nevada, parts of the Central Valley, Transverse & Peninsular Ranges.	Fed: None Calif: SSC, S3 USFS: S	Habitat present; Moderate potential
<i>Arizona elegans occidentalis</i> California glossy snake	Arid scrub, rocky washes, grasslands, chaparral, often with loose or sandy soils. Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular Ranges, south to Baja California. Sea level to 7200' elev. Nocturnal.	Fed: None Calif: SSC, S2	Habitat present; Moderate potential
<i>Aspidoscelis hyperythra</i> Orange-throated whiptail	Low-elevation coastal scrub, chaparral, valley-foothill hardwood, sea level to 1040m. Sandy areas, patches of rock. S CA, west of desert to tip of Baja CA.	Fed: None Calif: WL, S2S3 USFS: S MSHCP: AC	Occurs
<i>Aspidoscelis tigris stejnegeri</i> Coastal whiptail	Primarily hot, dry open areas with sparse foliage, chaparral, woodland, riparian; coastal So CA, mostly west of Peninsular Ranges and south of Transverse Ranges, north into Ventura County, below ±7000' elev. and into Baja.	Fed: None Calif: SSC, S3 MSHCP: AC	Occurs

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Coleonyx variegatus abbotti</i> San Diego banded gecko	Rock outcrops in shrublands, to 5000' elevation; southwest Calif. through much of n. Baja Calif.	Fed: None Calif: SSC, S1S2 MSHCP: AC	No habitat; No potential
<i>Crotalus ruber</i> Red-diamond rattlesnake	Desert scrub, thorn scrub, chaparral below 4,000ft. San Bernardino County S through most of Baja California, Mexico.	Fed: None Calif: SSC, S3 USFS: S MSHCP: AC	Occurs
<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	Open relatively rocky areas within valley-foothill locales, mixed chaparral/annual grasslands. Prefers moist habitats. W San Diego & Riv. Cos., SW San Bern., Vent. & LA Cos., NW Baja CA.	Fed: None Calif: SA, S2? USFS: S	Habitat present; Moderate potential
<i>Diadophis punctatus similis</i> San Diego ringneck snake	Open, fairly rocky areas. Use boards, flat rocks, wood, stable talus, rotting logs & small ground holes for cover. Prefers areas with surface litter or herbaceous vegetation. Often in somewhat moist areas near intermittent streams.	Fed: None Calif: SA, S2? USFS: S	Habitat present; outside geographic range, no potential
<i>Lampropeltis zonata</i> California mountain kingsnake	Found most commonly near rocks/boulders by streams or lake shores, may also shelter under rotting logs or dense shrubs. Variety of habitats including hardwood, hardwood conifer, conifer, chaparral, riparian, wet meadows. San Diego, Orange, western Riverside, LA, Ventura Co. in the Laguna, Palomar, Volcan, and Hot Springs Mountains; Santa Ana Mountains; Hollywood Hills, Santa Monica mountains. Unverified reports from Whittier Hills, Palos Verde Hills, and Baldwin Hills	Fed: None Calif: None MSHCP: NAC f USFS: S	Habitat present; Moderate potential
<i>Phrynosoma blainvillii</i> Coast horned lizard	Coastal sage scrub, low elevation chaparral, annual grassland, riparian scrub and woodlands, desert wash, pinyon and juniper woodland, valley and foothill grassland, 0-2438m elevation. SW Calif. to NW Baja California, Mexico.	Fed: None Calif: SSC, S4 BLM: S MSHCP: AC	Habitat present; Moderate potential
<i>Plestiodon skiltonianus interparietalis</i> Coronado skink	Grassland, chaparral, pinon-juniper and juniper sage woodland, pine-oak / pine forests in Coast Ranges of Southern CA. Prefers early successional stages or open areas. Found in rocky areas close to streams and on dry hillsides. Riverside, San Diego Cos., Baja. Diurnal, secretive, inactive in cold weather.	Fed: None Calif: WL, S2S3 BLM: S	Habitat present; Outside current range; Low – No potential
<i>Salvadora hexalepis virgulata</i> Coast patch-nosed snake	Shrublands, washes, sandy flats, rocky areas; Santa Barbara County through southwest Calif., to northwest Baja Calif. Diurnal.	Fed: None Calif: SSC, S3	Habitat present; Moderate potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Thamnophis hammondi</i> Two-striped gartersnake	Usually in or near perennial fresh water & adjacent riparian habitat, pools in streams. SW CA & NW Baja Ca. Usually in or near perennial fresh water & adjacent riparian habitat, pools in streams. SW CA & NW Baja Ca. Primarily aquatic. Diurnal. Also active at night and at dusk during hot weather in some areas. Can be active most of the year depending on weather conditions. Has been found from January to November.	Fed: None Calif: SSC, S3S4 BLM: S USFS: S	Habitat present; No perennial water Low potential
<i>Thamnophis sirtalis</i> ssp. 1 South coast garter snake	In or near perennial fresh water and adjacent riparian habitat, usu. about pools in streams; SW Ca & NW Baja Ca. Sensitive population sea level to about 850m	Fed: None Calif: SSC, S1S2	Habitat present; No perennial water Low potential
BIRDS			
<i>Accipiter cooperii</i> Cooper's hawk	Cismontane woodland, riparian forest, riparian woodland, upper montane coniferous forest. Forages in open areas over scrublands; California, Mexico, Central America. Nests in trees, often in dense woods. Year-round resident in most of southern California range. CNDDDB only tracks nesting.	Fed: None Calif: WL, S4 MSHCP: AC	Occurs
<i>Accipiter striatus</i> Sharp-shinned hawk	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests usually within 275 ft of water. Breeding range in CA poorly known, probably breeds primarily in northern half of state. CNDDDB only tracks nesting.	Fed: None Calif: WL, S4 MSHCP: AC	No habitat; No potential
<i>Agelaius tricolor</i> Tricolored blackbird	Breeds colonially in freshwater marshes, nomadic among marshes and fields in winter; almost completely endemic to Calif. Year-round resident in southern California range. CNDDDB only tracks nesting.	Fed: BCC Calif: THR, SSC, S2 BLM: S MSHCP: AC	No habitat; No potential
<i>Aimophila ruficeps canescens</i> Southern California rufous-crowned sparrow	Sparse, mixed chaparral, scrub, rocky, brushy slopes. Central California to Baja California. Year-round resident in southern California range.	Fed: None Calif: WL, S4 MSHCP: AC	Occurs
<i>Ammodramus savannarum</i> Grasshopper sparrow	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting. Year-round resident in southern California range. CNDDDB only tracks nesting.	Fed: None Calif: SSC, S3 MSHCP: NAC e	No habitat; No potential
<i>Antigone canadensis canadensis</i> Lesser sandhill crane	Open wetland habitats surrounded by shrubs or trees. They nest in marshes, bogs, wet meadows, prairies, burned-over aspen stands, and other moist habitats, preferring those with standing water	Fed: None Calif: SSC, S4	No habitat; No potential
<i>Aquila chrysaetos</i> Golden eagle	Found in a variety of habitats from sea level to 11,500 feet, rugged open habitats preferred. Large platform nests constructed on secluded cliffs, large trees, and occasionally structures (i.e., electrical transmission towers). CNDDDB tracks nesting and wintering.	Fed: BGEPA Calif: FP, WL, S3 BLM: S MSHCP: AC	Habitat present; Moderate potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Artemisospiza belli belli</i> Bell's sage sparrow	Sage scrub and chaparral communities. Nests are mainly in shrubs, also in grass, and occasionally on ground under shrub. Found in coastal sage scrub in south of range. Central Washington southward to Baja California, Mexico. Year-round resident in southern CA.	Fed: None Calif: WL, S3 MSHCP: AC	Habitat present; Moderate potential
<i>Ardea alba</i> Great egret	Brackish and freshwater marshes, estuary, riparian forest, wetland. Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes. CNDDDB only tracks nesting colonies.	Fed: None Calif: SA, S4	No habitat; No potential
<i>Ardea herodias</i> Great blue heron	Brackish and freshwater marshes, estuary, riparian forest, wetland. Colonial nester in tall trees, cliffsides, & sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows. CNDDDB only tracks nesting colonies.	Fed: None Calif: SA, S4 MSHCP: AC	No habitat; No potential
<i>Asio otus</i> Long-eared owl	Conifer, oak, riparian, pinyon-juniper, and desert woodlands that are open or adjacent to grasslands, meadows, or shrublands. Most of CA <i>except</i> Central Valley, coastal LA and Orange Co., western Imperial Co., and central Riverside Co. Very limited breeding range in southern CA. CNDDDB only tracks nesting.	Fed: BCC Calif: SSC, S3?	No habitat; No potential
<i>Athene cucularia</i> Burrowing owl	Nests in rodent burrows, usually in grasslands. Forages in open habitat; increasingly uncomm. in S CA. Occurs through W US/Mex. Sparse in desert scrub but common around irrigated lands. CNDDDB tracks burrow sites and some wintering sites.	Fed: BCC Calif: SSC, S2 BLM: S MSHCP: AC c	Habitat present; Low potential (Survey Results)
<i>Baeolophus inornatus</i> Oak titmouse	Open pine or mixed oak-pine forest, juniper woodland, pinyon or juniper mixed with Joshua trees. Not migratory. Not tracked in CNDDDB.	Fed: BCC Calif: None	Habitat present (oak woodland); High potential
<i>Botaurus lentiginosus</i> American bittern	Wetlands of many sizes and types. In winter they move to areas where water bodies don't freeze, esp. near the coast, where they may occasionally use brackish marshes	Fed: None Calif: S3S4 MSHCP: AC	No habitat; No potential
<i>Buteo regalis</i> Ferruginous hawk	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Great Basin grassland and scrub, pinyon and juniper woodlands, valley and foothill grassland. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles. Does not breed in southern CA.	Fed: None Calif: WL, S3S4 MSHCP: AC	No habitat; No potential
<i>Buteo swainsoni</i> Swainson's hawk	Grassland/agricultural, large trees for nesting, desert scrub with Joshua tree & Fremont cottonwood overstory, near streams & open fields. Breeds overwhelmingly in Great Basin & Central Valley of California. Seen in migration in southern California. CNDDDB only tracks nesting.	Fed: None Calif: THR, S4 BLM: S MSHCP: AC	No habitat; No potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Campylorhynchus brunneicapillus sandiegensis</i> Coastal cactus wren	Desert scrub and coastal sage scrub with cactus patches; Southern CA and northwestern Baja. Non-migratory. Pairs defend territories throughout the year. Limited to San Diego and Orange Cos.	Fed: None Calif: SSC, S2 USFS: S MSHCP: AC	Habitat present; Low potential
<i>Chaetura vauxi</i> Vaux's swift	Nests in coniferous or mixed forest. Forages in forest openings, above streams	Fed: BCC Calif: SSC, S3	Occurs
<i>Charadrius nivosus nivosus</i> Western snowy plover	Coastal beaches, sand spits, salt pans, river bars. Coastal areas from Washington State south to Baja. Federal listing applies only to the Pacific coastal population. CNDDDB only tracks nesting. Year-round resident in southern CA range except for eastern deserts where it is seen in migration.	Fed: THR, BCC Calif: SSC, S3	No habitat; No potential
<i>Charadrius montanus</i> Mountain plover	Chenopod scrub, valley and foothill grasslands. Short grasslands, freshly plowed fields, newly sprouting grain fields, & sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents. Does not breed in southern CA.	Fed: BCC Calif: SSC, S2 MSHCP: AC BLM: S	No habitat; No potential
<i>Circus hudsonius (C. cyaneus)</i> Northern harrier	Open habitats with hunting perches, marshes, meadows, grasslands, pastures, croplands, lake and river edges. Nests on the ground. Breeds widely but locally in North America, various portions of CA including Central Valley, central and northern coast, northeastern CA, and southern coastal CA. Does not breed in most of southern CA range. CNDDDB only tracks nesting.	Fed: BCC Calif: SSC, S3 MSHCP: AC	No habitat; No potential
<i>Cistothorus palustris clarkae</i> Clark's marsh wren	Marshes, especially with dense reeds.	Fed: None Calif: SSC, S2	No habitat; No potential
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	Valley foothill & desert riparian. Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage along slow-moving watercourses, backwaters, or seeps. Willow almost always a dominant component of the vegetation. Most of the US (excluding the NW states) & into Baja California & northern Mexico. CNDDDB only tracks nesting.	Fed: THR Calif: END, S1 BLM: S USFS: S MSHCP: AC a	No habitat; No potential
<i>Coturnicops noveboracensis</i> Yellow rail	Summer resident in eastern Sierra Nevada. Freshwater marshlands. Occurs year round in California, very local breeder in NE interior and winter visitor on the coast and Suisun Marsh region, central and southern coastal US, parts of Canada, south central Oregon.	Fed: BCC Calif: SSC, S2 USFS: S (Lassen & Shasta-Trinity NF)	No habitat; No potential
<i>Egretta thula</i> Snowy egret	Widespread in CA. coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches and wet fields. In So. CA, common yearlong in the Imperial Valley and along the Colorado River. Desert regions, uncommon in spring migration and rare through summer.	Fed: None Calif: SA, S4	No habitat; No potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Elanus leucurus</i> White-tailed kite	Breeds in woodlands and riparian forests, forages over open terrain; Pacific Coast (Calif, northern Baja, Oregon), other scattered localities. Year-round resident in southern CA range. CNDDDB only tracks nesting.	Fed: None Calif: FP, S3S4 BLM: S MSHCP: AC	No habitat; No potential
<i>Empidonax traillii brewsteri</i> Little willow flycatcher	Wet mountain meadow systems with standing water for at least part of the breeding season (May to July) and with ample numbers of willow and other associated trees and shrubs	Fed: None Calif: END, S3	No habitat; No potential
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	Dense riparian forests, wet mountain meadow systems with standing water for at least part of the breeding season (May to July) & with ample numbers of willow & other associated trees & shrubs. Rare & local in S CA. SW US & N Baja California. CNDDDB only tracks nesting.	Fed: END Calif: END, S3 MSHCP: AC a	No habitat; No potential
<i>Eremophila alpestris actia</i> California horned lark	Variety of open habitats with low growing vegetation or bare ground, grasslands, rangelands, "bald" hills, mtn. meadows, open coastal plains, fallow fields, alkali flats. Coastal Sonoma Co. to San Diego Co., San Joaquin Valley & E to foothills.	Fed: None Calif: WL, S4 MSHCP: AC	Occurs
<i>Falco columbarius</i> Merlin	Woodlands, grasslands, agricultural fields, and areas around livestock feed lots. Dense tree stands close to bodies of water are needed for cover. Uses a wide variety of habitats. Winter migratory bird to southern California.	Fed: None Calif: WL, S3S4 MSHCP: AC	No habitat; No potential
<i>Falco mexicanus</i> Prairie falcon	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs, also transmission towers, tall buildings, large trees. Forages far afield, even to marshlands and ocean shores. Desert scrub, valley and foothill grassland. CNDDDB only tracks nesting.	Fed: None Calif: WL, S4 MSHCP: AC	No habitat; No potential
<i>Falco peregrinus anatum</i> American peregrine falcon	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site. CNDDDB only tracks nesting.	Fed: Delisted Calif: Delisted, S3S4 MSHCP: AC	Habitat present-forage only; Low potential
<i>Haliaeetus leucocephalus</i> Bald eagle	Breed in large trees, usually near major rivers or lakes. Winters more widely. Wide but scattered distribution in N America, esp. coastal regions. CNDDDB tracks nesting and wintering.	Fed: Delisted, BGEPA Calif: END, FP, S3 MSHCP: AC BLM: S USFS: S	No habitat; No potential
<i>Hydroprogne caspia</i> Caspian tern	Salt marshes, barrier islands, dredge spoil islands, freshwater lake islands, and river islands	Fed: None Calif: SA, S4	No habitat; No potential
<i>Icteria virens</i> Yellow-breasted chat	Summer resident, inhabits riparian thickets of willow near watercourses, low dense riparian willow. Migrant and summer resident in CA, northern CA, central coast, eastern Central Valley, coastal southern CA, Colorado River, western US, Canada, Mexico, Central America. CNDDDB only tracks nesting.	Fed: None Calif: SSC, S4 MSHCP: AC	No habitat; No potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Lanius ludovicianus</i> Loggerhead shrike	Open areas where small trees, shrubs, and fences can provide suitable perches. Nests in small trees and large shrubs. Throughout much of North America. CNDDDB only tracks nesting.	Fed: None Calif: SSC, S4 MSHCP: AC	No habitat; No potential
<i>Laterallus jamaicensis coturniculus</i> California black rail	Saline, brackish, and freshwater emergent wetlands. San Francisco Bay area, Sacramento-San Joaquin Delta, scattered locations on coastal southern CA, Salton Sea, lower Colorado River, scattered locations in US, Mex, Central America.	Fed: None Calif: THR, FP, S2 BLM: S	No habitat; No potential
<i>Nannopterum auritum</i> (<i>Phalacrocorax auritus</i>) Double-crested cormorant	Riparian scrub, forest, woodland. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins. Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Feeds on fish and other aquatic animals, generally in shallow, open water close to shore. CNDDDB only tracks nesting colonies.	Fed: None Calif: WL, S4 MSHCP: AC	No habitat; No potential
<i>Nycticorax nycticorax</i> Black-crowned night heron	Riparian forest and woodland, marsh, wetland. Colonial nester, usually in trees, occas in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots. CNDDDB tracks nesting colonies.	Fed: None Calif: SA, S4 MSHCP: AC	No habitat; No potential
<i>Pandion haliaetus</i> Osprey	Nests on snags, treetops or between large branches, cliffs, or human built platforms with open surroundings. Needs open water & shallow fishing grounds. Throughout the US, with most nesting in the northwestern states and east coast, and Canada. Rare but possible in Southern CA. CNDDDB only tracks nesting.	Fed: None Calif: WL, S4 MSHCP: AC	Suitable trees for nesting, no suitable open surroundings or water for foraging; No potential
<i>Passerculus sandwichensis beldingi</i> Belding's savannah sparrow	Inhabits coastal salt marshes from Santa Barbara south through San Diego County. Nests in <i>Salicornia</i> on and about margins of tidal flats.	Fed: BCC Calif: END, S3	No habitat; No potential
<i>Plegadis chihi</i> White-faced ibis	Freshwater wetlands, shallow lakes, wet meadows, flooded pastures and croplands. Nests in dense, fresh emergent wetland. Salton Sea, local winter visitor along coast, uncommon elsewhere in southern CA and Central Valley. CNDDDB only tracks nesting colonies.	Fed: None Calif: WL, S3S4 MSHCP: AC	No habitat; No potential
<i>Polioptila californica californica</i> Coastal California gnatcatcher	Sage scrub, also chaparral, grasslands, riparian adjacent to or mixed with sage scrub below 2,500 ft elevation. S Ventura Co. to LA, Orange, Riv., San Bern., San D. Cos into Baja CA, Mexico.	Fed: THR Calif: SSC, S2 MSHCP: AC	Habitat present; Moderate potential (survey results negative)
<i>Poocetes gramineus affinis</i> Oregon vesper sparrow	Open habitats with grass, including prairie, sagebrush steppe, meadows, pastures, and roadsides	Fed: BCC Calif: SSC, S2	No habitat; No potential
<i>Setophaga petechia</i> Yellow warbler	Riparian thickets, including willow, cottonwood, sycamore Alders and aspen for nesting and foraging, also conifer forest.	Fed: None Calif: SSC, S3 MSHCP: AC	Marginal habitat; Low potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Spinus lawrencei</i> Lawrence's goldfinch	Summer breeder, may overwinter. Coastal side of southern and central CA, western edge of southern deserts, east side of Central Valley into northern CA, Colorado River, SW US and northern Mex. Valley foothill hardwood and hardwood-conifer, desert riparian, pinyon juniper, palm oasis, lower montane. Nests in oaks, conifers. CNDDDB only tracks nesting.	Fed: BCC Calif: SA, S4	Occurs
<i>Spizella atrogularis</i> Black-chinned sparrow	Chaparral, sagebrush, arid scrublands, and brushy hillsides. Present during breeding season only in California. Not tracked in the CNDDDB.	Fed: BCC Calif: None	Occurs
<i>Strix occidentalis occidentalis</i> California spotted owl	Hardwood and mixed conifer/hardwood forests at mid to high elevations, oak and riparian woodlands at lower elevations with large old trees and snags, dense canopies, multiple canopy layers, and downed woody debris. Nests in tree cavities. Foraging habitat also includes more open stands.	Fed: BCC Calif: SSC, S2 MSHCP: NAC f USFS: S BLM: S	No habitat (woodlands over all not large enough); out of mapped range, No potential
<i>Vireo bellii pusillus</i> Least Bell's vireo	Riparian woodlands, bottomlands. Northern Mex. & Baja CA into Southern CA & the Southern mid-western US. CNDDDB only tracks nesting.	Fed: END Calif: END, S3 MSHCP: AC a	No habitat; Low potential
<i>Xanthocephalus xanthocephalus</i> Yellow-headed blackbird	Marsh, swamp, wetland. Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds. Nests only where large insects are abundant. CNDDDB only tracks nesting.	Fed: None Calif: SSC, S3	No habitat; No potential
MAMMALS			
<i>Antrozous pallidus</i> Pallid bat	Rock outcrops of shrublands, ≤ 6000' elevation; southwest North America to interior Oregon and WA; hibernates in winter. Locally common at low elevations in grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Forages over open ground. Roosts in caves, crevices, mines, hollow trees, buildings. Very sensitive to disturbance of roosting sites.	Fed: None Calif: SSC, S3 BLM: S USFS: S	Habitat present; High potential
<i>Chaetodipus californicus femoralis</i> Dulzura pocket mouse	Variety of habitats including coastal scrub, chaparral & grassland. Attracted to grass-chaparral edges. Chaparral, coastal scrub, valley and foothill grassland.	Fed: None Calif: SSC, S3	Habitat present; High potential
<i>Chaetodipus (Perognathus) fallax fallax</i> Northwestern San Diego pocket mouse	Sandy herbaceous areas, usually in association with rocks or coarse gravel, chaparral, coastal scrub, grasslands. SW CA & NW Baja California (inland to San Bernardino Valley).	Fed: None Calif: SA, S3S4 MSHCP: AC	No habitat; No potential
<i>Dipodomys merriami parvus</i> San Bernardino kangaroo rat	Alluvial floodplains and adjacent upland habitats within the San Bernardino, Menifee, and San Jacinto valleys, Riversidean alluvial fan sage scrub (scale broom scrub).	Fed: END Calif: END, SSC, S1 MSHCP: AC c	No habitat; No potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	Sparse, gently sloping grassland, sometimes at margins of cultivated or disturbed lands; prefers grassland dominated by forbs rather than annual grasses, prefers sparse perennial vegetation; firm soil for burrowing (not too hard or too sandy); may use abandoned gopher burrows; W Riverside Co. and adjacent San Diego Co. San Bernardino County occurrences extirpated. No critical habitat has been designated.	Fed: THR Calif: THR, S3 MSHCP: AC	Habitat present; Outside geographic range (USFWS) Low potential
<i>Eumops perotis californicus</i> Western mastiff bat	Lowlands (with rare exceptions), many open, semi-arid to arid habitats, conifer and deciduous woodlands, coastal scrub, grasslands, chaparral. Central & S CA, S AZ, NM, SW TX. Roosts in deep rock crevices, high buildings, trees, and tunnels; forages over wide area.	Fed: None Calif: SSC, S3S4 BLM: S	Habitat present; Low potential
<i>Lasiurus cinereus</i> Hoary bat	Broadleaved upland forest, cismontane woodland, lower montane coniferous forest, north coast coniferous forest. 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.	Fed: None Calif: SA, S4	Habitat present; High potential
<i>Lasiurus frantzii</i> (<i>L. blossevillii</i>) Western red bat	Cismontane woodland, lower montane coniferous forest, riparian forest/woodland. Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Fed: None Calif: SSC, S3	No habitat; No potential
<i>Lasiurus xanthinus</i> Western yellow bat	Valley foothill riparian, desert riparian, desert wash, palm oasis. Roosts in trees, particularly palms. Forages over water and among trees. Desert regions of the SW US. Distributed in S CA, AZ, NM, & TX, into Mexico.	Fed: None Calif: SSC, S3	Habitat present; Low potential
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	Chaparral, coastal, or Riversidean sage scrub with adjacent open grassland. Los Angeles Co. S to San Quintin, Baja California, Mexico.	Fed: None Calif: SA, S3S4 MSHCP: AC	Occurs (Observed in previous surveys)
<i>Myotis ciliolabrum</i> Western small-footed myotis	Wide range of habitats mostly arid wooded & brushy uplands near water. Seeks cover in caves, buildings, mines, and crevices. Prefers open stands in forests / woodlands. Requires drinking water. Feeds on a variety of small flying insects.	Fed: None Calif: SA, S3 BLM: S	No habitat; No potential
<i>Myotis yumanensis</i> Yuma myotis	Variety of habitats, optimal habitat is open forest with water sources over which to feed. Widespread in CA except for deserts. Elev. 0-11,000 ft but rare over 8,000 ft. Feeds over ponds and streams. Roosts in buildings, mines, caves, or crevices, under bridges. Hibernates in winter.	Fed: None Calif: SA, S4 BLM: S	No habitat; Low potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	Arid shrublands, rocky outcrops, & crevices. Cismontane CA., San Luis Obispo to San Diego Co. & NW Baja California. 0-7000 ft. elev. Variety of shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth. Constructs elaborate middens of sticks and other materials.	Fed: None Calif: SSC, S3S4 MSHCP: AC	Habitat present; High potential
<i>Nyctinomops femorosaccus</i> Pocketed free-tailed bat	Deserts & arid lowlands, pinyon juniper woodlands, desert scrub, riparian scrub, Joshua tree woodland, rocky areas with high cliffs. E Riverside & San Diego Cos. and Imperial Co., through SW US, Baja California, mainland Mexico. Roost mainly in crevices of high cliffs. Few records in So CA. Prefers rocky desert areas with high cliffs or rock outcrops. Feeds over ponds, streams, and arid desert.	Fed: None Calif: SSC, S3	No habitat; No potential
<i>Onychomys torridus ramona</i> Southern grasshopper mouse	Nocturnal, active year-round. Desert scrub, coastal scrub, mixed chaparral, sagebrush, especially scrub habitats with friable soil, prefers low to moderate shrub cover. LA through San Diego counties and northwest Baja.	Fed: None Calif: SSC, S3	Habitat present, prefers low to moderate shrub cover; Low potential
Wildlife references: CDFW (1998, 1999, 2014, 2016, 2024b, 2024c), USFWS (1993, 1996, 2024b)			

Table 14. U.S. Forest Service Sensitive Species Potentials for Occurrence

Species	Growth Form, Habitat and Distribution	Flowering season	Conservation Status	Potential for Occurrence
PLANTS				
<i>Abronia villosa</i> var. <i>aurita</i> Chaparral sand verbena	Annual herb. Sandy soils in chaparral, coastal scrub, desert dunes at 75-1600m elev. Riverside, San Bernardino, Imperial, San Diego, Orange Cos. (presumed extirpated in Orange Co.), Arizona, Baja.	(Jan)Mar-Sep	Fed: None Calif: S2 CRPR: 1B.1 BLM: S	Habitat present; Low potential
<i>Brodiaea orcuttii</i> Orcutt's brodiaea	Perennial bulbiferous herb. Mesic, clay soils in closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools at 30-1692m elevation. Riverside and San Diego Cos.	May-Jul	Fed: None Calif: S2 CRPR: 1B.1 USFS: S BLM: S	No habitat; No potential
<i>Calochortus weedii</i> var. <i>intermedius</i> Intermediate mariposa lily	Perennial bulbiferous herb. Rocky, calcareous soils in chaparral, coastal scrub, valley and foothill grassland at 105-855m elevation. LA, Orange, San Bernardino, and western Riverside Co.	May-Jul	Fed: None Calif: S3 CRPR: 1B.2 USFS: S MSHCP: AC	Occurs
<i>Caulanthus simulans</i> Payson's jewelflower	Annual herb. Chaparral, coastal scrub at 90-2200m elevation. North-facing slopes and ridgelines on sandy-granitic soils, frequently on steep rocky slopes, in burned areas, or disturbed sites such as streambeds. Orange, western Riverside, San Diego Cos.	(Feb)Mar-May(Jun)	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Habitat present; Low (potential on steep slopes in understory)
<i>Chorizanthe parryi</i> var. <i>fernandina</i> San Fernando Valley spineflower	Annual herb. Sandy soils in coastal scrub and valley and foothill grassland at 150-1220m elevation. LA and Ventura Cos. Presumed extirpated in Orange Co.	Apr-Jul	Fed: None Calif: END, S1 CRPR: 1B.1 USFS: S	Habitat present (sandy css); Out of current known range, Low-No potential (survey results)
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	Annual herb. Sandy or rocky soils and openings in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland at 275-1220m elev. LA, Riverside, San Bernardino Cos.	Apr-Jun	Fed: None Calif: S2 CRPR: 1B.1 USFS: S BLM: S MSHCP: AC	Habitat present; Low potential
<i>Clinopodium chandleri</i> San Miguel savory	Perennial shrub. Rocky, gabbroic, or metavolcanic soils in chaparral, cismontane woodlands, coastal scrub, riparian woodland, valley and foothill grassland at 120-1075m elevation. Orange, Riverside, San Diego Co., Baja.	Mar-Jul	Fed: None Calif: S2 CRPR: 1B.2 MSHCP: AC b BLM: S USFS: S	No habitat. No potential

Species	Growth Form, Habitat and Distribution	Flowering season	Conservation Status	Potential for Occurrence
<i>Dudleya multicaulis</i> Many-stemmed dudleya	Perennial herb. Often on clay soils in chaparral, coastal scrub, valley and foothill grassland at 15-790m elevation. LA, Orange, Riverside, San Bernardino, San Diego Cos.	Apr-Jul	Fed: None Calif: S2 CRPR: 1B.2 USFS: S MSHCP: AC b	Habitat present; Low potential
<i>Hesperocyparis forbesii</i> Tecate cypress	Perennial evergreen tree. Clay, gabbroic, or metavolcanic soils in closed-cone coniferous forest, chaparral at 80-1500m elevation. Orange, Riverside, San Diego Co., Baja.	Not applicable	Fed: None Calif: S2 CRPR: 1B.1 BLM: S	Habitat present; no soils; No potential
<i>Horkelia cuneata</i> var. <i>puberula</i> Mesa horkelia	Perennial herb. Sandy /gravelly soils in maritime chaparral, cismontane woodland, coastal scrub at 70-810m elevation. LA, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Ventura Cos. Presumed extirpated in Riverside and San Diego Cos.	Feb-Jul(Sep)	Fed: None Calif: S1 CRPR: 1B.1 USFS: S	Habitat present (sandy/gravelly css, chap.); Low potential (survey results)
<i>Lepechinia cardiophylla</i> Heart-leaved pitcher sage	Perennial shrub, fire follower. Closed-cone coniferous forest, chaparral, cismontane woodland, oak woodland at 520-1370m elev. Santa Ana Mts of Orange and Riverside Co., Iron Mt. in San Diego Co., and coastal mts. of Baja. Most (possible all) pops. in CA are in Cleveland National Forest.	Apr-Jul	Fed: None Calif: S2S3 CRPR: 1B.2 MSHCP: AC d	Habitat present; known elev. Range above 1700 ft. site reaches 1700 only on sw. edge; Low potential (survey results)
<i>Linanthus orcuttii</i> Orcutt's linanthus	Annual herb. Openings in chaparral, lower montane coniferous forest, pinyon and juniper woodland at 915-2145m elevation. LA, Riverside, San Bernardino, and San Diego Counties, Baja California. Presumed extirpated in LA County.	May-Jun	Fed: None Calif: S2 CRPR: 1B.3 USFS: S	Suitable habitat: known elev. range exceeds site; Low potential (elevation, survey results)
<i>Monardella australis</i> ssp. <i>jokerstii</i> Jokerst's monardella	Perennial rhizomatous herb. Steep scree or talus slopes, alluvial benches in chaparral, lower montane coniferous forest at 1350-1750m elevation. San Bernardino Co, known only from San Gabriel Mts.	Jul-Sep	Fed: None Calif: S1? CRPR: 1B.1 USFS: S	No habitat; No potential
<i>Monardella hypoleuca</i> ssp. <i>lanata</i> Felt-leaved monardella	Perennial rhizomatous herb. Chaparral, cismontane woodland at 300-1575m elevation. Orange, San Diego Co., Baja.	Jun-Aug	Fed: None Calif: S3 CRPR: 1B.2	Suitable habitat; Low potential
<i>Monardella macrantha</i> ssp. <i>hallii</i> Hall's monardella	Perennial rhizomatous herb. Broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland at 730-2195m elev. LA, Orange, Riverside, San Bernardino, San Diego Co.	Jun-Oct	Fed: None Calif: S3 CRPR: 1B.3 USFS: S MSHCP: AC	Habitat present; Low potential
<i>Nolina cismontana</i> Chaparral nolina	Perennial evergreen shrub. Sandstone or gabbro soils in chaparral, coastal scrub at 140-1275m elevation. LA, Orange, Riverside, San Diego, Ventura Co.	(Mar)May-Jul	Fed: None Calif: S3 CRPR: 1B.2	Occurs

Species	Growth Form, Habitat and Distribution	Flowering season	Conservation Status	Potential for Occurrence
<i>Penstemon californicus</i> California beardtongue	Perennial herb. Sandy soils in chaparral, lower montane coniferous forest, pinyon and juniper woodland at 1170-2300m. Orange and Riverside Cos., Baja.	May-Jun(Aug)	Fed: None Calif: S2 CRPR: 1B.2 USFS: S	No habitat; No potential
<i>Phacelia keckii</i> Santiago Peak phacelia	Annual herb. Closed-cone coniferous forest, chaparral at 545-1600m elevation. Orange, Riverside, San Diego Co.	May-Jun	Fed: None Calif: S1 CRPR: 1B.3	Habitat present; known elev. range exceeds site; Low potential
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i> Southern mountains skullcap	Perennial rhizomatous herb. Mesic areas in chaparral, cismontane woodland, lower montane coniferous forest. 425-2000m el. Often in meadows and along streams. LA, Riverside, San Bernardino, San Diego Cos. Presumed extirpated in LA and San Bernardino Cos.	Jun-Aug	Fed: None Calif: S3 CRPR: 1B.2 USFS: S	Suitable habitat: known elev. range exceeds site; Low potential
<i>Sibaropsis hammittii</i> Hammit's clay-cress	Annual herb. Clay soils in chaparral openings, valley and foothill grassland at 720-1065m elev. Known only from Elsinore Peak area of Santa Ana Mts. in Riverside Co. and Vulcan Mt. in San Diego Co.	Mar-Apr	Fed: None Calif: S2 CRPR: 1B.2 USFS: S MSHCP: AC b	Suitable habitat: known elev. range exceeds site; Low potential
<i>Sidalcea neomexicana</i> Salt spring checkerbloom	Perennial herb. Alkaline, mesic soils in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas at 15-1530m elevation. Kern, LA, Orange, Riverside, San Bernardino, San Diego, Ventura Cos., western US, Sonora Mex. Presumed extirpated in LA Co.	Mar-Jun	Fed: None Calif: S2 CRPR: 2B.2 USFS: S	No habitat; No potential
<i>Streptanthus campestris</i> Southern jewelflower	Perennial herb. Rocky soils in chaparral, lower montane coniferous forest, pinyon juniper woodland at 900-2300m elev. Imperial, Santa Barbara, Ventura, San Bernardino, Riverside, San Diego Co, Baja.	(Apr)May-Jul	Fed: None Calif: S3 CRPR: 1B.3	Suitable habitat: known elev. range exceeds site; Low potential
<i>Symphotrichum defoliatum</i> San Bernardino aster	Perennial rhizomatous herb. Near ditches, streams, springs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows, seeps, marshes, swamps, valley /foothill grasslands (vernal mesic) at 2-2040m elev. LA, Orange, Riverside, San Bernardino, San Diego, Imperial, Kern, Santa Barbara, San Luis Obispo Cos.	Jul-Nov	Fed: None Calif: S2 CRPR: 1B.2 USFS: S	Habitat present; Low potential (survey results)
<i>Tetracoccus dioicus</i> Parry's tetracoccus	Perennial deciduous shrub. Chaparral, coastal scrub at 165-1000m. Orange, Riverside, San Diego Cos., Baja.	Apr-May	Fed: None Calif: S2 CRPR: 1B.2 USFS: S BLM: S	Suitable habitat; Low potential
Plant references: CDFW (1998, 1999, 2014, 2016, 2024a, 2024c), Hickman (1993) Munz (1974), Skinner & Pavlik (1994), USFWS (1993, 1996, 2024b), CNPS (2014, 2016, 2024), Calflora (2014, 2016, 2024).				

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
INVERTEBRATES			
<i>Danaus plexippus</i> pop. 1 Monarch butterfly	California overwintering population.	Fed: CAN State: SA, S2 USFS: S (Los Padres NF)	Low/Absent; individual monarchs may be present but site is too far inland to support overwintering population.
FISH			
<i>Gila orcuttii</i> Arroyo chub	Slow-moving or backwater sections of warm/ cool streams with mud or sand substrates. LA, San Gabriel, San Luis Rey, Santa Ana & Santa Margarita Riv & Malibu & San Juan creeks.	Fed: None Calif: SSC, S2 MSHCP: AC USFS: S	No habitat; No potential
<i>Rhinichthys osculus</i> subspecies 8 Santa Ana speckled dace	Headwaters of the Santa Ana & San Gabriel Rivers, May be extirpated from the LA River system. Santa Ana River pops in lower San Bernardino Mtn. foothills & washes. Requires permanent flowing streams with summer water temps of 17-20C. usually inhabits shallow cobble and gravel riffles.	Fed: None Calif: SSC, S1 USFS: S	No habitat; No potential
REPTILES			
<i>Anniella stebbinsi</i> (<i>Anniella pulchra pulchra</i>) Southern California legless lizard	Various habitats, mainly shrublands, <6500 ft. elev. Occurs in moist warm sandy or loose loamy soils under sparse vegetation. Prefers soils with high moisture content. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, stream terraces with sycamores, cottonwoods, or oaks. Coast Ranges from Bay area to N Baja CA, SW Sierra Nevada, parts of the Central Valley, Transverse & Peninsular Range	Fed: None Calif: SSC, S3 USFS: S	Habitat present; Moderate potential
<i>Aspidoscelis hyperythra</i> Orange-throated whiptail	Low-elevation coastal scrub, chaparral, valley-foothill hardwood, sea level to 1040m. Sandy areas, patches of rock. S CA, west of desert to tip of Baja CA.	Fed: None Calif: WL, S2S3 USFS: S MSHCP: AC	Occurs
<i>Crotalus ruber</i> Red-diamond rattlesnake	Desert scrub, thorn scrub, chaparral below 4,000ft. San Bernardino County S through most of Baja California, Mexico.	Fed: None Calif: SSC, S3 USFS: S MSHCP: AC	Occurs
<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	Open relatively rocky areas within valley-foothill locales, mixed chaparral/annual grasslands. Prefers moist habitats. W San Diego & Riv. Cos., SW San Bern., Vent. & LA Cos., NW Baja CA.	Fed: None Calif: SA, S2? USFS: S	Habitat present; Moderate potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Actinemys pallida</i> Southwestern pond turtle	Perennial ponds, streams, marshes, irrigation ditches. Coastal S & cent. CA, NW Baja CA, below about 4800 ft. elev. (few higher elev. pops.). Formerly <i>Emys marmorata</i> (western pond turtle) but now split into <i>Actinemys pallida</i> (southwestern pond turtle) and <i>Actinemys marmorata</i> (northwestern pond turtle).	Fed: Prop THR Calif: SSC, SNR BLM: S USFS: S	No habitat; No potential
<i>Lampropeltis zonata</i> California mountain kingsnake	Found most commonly near rocks/boulders by streams or lake shores, may also shelter under rotting logs or dense shrubs. Variety of habitats including hardwood, hardwood conifer, conifer, chaparral, riparian, wet meadows. San Diego, Orange, western Riverside, LA, Ventura Co. in the Laguna, Palomar, Volcan, and Hot Springs Mts; Santa Ana Mts; Hollywood Hills, Santa Monica Mts. Unverified reports from Whittier Hills, Palos Verde Hills, and Baldwin Hills	Fed: None Calif: None MSHCP: NAC f USFS: S	Habitat present; Moderate potential
<i>Thamnophis hammondi</i> Two-striped gartersnake	Usually in or near perennial fresh water & adjacent riparian habitat, pools in streams. SW CA & NW Baja Calif. Usually in or near perennial fresh water & adjacent riparian habitat, pools in streams. SW CA & NW Baja Calif. Primarily aquatic. Diurnal. Active at night and at dusk during hot weather in some areas. Can be active most of the year depending on weather conditions. Has been found from January - November.	Fed: None Calif: SSC, S3S4 BLM: S USFS: S	Habitat present; No perennial water Low potential
BIRDS			
<i>Campylorhynchus brunneicapillus sandiegensis</i> Coastal cactus wren	Desert scrub and coastal sage scrub with cactus patches; Southern CA and northwestern Baja. Non-migratory. Pairs defend territories throughout the year. Limited to San Diego and Orange Cos.	Fed: None Calif: SSC, S2 USFS: S MSHCP: AC	Habitat present; Low potential
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	Valley foothill and desert riparian. Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage along slow-moving watercourses, backwaters, or seeps. Willow almost always a dominant component of the vegetation. Most of the United States (excluding the NW states) & into Baja California & northern Mexico. CNDDDB only tracks nesting.	Fed: THR Calif: END, S1 BLM: S USFS: S MSHCP: AC a	No habitat; No potential
<i>Coturnicops noveboracensis</i> Yellow rail	Summer resident in eastern Sierra Nevada. Freshwater marshlands. Occurs year round in California, very local breeder in NE interior and winter visitor on the coast and Suisun Marsh region, central and southern coastal US, parts of Canada, south central Oregon.	Fed: BCC Calif: SSC, S2 USFS: S (Lassen & Shasta-Trinity NF)	No habitat; No potential
<i>Empidonax traillii brewsteri</i> Little willow flycatcher	Wet mountain meadow systems with standing water for at least part of the breeding season (May to July) and with ample numbers of willow and other associated trees and shrubs	Fed: None Calif: END, S3	No habitat; No potential
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	Dense riparian forests, wet mountain meadow systems with standing water for at least part of the breeding season (May to July) & with ample numbers of willow & other associated trees & shrubs. Rare & local in S CA. SW US & N Baja California. CNDDDB only tracks nesting.	Fed: END Calif: END, S3 MSHCP: AC a	No habitat; No potential

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Haliaeetus leucocephalus</i> Bald eagle	Breed in large trees, usually near major rivers or lakes. Winters more widely. Wide but scattered distribution in N America, esp. coastal regions. CNDDDB tracks nesting and wintering.	Fed: Delisted, BGEPA Calif: END, FP, S3 MSHCP: AC BLM: S USFS: S	No habitat; No potential
<i>Strix occidentalis occidentalis</i> California spotted owl	Hardwood and mixed conifer/hardwood forests at mid to high elevations, oak and riparian woodlands at lower elevations with large old trees and snags, dense canopies, multiple canopy layers, and downed woody debris. Nests in tree cavities. Foraging habitat also includes more open stands.	Fed: BCC Calif: SSC, S2 MSHCP: NAC f USFS: S BLM: S	No habitat (woodlands over all not large enough); out of mapped range, No potential
MAMMALS			
<i>Antrozous pallidus</i> Pallid bat	Rock outcrops of shrublands, ≤ 6000' elevation; southwest North America to interior Oregon and Washington; hibernates in winter. Locally common at low elevations in grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Forages over open ground. Roosts in caves, crevices, mines, hollow trees, buildings. Very sensitive to disturbance of roosting sites.	Fed: None Calif: SSC, S3 BLM: S USFS: S	Habitat present; High potential
<i>Myotis thysanodes</i> Fringed myotis	Found in a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood & hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts.	Fed: None Calif: SA, S3 BLM: S USFS: S	No caves/mines observed; Low potential
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	Alpine and subalpine meadows and montane boreal forests. Dense growth of both trees and underbrush. Generally, above 9000 ft. elevation, but can be as low as 6000 ft. Historically from southern Washington to southern limits of the Sierra Nevada.	Fed: None Calif: THR, S1 USFS: S	No habitat; No potential, Beyond the geographic range

Table 13 and 14 Legend

“Documented occurrences” refers to species occurrences in the California Natural Diversity Database (CNDDDB) unless otherwise noted. For plant species that are not tracked in the CNDDDB, records from the Consortium of California Herbaria (CCH) may be used (only CCH records that include map coordinates are utilized). eBird (eBird.org) is an online database of bird distribution and abundance sponsored by the Cornell Laboratory of Ornithology and compiled from observations submitted by citizen scientists. eBird records of bird observations are noted but should be interpreted with caution. eBird records “in vicinity” means records within about a 5-mile radius of the site. Bumble Bee Watch (BBW) is a community science project through the partnership of The Xerces Society, the University of Ottawa, Wildlife Preservation Canada, BeeSpotter, The Natural History Museum, London, and the Montreal Insectarium. Bumble bee sightings/photos are submitted by individuals and verified by bumble bee experts.

Federal designations: (Federal Endangered Species Act, U.S. Fish and Wildlife Service):

END:	Federally listed, endangered; an animal or plant in danger of extinction within the foreseeable future throughout all or a significant portion of its range.
THR:	Federally listed, threatened; an animal or plant which is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range.
Cand	Candidate for federal listing as threatened or endangered; species that has been studied by the U.S. Fish and Wildlife Service, and the Service has concluded that it should be proposed for addition to the Federal Endangered and Threatened species list.
Prop	Proposed for federal listing as Endangered or Threatened under Section 4 of the Endangered Species Act.
Delisted:	Previously federally listed as endangered or threatened, but is no longer listed (e.g., due to recovery).
None:	The species has no federal conservation status.
BGEPA:	Federal Bald and Golden Eagle Protection Act; protects bald and golden eagles.
BCC:	USFWS Bird of Conservation Concern; migratory and non-migratory bird species (beyond those already designated as Federally threatened or endangered) that represent USFWS highest conservation priorities.

State designations: (California Endangered Species Act, California Dept. of Fish and Wildlife)

END:	State listed, endangered; a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
CanE:	Candidate Endangered; a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed as being under review by the Department of Fish and Wildlife for addition to the list of endangered species, or a species for which the commission has published a notice of proposed regulation to add the species to the list of endangered species.
CanT:	Candidate Threatened; a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed as being under review by the Department of Fish and Wildlife for addition to the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to the list of threatened species.
THR:	State listed, threatened; a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts.
RARE:	State listed as rare: a native plant species, subspecies, or variety when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens (Native Plant Protection Act of 1977).
WJTCA	Western Joshua Tree Conservation Act; specifies mitigation for take of Joshua trees.
SSC:	CDFW Species of Special Concern; vertebrate species of concern due to declining population levels, limited ranges, and/or continuing threats that have made them vulnerable to extinction.

FP:	Fully Protected; California Fish and Game Code states that Fully Protected species "...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected" species, although take may be authorized for necessary scientific research. Changes to State Law in 2023 allows Incidental Take Permitting for fully protected species for certain water, transportation, wind energy, and solar energy projects.
Delisted:	Previously state listed as threatened or endangered, but no longer listed (e.g., due to recovery).
SA:	CDFW Special Animal; wildlife of state conservation concern.
SH:	All California sites are historical, still some hope of rediscovery.
SX:	All California sites are historical, presumed extirpated.
PFB:	Protected Fur-bearing Mammal under Title 14 of the California Code of Regulations.
None:	The species has no state conservation status.
DPS:	Distinct Population Segment.

State Rank (S Rank): A reflection of the condition and imperilment of an element (plant, animal, vegetation community) throughout its range within the state. The S ranks are determined through a combination of rarity, threat, and trend factors, weighted more heavily on the rarity factors. Where correct category is uncertain, the S rank includes two categories or a question mark. Older ranks, which need to be updated, may still contain a decimal "threat" rank of .1, .2, or .3, where .1 indicates very threatened status, .2 indicates moderate threat, and .3 indicates few or no current known threats.

S1:	Critically imperiled; imperiled in the state because of extreme rarity or some factor(s) making it especially vulnerable to extirpation from the state.
S2:	Imperiled; imperiled in the state because of rarity due to very restricted range, very few populations, steep declines, or other factors making it very vulnerable to extirpation from the state or nation.
S3:	Vulnerable; vulnerable in the state due to a restricted range, relatively few populations, recent and widespread declines, or other factors making it vulnerable to extirpation.
S4:	Apparently secure; uncommon but not rare, some cause for long-term concern due to declines or other factors.
S5:	Secure; common, widespread, and abundant in the state.
SH:	Possibly extirpated; species or community occurred historically in the state, and there is some possibility that it may be rediscovered. The element has not been seen for at least 20 years, but suitable habitat still exists.
SX:	Presumed extirpated; species or community is believed to be extirpated from the state.
SNR:	Unranked, state rank not yet assessed.

California Rare Plant Rank (CRPR): The *California Rare Plant Ranks* are a ranking system originally developed by the California Native Plant Society (CNPS) to better define and categorize rarity in California's plants. These ranks were previously known as the CNPS lists but were renamed to the *California Rare Plant Ranks* to better reflect the joint effort among the CNPS, the CDFW, and a wide range of botanical experts, who work together to assign a rarity ranking.

1A:	Plants presumed extinct in California and rare/extinct elsewhere.
1B:	Plants rare, threatened, or endangered in California and elsewhere.
2A:	Plants presumed extirpated in California, but more common elsewhere.
2B:	Plants rare, threatened, or endangered in California but more common elsewhere.
3:	Plants about which we need more information.
4:	Plants of limited distribution.
X.1:	Extension to CRPR (e.g., 1B.1); seriously threatened in California.
X.2:	Extension to CRPR (e.g., 1B.2); fairly threatened in California.

- X.3: Extension to CRPR (e.g., 1B.3); not very threatened in California.
CBR: Considered but rejected.

U.S. Forest Service (USFS) designation:

- S: Sensitive; plant and animal species identified by a regional forester that are not listed or proposed for listing under the Federal Endangered Species Act for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or density, or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

Bureau of Land Management (BLM designation):

- S: Sensitive; plant and animal species requiring special management consideration to promote their conservation and reduce the likelihood for future listing under the Federal Endangered Species Act. Includes species designated as sensitive by the BLM State Director and all Federal Candidate species and Federal delisted species in the 5 years following delisting. Sensitive species are managed as special status species.

Western Riverside County Multiple Species Habitat Conservation Plan: Applied to species that are covered under state and federal permits for the MSHCP.

NAC: Species Not Adequately Conserved

AC: Species Adequately Conserved

- (a): Surveys may be required for these species as part of wetlands mapping as described in Section 6.1.2 of the MSHCP.
- (b): Surveys may be required for these species within Narrow Endemic Plant Species survey area as described in Section 6.1.3 of the MSHCP.
- (c): Surveys may be required for these species within locations shown on survey maps as described in Section 6.3.2 of the MSHCP.
- (d): Surveys may be required for these species within Criteria Area as described in Section 6.3.2 of the MSHCP.
- (e): These Covered Species will be considered Adequately Conserved when conservation requirements identified in species-specific conservation objectives have been met. Species-specific conservation objectives for these species are presented in Section 9.0 of the MSHCP. Please refer to Table 9-3 of the MSHCP for specific conservation objectives that must be met for these species prior to including them on the list of Covered Species Adequately Conserved.
- (f): These Covered Species will be considered Adequately Conserved when a Memorandum of Understanding is executed with the U.S. Forest Service that addresses management for these species on Forest Service Land. Refer to Table 9-3 of the MSHCP.

No entry: Not a Covered Species

Definitions of occurrence probability:

These definitions provide general guidance. Classifications for individual species may be modified based on biologists' experience and expert opinion.

Occurs: Species was detected during surveys or previously documented on the Project site or adjacent areas.

High: Species documented in the vicinity (i.e., within 5 miles) of the Project site and suitable habitat is present, but species not detected during surveys.

Moderate: Species documented in the vicinity of the Project site or suitable habitat present and site is within geographic and elevational range of the species.

Low: Species not documented in the vicinity of the Project site or suitable habitat is marginal.

Not Expected: Species not documented in the vicinity of the Project site and suitable habitat marginal or absent, or site is not within geographic and elevational range of the species.

Absent: No potential for the species to occur due to lack of habitat, geographic or elevation range, species life history, survey results, etc.

Unknown: No focused surveys have been performed in the region, and the species' distribution and habitat are poorly known.

Table 15. Special Status Species Point Data, Numbers, and Area Extent

*(based on 2024 Project design)

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
Intermediate Mariposa Lily		<i>C. weedii intermedius</i>			
2016/2017					
Area 1	33.844419°	-117.617263°	31		0
Area 2	33.844498°	-117.617652°	13		0
Area 3	33.844587°	-117.617977°	45		0
Area 4	33.845176°	-117.618810°	5		0
Area 5	33.844882°	-117.618531°	8		0
Area 6	33.849429°	-117.614542°	25		25
Area 7	33.850483°	-117.612290°	11		11
Area 8	33.846525°	-117.609372°	34		34
Area 9	33.847261°	-117.609071°	22		22
Area 10	33.846431°	-117.609407°	23		23
Area 11	33.846401°	-117.610203°	2		2
Area 12	33.846363°	-117.610090°	8	312, 313, 315	8
Area 13	33.846411°	-117.609633°	3	316, 320	3
Area 14	33.846260°	-117.610018°	8	318, 321	8
Area 15	33.846577°	-117.609482°	17	322, 354, 355	17
Area 16	33.846835°	-117.609442°	4	348	4
Area 17	33.846692°	-117.609443°	3	352	3
Area 18	33.846606°	-117.609403°	3	353, 356	3
Area 19	33.846059°	-117.605215°	2	398, 399	0
Area 20	33.850485°	-117.613362°	8		8
Area 21	33.850607°	-117.612279°	5	407, 408	5
Area 22	33.850543°	-117.612408°	3		3
Area 23	33.849536°	-117.614303°	7	421, 422, 431	7
Area 24	33.851853°	-117.613779°	5		5
Area 25	33.845013°	-117.613359°	7	600, 601, 602	7
Area 26	33.844400°	-117.616956°	7	8 ft radius	0
271	33.847702°	-117.611795°	1		1
272	33.847929°	-117.611548°	2	3 ft radius	2
273	33.847874°	-117.611613°	6	4 ft radius	6
274	33.847197°	-117.611846°	1		1
277	33.846956°	-117.613087°	4	1 ft radius	4
278	33.847010°	-117.613131°	2	1 ft radius	2
279	33.846956°	-117.613033°	1		1
280	33.846955°	-117.613217°	1		1
282	33.846701°	-117.613561°	1		1
283	33.846728°	-117.613615°	1		1
284	33.846628°	-117.613679°	1		1
286	33.846419°	-117.614013°	1		1
295	33.846668°	-117.614814°	1		0
296	33.846713°	-117.614761°	2	3 ft radius	0
298	33.846853°	-117.613940°	2	1 ft radius	2
299	33.846791°	-117.611767°	2	1 ft radius	2
300	33.846684°	-117.611507°	1		1
301	33.846639°	-117.611496°	1		1
302	33.846711°	-117.611485°	1		1
303	33.846632°	-117.611171°	2	2 ft radius	2
304	33.846796°	-117.610827°	1		1
305	33.846267°	-117.610131°	1		1

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
306	33.846410°	-117.610478°	2	1 ft radius	2
309	33.846456°	-117.610316°	1		1
310	33.846482°	-117.610446°	1		1
311	33.846357°	-117.610175°	2	3 ft radius	2
314	33.846437°	-117.610446°	1		1
317	33.846421°	-117.610057°	4	2 ft radius	4
319	33.846250°	-117.609904°	3	3 ft radius	3
339	33.847795°	-117.609461°	2	4 ft radius	2
340	33.847750°	-117.609407°	1		1
349	33.846829°	-117.609519°	1		1
350	33.846767°	-117.609454°	1		1
351	33.846748°	-117.609551°	1		1
363	33.846317°	-117.609278°	1		1
364	33.846326°	-117.609213°	1		1
365	33.845940°	-117.608875°	5	3 ft radius	5
366	33.845980°	-117.608011°	1	offsite	0
373	33.845990°	-117.607903°	1	offsite	0
374	33.845774°	-117.607825°	2	1 ft radius	0
375	33.845746°	-117.607901°	1		0
376	33.845710°	-117.607922°	1		0
377	33.845747°	-117.607814°	1		0
392	33.846011°	-117.607287°	1	offsite	0
395	33.846153°	-117.605785°	1		0
396	33.845682°	-117.604474°	1		0
397	33.845736°	-117.604474°	1		0
400	33.850516°	-117.613588°	1		1
403	33.850475°	-117.612755°	1		1
404	33.850614°	-117.612021°	1		1
405	33.850624°	-117.611924°	2	3 ft radius	2
406	33.850641°	-117.612097°	1		1
414	33.850389°	-117.613663°	3	2 ft radius	3
415	33.850344°	-117.613630°	1		1
416	33.850300°	-117.613565°	1		1
417	33.850309°	-117.613489°	2	1 ft radius	2
418	33.849793°	-117.613864°	5	2 ft radius	5
419	33.849656°	-117.614263°	1		1
420	33.849638°	-117.614328°	3	2 ft radius	3
438	33.851598°	-117.613682°	1		1
439	33.851769°	-117.613759°	1		1
442	-117.613759°	-117.614675°	1		0
443	33.852910°	-117.614697°	1		0
444	33.853323°	-117.614948°	1	offsite	0
588	33.845328°	-117.612113°	4	2 ft radius	4
589	33.845364°	-117.612168°	1		1
590	33.846204°	-117.613773°	3	2 ft radius	3
592	33.845421°	-117.615227°	1		1
595	33.845086°	-117.613679°	4	3ft. Radius	4
596	33.845077°	-117.613614°	1		1
597	33.844997°	-117.613505°	1		0
598	33.845024°	-117.613441°	1		1
599	33.845069°	-117.613441°	1		1
603	33.844971°	-117.613321°	1		1
644	33.844191°	-117.614137°	1		0
645	33.844650°	-117.614422°	1		0
647	33.844483°	-117.615253°	1		0

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
648	33.844462°	-117.615890°	1		0
672	33.843343°	-117.612391°	1		1
673	33.843270°	-117.612509°	2	1 ft radius	2
674	33.843206°	-117.612639°	3	1 ft radius	0
675	33.843070°	-117.612767°	1		0
676	33.842978°	-117.613123°	1		0
681	33.845016°	-117.618715°	2	2 ft radius	0
682	33.845097°	-117.618781°	3	2 ft radius	0
684	33.839913°	-117.603850°	1		1
685	33.845591°	-117.619087°	4	2 ft radius, offsite	0
686	33.845521°	-117.618795°	1		0
688	33.845503°	-117.618751°	1		0
689	33.845538°	-117.618989°	1		0
690	33.840800°	-117.608698°	1		0
691	33.841320°	-117.609318°	1		0
Area 27	33.847057°	-117.612209°	14		14
Area 28	33.850283°	-117.613806°	4		4
Area 29	33.850414°	-117.614017°	20		20
Area 30	33.850631°	-117.612132°	16		16
Area 31	33.850593°	-117.612014°	12		12
853	33.847166°	-117.612254°	1		1
854	33.847148°	-117.612285°	1		1
858	33.847040°	-117.612313°	1		1
860	33.845531°	-117.612469°	2		2
874	33.846265°	-117.609034°	1		1
875	33.845235°	-117.609356°	2		2
876	33.845531°	-117.608947°	4	6-ft radius	4
877	33.845583°	-117.608982°	2	1-ft radius	2
878	33.845692°	-117.608905°	1		1
879	33.846006°	-117.608307°	1		1
886	33.845875°	-117.607574°	1		0
888	33.845933°	-117.607570°	3	4-ft radius	0
890	33.846664°	-117.605845°	1		0
891	33.846759°	-117.605773°	8	3-ft radius	0
892	33.846731°	-117.605795°	1		0
893	33.846697°	-117.605819°	1		0
894	33.846132°	-117.605782°	9	10-ft radius	0
896	33.851557°	-117.613791°	3	2-ft radius	3
897	33.851574°	-117.613750°	1		1
898	33.851486°	-117.613901°	2	4-ft radius	2
899	33.851288°	-117.614027°	1		1
900	33.851189°	-117.613931°	8	6-ft radius	8
901	33.850615°	-117.613605°	2	1-ft radius	2
902	33.850572°	-117.613610°	3	3-ft radius	3
903	33.850549°	-117.613568°	1		1
911	33.850253°	-117.613943°	1		1
912	33.849965°	-117.613931°	2	1-ft radius	2
913	33.849980°	-117.614054°	1		1
914	33.849963°	-117.614121°	1		1
915	33.849982°	-117.614227°	1		1
916	33.850008°	-117.614343°	20	10-ft radius	20
917	33.850047°	-117.614331°	4	3-ft radius	4
918	33.850065°	-117.614401°	1		1
919	33.849903°	-117.614375°	1		1
920	33.849873°	-117.614313°	1		1

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
921	33.849798°	-117.614290°	3	2-ft radius	3
922	33.849750°	-117.614287°	5	4-ft radius	5
923	33.850644°	-117.613171°	1		1
924	33.850681°	-117.612974°	2	1-ft radius	2
925	33.850564°	-117.612117°	1		1
926	33.850560°	-117.612064°	1		1
927	33.850585°	-117.612032°	1		1
928	33.850616°	-117.612039°	2	1-ft radius	2
934	33.850708°	-117.611866°	4	1-ft radius	4
935	33.850716°	-117.611796°	1		1
936	33.844049°	-117.610909°	2		2
938	33.842486°	-117.608937°	1	flowering	1
939	33.841177°	-117.609313°	1		0
940	33.841196°	-117.609577°	1		0
941	33.841162°	-117.609667°	3	4-ft radius, flowering	0
942	33.841195°	-117.610149°	1		0
943	33.841240°	-117.610209°	1		0
944	33.841159°	-117.610334°	1		0
945	33.841126°	-117.610384°	2	1-ft radius	0
946	33.840975°	-117.610230°	9	5-ft radius	0
947	33.838921°	-117.609604°	2	1-ft radius	0
948	33.838774°	-117.608813°	1		0
949	33.838815°	-117.608528°	1		0
950	33.838937°	-117.608300°	1		0
951	33.838986°	-117.608302°	1		0
952	33.838862°	-117.608296°	2	1-ft radius	0
953	33.838816°	-117.607787°	4	2-ft radius	0
954	33.838789°	-117.607422°	1		0
955	33.838704°	-117.607095°	1		0
956	33.838650°	-117.607068°	2	Offsite	0
957	33.838607°	-117.606972°	1	Offsite	0
958	33.838601°	-117.606907°	1	Offsite	0
			676		463
2024 Additional Locations of Intermediate Mariposa Lily					
Area 1000	33.840985°	-117.610365°	9		0
Area 1001	33.841069°	-117.610368°	7		0
Area 1002	33.841535°	-117.609782°	10		0
Area 1003	33.841217°	-117.609440°	12		0
Area 1004	33.843972°	-117.614102°	7		1
Area 1005	33.844501°	-117.615168°	17	18 plants Overlaps 647 (1 plant) 45 plants Overlaps 62% of Area 2	0
Area 1006	33.844475°	-117.617591°	37	(13 plants/ est. 8 plants overlap)	0
Area 1007	33.844555°	-117.617854°	-	13 plants within Area 3	-
Area 1008	33.844858°	-117.618502°	5	6 plants Overlaps 11% of Area 5 (8 plants/ est. 1 plant overlaps)	0
Area 1009	33.845023°	-117.618755°	15		0
Area 1010	33.845242°	-117.618858°	15		0
Area 1017	33.849402°	-117.614701°	75	Partially offsite	11
0	33.83872804°	-117.60756256°	2		0
1	33.83899652°	-117.60921699°	1		0
2	33.83895629°	-117.60951491°	1		0
3	33.83895595°	-117.60831921°	1		0
4	33.83892573°	-117.60827779°	-	1 plant within 5 ft. 950	-

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
5	33.83874158°	-117.60754079°	1		0
6	33.83877975	-117.60748045	1		0
7	33.83877587	-117.60745821	2		0
8	33.83879314	-117.60745161	2		0
9	33.83879291	-117.60742450	3		0
10	33.83878289	-117.60738132	1		0
11	33.83870031	-117.60719471	1		0
12	33.83867329	-117.60711484	1	Offsite	0
13	33.83864291	-117.60706783	-	Offsite - 1 plant within 5 ft 956	-
14	33.83861369	-117.60703730	1	Offsite	0
15	33.83855460	-117.60695153	1	Offsite	0
16	33.83854791	-117.60692792	1	Offsite	0
17	33.83851245	-117.60691174	1	Offsite	0
18	33.83851758	-117.60686536	1	Offsite	0
19	33.84043204	-117.60947531	1		0
20	33.84088864	-117.61022666	1		0
21	33.84099243	-117.61021693	1		0
22	33.84098945	-117.61019792	4		0
23	33.84098919	-117.61026316	6		0
24	33.84097321	-117.61026221	1		0
25	33.84093683	-117.61043133	2		0
26	33.84090301	-117.61041993	1		0
27	33.84085230	-117.61037104	1		0
28	33.84091474	-117.61048776	4		0
29	33.84095909	-117.61041174	2		0
30	33.84119321	-117.61014826	-	1 plant within 5 ft 942	-
31	33.84107041	-117.61016188	1		0
32	33.84104713	-117.61014418	2		0
33	33.84104048	-117.61018782	1		0
34	33.84107015	-117.61018261	1		0
35	33.84104191	-117.61021491	1		0
36	33.84124114	-117.60964751	4		0
37	33.84139174	-117.60971586	1		0
38	33.84143923	-117.60971501	1		0
39	33.84151693	-117.60965758	1		0
40	33.84147216	-117.60959202	2		0
41	33.84148710	-117.60924354	1		0
42	33.84125542	-117.60958293	1		0
43	33.84116773	-117.60953196	1		0
44	33.84124986	-117.60941675	1		0
45	33.84129229	-117.60936517	1		0
48	33.84395600	-117.61416918	1		0
49	33.84405311	-117.61411844	1		0
50	33.84405827	-117.61411249	1		0
51	33.84407322	-117.61410987	1		0
52	33.84412524	-117.61412012	1		0
53	33.84424664	-117.61410424	1		0
54	33.84428883	-117.61410065	1		0
55	33.84431638	-117.61410435	1		0
56	33.84432564	-117.61406677	1		0
57	33.84438869	-117.61411576	1		0
58	33.84448248	-117.61410783	1		0
59	33.84455869	-117.61432297	1		0
60	33.84458730	-117.61446706	1		0
61	33.84474939	-117.61468618	1		0

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
62	33.84472763	-117.61474871	3		0
63	33.84474043	-117.61476333	3		0
64	33.84463178	-117.61472544	1		0
65	33.84460320	-117.61474516	1		0
66	33.84455382	-117.61484699	1		0
67	33.84453402	-117.61482688	1		0
68	33.84448696	-117.61496270	2		0
69	33.84446636	-117.61529427	1		0
70	33.84444696	-117.61541339	1		0
71	33.84447750	-117.61556013	3		0
72	33.84443573	-117.61567099	2		0
73	33.84443035	-117.61575524	1		0
74	33.84442209	-117.61590183	1		0
75	33.84436952	-117.61603554	1		0
76	33.84431764	-117.61671254	4		0
77	33.84431840	-117.61689149	1		0
78	33.84437751	-117.61701388	3		0
79	33.84439060	-117.61726745	-	1 plant - within 5 feet of Area 1	-
80	33.84457561	-117.61794671	-	1 plant - within Area 3	-
81	33.84458411	-117.61801301	-	1 plant - within 5 feet of Area 3	-
82	33.84460199	-117.61803005	-	1 plant - within 5 feet of Area 3	-
83	33.84462412	-117.61806026	1		0
84	33.84465383	-117.61806923	5		0
85	33.84470113	-117.61811353	-	6 plants - within 5 feet of Area 3	-
86	33.84474517	-117.61835375	2		0
87	33.84489139	-117.61869581	1		0
88	33.84512055	-117.61881993	2		0
89	33.84536509	-117.61894814	1		0
90	33.84550507	-117.61893083	4		0
91	33.84555319	-117.61850798	1		0
92	33.84567527	-117.61793924	1		0
93	33.84559934	-117.61763721	1		0
94	33.84534534	-117.61671803	1		0
95	33.84545107	-117.61628439	1		0
96	33.84548398	-117.61622061	1		0
97	33.84546698	-117.61608389	1		0
98	33.84546711	-117.61577572	1		0
99	33.84537848	-117.61545512	1		1
100	33.84501021	-117.61346716	1		0
101	33.84508913	-117.61365894	-	1 plant - within 5 feet of 595	-
102	33.84502113	-117.61332894	-	1 plant - within Area 25	-
106	33.84566856	-117.61287184	2		2
107	33.84566419	-117.61274273	1		1
108	33.84566547	-117.61268193	7		7
109	33.84543063	-117.61235432	1		1
110	33.84620531	-117.61377790	-	1 plant - within 5 feet of 590	-
111	33.84650680	-117.61472567	1		0
112	33.84667227	-117.61354288	1		1
113	33.84695083	-117.61307431	-	1 plant – overlapping 277	-
114	33.84697442	-117.61305028	1		1
115	33.84665622	-117.61116223	1		1
116	33.84664514	-117.61114086	1		1
117	33.84639451	-117.61044356	3		3
118	33.84650117	-117.61025066	3		3
119	33.84635678	-117.61014682	-	1 plant - within 5 feet of 311	-

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
120	33.84636017	-117.61008774	-	1 plant - within Area 12	-
121	33.84632161	-117.61009719	1		1
122	33.84627934	-117.61005189	1		1
123	33.84626327	-117.61002870	-	1 plant - within Area 14	-
124	33.84625433	-117.61001874	-	1 plant - within Area 14	-
125	33.84624698	-117.60999329	-	1 plant - within 5 feet of Area 14	-
126	33.84625268	-117.60997429	1		1
127	33.84622391	-117.60999682	1		1
130	33.84623625	-117.60987489	1		1
134	33.84638129	-117.60958763	1		1
136	33.84637463	-117.60933324	1		1
137	33.84560778	-117.60891380	1		1
138	33.84574480	-117.60894019	1		1
142	33.84682100	-117.60949005	-	1 plant - within 5 feet of 349	-
143	33.84680835	-117.60943850	-	1 plant - within 5 feet of 348	-
144	33.84669678	-117.60581999	-	1 plant - within 5 feet of 893	-
145	33.84675321	-117.60580128	1		0
146	33.84676911	-117.60580196	1		0
147	33.84676392	-117.60577650	1		0
148	33.84674845	-117.60577148	-	1 plant - within 5 feet of 891	-
149	33.84673748	-117.60576508	1		0
150	33.84674530	-117.60576148	-	1 plant - within 5 feet of 891	-
151	33.84691715	-117.61085269	1		1
152	33.84688989	-117.61085822	1		1
153	33.84689789	-117.61085120	1		1
154	33.84681212	-117.61083307	1		1
155	33.84661742	-117.61148041	1		1
156	33.84707173	-117.61218605	-	1 plant - within 5 feet of Area 27	-
157	33.84769890	-117.61177626	1		1
158	33.84771381	-117.61175489	1		1
159	33.84787476	-117.61157315	1		1
160	33.84789015	-117.61157296	1		1
161	33.84787053	-117.61158276	1		1
162	33.84787107	-117.61160859	1		1
163	33.84787005	-117.61162442	1		1
164	33.84787075	-117.61165276	3		1
165	33.84785990	-117.61166041	1		1
174	33.85035822	-117.61361296	1		1
175	33.85034784	-117.61359410	1		1
176	33.85034633	-117.61359436	1		1
177	33.85034156	-117.61361626	3		1
178	33.85035425	-117.61362999	3		1
179	33.85030866	-117.61360196	1		1
180	33.85003638	-117.61383683	1		1
181	33.85007260	-117.61385791	1		1
182	33.85010391	-117.61391511	1		1
183	33.84998687	-117.61387162	1		1
184	33.84997318	-117.61388837	1		1
185	33.84999873	-117.61386879	1		1
186	33.84998543	-117.61387084	1		1
187	33.84982350	-117.61384840	1		1
188	33.84969872	-117.61410835	1		1
189	33.84969303	-117.61409679	1		1
190	33.84969975	-117.61408641	1		1
191	33.84971961	-117.61418710	1		1

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
192	33.84972156	-117.61419256	1		1
193	33.84971168	-117.61425952	1		1
194	33.84970929	-117.61427216	1		1
195	33.84971132	-117.61428032	1		1
196	33.84972384	-117.61427171	1		1
197	33.84972198	-117.61428169	1		1
198	33.84971045	-117.61428140	1		1
199	33.84970851	-117.61428901	1		1
200	33.84969969	-117.61428439	1		1
201	33.84969409	-117.61426544	1		1
202	33.84965143	-117.61428790	1		1
203	33.84966646	-117.61430834	1		1
204	33.84961197	-117.61431669	1		1
205	33.84959510	-117.61431852	1		1
206	33.84959872	-117.61431681	1		1
207	33.84954064	-117.61432245	1		1
208	33.84953340	-117.61441130	1		1
209	33.84952984	-117.61442182	1		1
210	33.84944543	-117.61456855	1		1
211	33.84944886	-117.61457741	1		1
212	33.84944413	-117.61457373	1		1
213	33.84941201	-117.61458175	1		1
214	33.85050630	-117.61307743	1		1
215	33.85056218	-117.61301857	1		1
216	33.85057818	-117.61298044	1		1
217	33.85055490	-117.61294301	1		1
218	33.85053674	-117.61231567	1		1
219	33.85056701	-117.61228477	1		1
220	33.85060105	-117.61222702	1		1
221	33.85061613	-117.61223894	1		1
222	33.85060655	-117.61226476	1		1
223	33.85058516	-117.61220025	1		1
224	33.85056834	-117.61218703	1		1
225	33.85057093	-117.61217094	1		1
226	33.85058631	-117.61209004	1		1
227	33.85058602	-117.61206478	1		1
228	33.85058513	-117.61198409	-	1 plant - within 5 feet of Area 31	-
229	33.85057788	-117.61197637	1		1
230	33.85058828	-117.61195088	1		1
231	33.85062586	-117.61193176	1		1
232	33.85061864	-117.61191126	1		1
233	33.85054128	-117.61223519	1		1
234	33.85070340	-117.61299067	1		1
235	33.84425833	-117.61080820	1		1
236	33.84428782	-117.61080535	6		6
237	33.84427684	-117.61088067	10		10
238	33.84401292	-117.61392549	1		1
239	33.84592014	-117.60856794	1		1
240	33.84597031	-117.60825926	1	Offsite	0
241	33.84603150	-117.60807921	1	Offsite	0
242	33.84601565	-117.60804459	1	Offsite	0
243	33.84587365	-117.60786278	1		0
244	33.84570913	-117.60777799	1		0
245	33.84603746	-117.60814358	1	Offsite	0
246	33.84599425	-117.60893612	1		1

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
248	33.85129453	-117.61409256	1		1
Total 2024			479		138
Total Intermediate Mariposa Lily			1,154		601
Chaparral Nolina <i>Nolina cismontana</i>					
Area 1	33.847614°	-117.613560°	18		11
Area 2	33.845032°	-117.615732°	5208	est. based on transects	2187
Area 3	33.845885°	-117.607918°	15		0
Area 4	33.847234°	-117.614078°	20		15
Area 5	33.845155°	-117.607969°	15		0
Area 6	33.845870°	-117.607438°	58		0
281	33.846490°	-117.613378°	1		1
371	33.845903°	-117.607777°	1		0
372	33.845918°	-117.607710°	1		0
382	33.845498°	-117.608036°	2	6ft	0
394	33.846067°	-117.607200°	1	Offsite	0
641	33.843555°	-117.614592°	1		0
701	33.843830°	-117.610500°	1		1
702	33.844300°	-117.609100°	1		1
Total Chaparral Nolina			5343		2216
Brewer's calandrinia <i>Calandrinia breweri</i>					
2017					
1	33.845942°	-117.608377°	1	Flowering, fruiting	1
Fish's Milkwort <i>Polygala cornuta fishiae</i>					
2016/2017					
470	33.844524°	-117.606445°	7	offsite	0
490	33.844257°	-117.607201°	3	offsite	0
591	33.845561°	-117.614331°	1		1
619	33.844144°	-117.612205°	2		2
633	33.844086°	-117.613585°	6	10ft	6
639	33.845103°	-117.614740°	1		0
937	33.845622°	-117.614618°	5	4-ft radius	5
2024					
46	33.84452462°	-117.60645884°	1	Offsite	0
47	33.84404208°	-117.61360710°	1		1
103	33.84539120°	-117.61396202°	1		1
104	33.84552366°	-117.61431640°	1		1
105	33.84566908°	-117.61467258°	1		1
Total Fish's Milkwort			30		18
Paniculate Tarplant <i>Deinandra paniculata</i>					
2016/2017					
Area 1	33.846565°	-117.609401°	200		200
Area 2	33.851318°	-117.613916°	60		60
437	33.851474°	-117.613708°	1		1
Area 11	33.846395°	-117.609563°		within and adjacent to Area 1	
Area 12	33.846425°	-117.609423°		within and adjacent to Area 1	
Area 13	33.846521°	-117.609523°			
Area 14	33.846746°	-117.609501°		within and adjacent to Area 1	
Area 15	33.851569°	-117.613579°			
Area 16	33.851379°	-117.613907°	-	within Area 2	-

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
128	33.84622923°	-117.60993961°	5		5
129	33.84624328°	-117.60991323°	15		15
131	33.84629200°	-117.60980644°	2		2
132	33.84628869°	-117.60965516°	1		1
133	33.84635312°	-117.60962553°	3		3
135	33.84639800°	-117.60934967°	1		1
139	33.84660655°	-117.60943291°	-	1 plant - within 5 feet of Area 1	-
140	33.84662696°	-117.60943792°	-	1 plant - within 5 feet of Area 1	-
141	33.84666955°	-117.60944054°	-	3 plants - within 5 feet of Area 1	-
166	33.85155244°	-117.61364309°	1		1
167	33.85145953°	-117.61369748°	-	1 plant - within 5 feet of 437	-
168	33.85144312°	-117.61371599°	1		1
169	33.85141114°	-117.61376227°	1		1
170	33.85126657°	-117.61388607°	8		8
171	33.85125599°	-117.61385333°	6		6
172	33.85119478°	-117.61384012°	6		6
173	33.85105529°	-117.61379883°	6		6
247	33.84844934°	-117.60744419°	25		25
Total Paniculate Tarplant			342		342
Coulter's Matilija Poppy <i>Romneya coulteri</i>					
Area 1	33.844207°	-117.608052°		center of area	0
	33.844614°	-117.605662°	5	RC3	0
	33.844879°	-117.605769°	66	RC4	0
	33.844593°	-117.606220°	11	RC5	0
	33.844537°	-117.606841°	56	RC6	0
	33.844673°	-117.607208°	17	RC7	0
	33.844260°	-117.607944°	127	RC8	0
	33.844114°	-117.608579°	22	RC9	0
	33.844210°	-117.608994°	30	RC10	30
	33.843948°	-117.609438°	34	RC11	34
	33.843839°	-117.609853°	35	RC12	35
	33.843984°	-117.610202°	35	RC14	35
	33.844042°	-117.609780°	5	RC13	5
	33.843897°	-117.610657°	9	RC15	9
	33.844331°	-117.608370°	1	526	0
	33.844417°	-117.608420°	6	527 - 12 ft. radius	6
	33.844151°	-117.608480°	1	528	0
	33.844138°	-117.609247°	1	549	1
	33.844181°	-117.609346°	4	550 - 10 ft. radius	4
	33.843991°	-117.609736°	1	565	1
	33.844196°	-117.609714°	3	566 - 10 ft. radius	3
	33.844083°	-117.609669°	1	567	1
	33.843858°	-117.610227°	2	575 - 6 ft. radius	2
Area 4	33.843960°	-117.611211°	31	RC17 and RC18	31
Area 5	33.844245°	-117.612923°	49	RC19, RC20	49
Area 11	33.849586°	-117.610730°	14	RC1	14
Area 12	33.844827°	-117.604978°	13		0
Area 21	33.848668°	-117.614883°	27		0
Area 22	33.849284°	-117.613539°	11	RC22, 705	5
Area 23	33.844831°	-117.612627°	20	RC16	20
Area 24	33.843596°	-117.612901°	18		0
266	33.849813°	-117.610660°	3	3 ft radius, offsite	3
445	33.844941°	-117.604803°	2	5 ft radius	0
446	33.844891°	-117.604892°	1		0

Location Number	Point or Est. Center of Polygon		Number of Plants	Notes	Number Impacted*
	Latitude (N)	Longitude (W)			
451	33.844400°	-117.605501°	1	Offsite	0
457	33.845034°	-117.605613°	1		0
617	33.844022°	-117.611794°	1		1
618	33.844008°	-117.611848°	1		1
631	33.844196°	-117.613249°	1		1
632	33.844034°	-117.613382°	1		1
640	33.843541°	-117.614285°	1		1
643	33.843821°	-117.613925°	1		1
695	33.839685°	-117.604741°	1		1
696	33.839751°	-117.604533°	16	697, 698, 15ft radius	16
699	33.839760°	-117.604329°	4	10ft	4
700	33.840175°	-117.604046°	1		1
Area 25	33.843859°	-117.614474°	20		0
959	33.844613°	-117.613931°	4	10-ft radius	0
960	33.844698°	-117.614019°	1	flowering	0
Total Coulter's Matilija Poppy			716		316
Crotch bumble bee <i>Bombus crotchii</i>					
	33.851387°	-117.613740°	1		
	33.842537°	-117.609017°	2		
	33.840281°	-117.602489°	1		
	33.841498°	-117.607858°	1		
Coastal western whiptail <i>Aspidoscelis tigris stejnegeri</i>					
	33.839967°	-117.603916°	1		
	33.847727°	-117.609422°	1		
	33.850558°	-117.613032°	1		
	33.844559°	-117.607513°	1		
	33.84434°	-117.61626°	1		
Orange-throated whiptail <i>Aspidoscelis hyperythra</i>					
	33.844956°	-117.614060°	1		
	33.844329°	-117.616622°	1		
	33.846762°	-117.613203°	1		
Coast horned lizard <i>Phrynosoma blainvillii</i>					
	33.84677°	-117.61322°	1		
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>					
	33.845327°	-117.605037°	1		
	33.848631°	-117.610283°	1		
	33.845117°	-117.605139°	1		

Table 16. 2008 *R. Coulteri* Point Data, Population Estimates, and Area Extent

Latitude (N)	Longitude (W)	Location	Population Size	Areal Extent of Population l x w (ft)
33504071	117362028	1	5	100 x 15
33504110	117362284	2	15	25 x 6
33504086	117362439	3	85	55 x 25
33504002	117362641	4	76	200 x 50
33503993	117362781	5	51	200 x 65
33503934	117362918	6	33	125 x 75
33503919	117363148	7	45	150 x 66
33503847	117363307	8	10	100 x 9
33503781	117363519	9	15	150 x 25
33503757	117363674	10	25	300 x 35
33503811	117363613	11	31	75 x 36
33504104	117363735	12	75	185 x 55
33504702	117363793	13	57	225 x 68
33503702	117365536	14	3	20 x 3

Table 17. 2013 *R. Coulteri* Point Data, Population Estimates, and Area Extent

Latitude (N)	Longitude (W)	Location	Population Size	Areal Extent of Population l x w (ft)
33504071	117362028	1	2	100 x 15
33504110	117362284	2	7	25 x 6
33504086	117362439	3	35	55 x 25
33504002	117362641	4	43	200 x 50
33503993	117362781	5	24	200 x 65
33503934	117362918	6	12	125 x 75
33503919	117363148	7	22	150 x 66
33503847	117363307	8	5	100 x 9
33503781	117363519	9	7	150 x 25
33503757	117363674	10	12	300 x 35
33503811	117363613	11	15	75 x 36
33504104	117363735	12	30	185 x 55
33504702	117363793	13	21	225 x 68
33503702	117365536	14	1	20 x 3

Table 18. Climatic Data Corona 2015-2017

Year/Month	Corona, CA airport – KAJO			Corona, CA near Skyline– KCACORON22		
	Temp. High (°F)	Temp. Low (°F)	Temp. High (°F)	Temp. Low (°F)	Temp. High (°F)	Temp. Low (°F)
15-Sept	104	50	1.6	102.3	60.1	1.92
15-Oct	93	48	0.48	100.9	55.9	0.86
15-Nov	88	27	0.27	87.9	39.3	0.5
15-Dec	84	23	0.69	83.3	31.8	0.84
16-Jan	79	28	2.90	76.9	36.1	4.2
16-Feb	91	57	0.42	89.5	35	0.22
16-Mar	88	36	0.98	86.2	42.1	0.98
16-Apr	98	39	0.21	95	43.5	0.23
16-May	86	42	0.17	86.4	47.8	0.25
16-Jun	109	48	0	110.7	54	0
16-Jul	92	60	0	106.1	57.3	0
16-Aug*	91	59	0	92.4	63.3	
Total 2015-16 season			7.72			10
16-Sept	102	45	0.00	103.9	32.0	0.00
16-Oct	97	41	0.93	94.5	53.0	0.59
16-Nov	93	28	1.00	89.0	40.1	0.81
16-Dec	79	26	3.10	76.1	33.0	3.98
17-Jan	78	30	6.46	75.7	34.4	7.55
17-Feb	80	32	2.33	80.5	34.8	3.24
17-Mar	90	33	0.18	93.5	36.5	0.2
17-Apr	93	37	0.08	96.2	44.0	0.19
17-May	96	37	0.15	98.3	42.3	0.23
17-Jun	102	43	0.00	108.8	49.5	0.00
17-Jul	102	51	0.01	111.9	55.9	0.02
17-Aug	100	55	0.03	108.0	59.8	0.02
Total 2016-17 season			14.27			16.83

weather underground data

Table 19. Climatic Data for Corona Area, 2023-2024 (RAWS Data) (WRCC 2024)

Year/Month	Corona, CA #2 - near Skyline			Temescal, CA #2		
	Temp. High (°F)	Temp. Low (°F)	Precipitation (inches)	Temp. High (°F)	Temp. Low (°F)	Precipitation (inches)
23-Sept	81	61	0.13	82	62	0.18
23-Oct	82	63	0.03	82	64	0.00
23-Nov	73	56	0.22	73	58	0.21
23-Dec	67	52	1.03	68	53	0.61
24-Jan	63	49	2.29	63	50	2.45
24-Feb	60	47	9.23	60	48	8.94
24-Mar	63	47	4.59	60*	47*	3.15*
24-Apr	71	49	0.69	71	51	0.69
24-May	74	51	0.29	75	52	0.11
24-Jun	86	58	0.02	87	59	0.00
24-Jul	97	68	0.00	97	68	0.00
24-Aug	96	67	0.00	96	67	0.00
Total 2023-24 season			18.52			16.34

• Data missing

RAWS data

Table 20. CDFW and RWQCB Jurisdictional Features and Riparian/Riverine in the Survey Area.

Feature Number	State CDFW/MSHCP Riparian/Riverine Area Avg. Width (ft.)	State CDFW/MSHCP Length (ft.) 2024	State CDFW/MSHCP Riparian/Riverine Area 2024	State Wetland and MSHCP Riparian	RWQCB Feature Avg. Width (ft.)	RWQCB Length (ft.) 2024	RWQCB Feature Area (sq. ft.) 2024	RWQCB Wetland (sq. ft.)	Impacts to State Jurisdiction (CDFW)			Impacts to State Waters (RWQCB)		
									Streambed and Wetland Length	Streambed and MSHCP Riverine Only	Wetlands and MSHCP Riparian Only	Feature Length	Feature Impact	Wetland
									ft.	sq. ft.	sq. ft.	ft.	sq. ft.	sq. ft.
Permanent Impacts														
1	25.4	2,713	68,798	-	12.9	2,713	34,913	-	2,073	65,848	-	2,073	32,172	-
1 (Offsite)	48.3	131	6,332	-	19.8	131	2,600	-	131	6,332	-	131	2,600	-
1a	2.0	180	360	-	1.5	198	298	-	180	360	-	198	298	-
1b	2.1	191	402	-	1.0	191	190	-	123	287	-	126	132	-
1c	2.0	551	1,108	-	1.0	497	510	-	433	870	-	431	443	-
1d	2.3	177	402	-	1.4	199	280	-	177	402	-	199	280	-
1e	2.1	184	380	-	0.7	150	105	-	184	380	-	150	105	-
1f	3.6	899	3,276	-	1.3	890	1,149	-	386	1,676	-	387	501	-
1f1	2.5	433	1,095	-	1.0	370	375	-	433	1,095	-	370	375	-
1f2	1.6	121	195	-	0.5	71	38	-	-	-	-	-	-	-
1f3	2.0	109	218	-	0.6	51	31	-	-	-	-	-	-	-
1f4	2.0	125	250	-	0.4	119	50	-	-	-	-	-	-	-
1f5	2.1	147	309	-	0.4	84	30	-	-	-	-	-	-	-
1g	3.8	153	574	-	1.2	75	90	-	153	574	-	75	90	-
1h	2.0	17	34	-	0.5	12	6	-	17	34	-	12	6	-
1i	12.3	383	4,710	-	1.1	271	297	-	20	220	-	22	19	-
1i1	3.3	60	197	-	1.4	35	48	-	-	-	-	-	-	-
1j	2.6	108	281	-	0.4	75	27	-	-	-	-	-	-	-
1k	2.0	95	190	-	1.0	80	77	-	-	-	-	-	-	-
1l	1.2	238	288	-	0.4	200	72	-	-	-	-	-	-	-
1l1	1.5	99	149	-	0.3	54	16	-	-	-	-	-	-	-
1m	1.0	13	13	-	-	0	0	-	-	-	-	-	-	-
2	1.0	223	232	-	0.4	135	57	-	-	-	-	-	-	-
3	98.0	3,862	114,283	264,169	2.1	3,887	8,082	-	2,277	107,545	158,110	2,277	5,429	-
3a	1.0	212	211	-	0.3	153	41	-	-	-	-	-	-	-

Feature Number	State CDFW/MSHCP Riparian/Riverine Area Avg. Width (ft.)	State CDFW/MSHCP Length (ft.) 2024	State CDFW/MSHCP Riparian/Riverine Area 2024	State Wetland and MSHCP Riparian	RWQCB Feature Avg. Width (ft.)	RWQCB Length (ft.) 2024	RWQCB Feature Area (sq. ft.) 2024	RWQCB Wetland (sq. ft.)	Impacts to State Jurisdiction (CDFW)			Impacts to State Waters (RWQCB)		
									Streambed and Wetland Length	Streambed and MSHCP Riverine Only	Wetlands and MSHCP Riparian Only	Feature Length	Feature Impact	Wetland
									ft.	sq. ft.	sq. ft.	ft.	sq. ft.	sq. ft.
3b	3.7	330	1,229	-	0.8	105	84	-	-	-	-	-	-	-
3c	3.0	434	1,302	-	0.8	412	342	-	-	-	-	-	-	-
3c1	1.2	131	161	-	0.4	66	24	-	-	-	-	-	-	-
3d	1.2	426	527	-	0.5	360	186	-	-	-	-	-	-	-
3e	1.4	474	672	-	1.0	297	290	-	103	203	-	117	135	-
3f	0.6	189	115	-	0.5	173	94	-	189	115	-	173	94	-
3g	6.0	1,647	9,908	-	1.2	1,568	1,886	-	1,647	9,908	-	1,568	1,886	-
3g1	1.5	764	1,152	-	0.8	497	375	-	764	1,152	-	497	375	-
3g1a	1.0	226	226	-	0.3	172	53	-	226	226	-	172	53	-
3g1a1	2.1	57	118	-	0.4	27	10	-	57	118	-	27	10	-
3g2	13.4	1,293	17,326	-	5.1	1,116	5,687	-	1,293	17,326	-	1,116	5,687	-
3g2a	2.3	383	897	-	0.8	265	224	-	383	897	-	265	224	-
3g2a1	1.5	304	458	-	0	0	0	-	304	458	-	-	-	-
3g2b	2.0	262	532	-	0.4	165	66	-	262	532	-	165	66	-
3g2c	1.5	250	378	-	0.8	150	114	-	250	378	-	150	114	-
3g2c1	2.0	93	190	-	0.8	52	42	-	93	190	-	52	42	-
3g2d	2.9	77	222	-	1.4	51	72	-	77	222	-	51	72	-
3g3	2.0	322	648	-	0.8	192	158	-	-	-	-	-	-	-
3h	15.3	1,017	15,547	-	2.6	1,118	2,862	-	987	15,415	-	1,118	2,862	-
3h1	20.4	710	14,502	-	1.1	621	670	-	710	14,502	-	621	670	-
3h1a	27.6	214	5,910	-	0.9	170	155	-	196	5,901	-	170	155	-
3h1b	1.0	395	395	-	0.9	278	261	-	297	306	-	278	261	-
3i	2.1	293	601	-	0.4	107	44	-	190	422	-	107	44	-
3j	9.0	2,023	18,136	-	4.5	1,635	7,338	-	1,089	12,484	-	1,089	6,739	-
3k	1.2	371	436	-	1.1	322	354	-	-	-	-	-	-	-
3k1	1.3	155	204	-	0.6	95	57	-	-	-	-	-	-	-
3l	1.6	277	447	-	0.5	178	89	-	-	-	-	-	-	-
3m	4.3	427	1,850	-	1.0	302	293	-	-	-	-	-	-	-

Feature Number	State CDFW/MSHCP Riparian/Riverine Area Avg. Width (ft.)	State CDFW/MSHCP Length (ft.) 2024	State CDFW/MSHCP Riparian/Riverine Area 2024	State Wetland and MSHCP Riparian	RWQCB Feature Avg. Width (ft.)	RWQCB Length (ft.) 2024	RWQCB Feature Area (sq. ft.) 2024	RWQCB Wetland (sq. ft.)	Impacts to State Jurisdiction (CDFW)			Impacts to State Waters (RWQCB)		
									Streambed and Wetland Length	Streambed and MSHCP Riverine Only	Wetlands and MSHCP Riparian Only	Feature Length	Feature Impact	Wetland
									ft.	sq. ft.	sq. ft.	ft.	sq. ft.	sq. ft.
4a	1.5	233	350	-	0.3	146	45	-	-	-	-	-	-	-
4b	1.8	268	484	-	0.3	148	42	-	-	-	-	-	-	-
5	6.4	1,308	8,429	-	1.1	1,087	1,222	-	1,308	8,429	-	1,087	1,222	-
5a	5.8	516	2,975	-	1.7	483	815	-	455	2,660	-	421	710	-
5a1	8.4	480	4,050	-	5.4	432	2,325	-	-	-	-	-	-	-
5a2	2.9	100	294	-	1.4	62	85	-	62	234	-	62	85	-
5c	1.5	212	322	-	0.5	187	92	-	212	322	-	187	92	-
5e	1.9	396	762	-	1.0	217	208	-	396	762	-	217	208	-
6	187.5	1,144	24,448	190,106	26.1	901	23,505	-	497	13,142	8,061	112	100	-
									CDFW Permanent Impacts			RWQCB Permanent Impacts		
Totals		29,625	340,490	454,275		24,798	99,551	0	18,634	291,927	166,171	16,273	64,356	0
										6.70 (ac)	3.81 (ac)		1.48 (ac)	
Temporary Impacts														
5a1 (Basin)	16.1	222 ¹	3,568 ¹	-		219 ¹	2,206 ¹	-	222	3,568	-	219	2,206	-
6 (Haul Rd Offsite)	206.2	222	45,787	0	39	222	8,647	-	222	45,787		222	8,647	
									CDFW Temporary Impacts			RWQCB Temporary Impacts		
Totals		222	45,787	0		222	8,647	0	444	49,355		441	10,853	
										1.13 (ac)			0.25 (ac)	
Total CDFW Resources														
Total RWQCB Resources														
Total CDFW Impacts														
Total RWQCB Impacts														
		29,847	386,277	454,275		25,020	108,198	0	18,856	337,714	166,171	16,495	75,209	0
			8.87(ac)	10.43 (ac)			2.48 (ac)	0		7.75 (ac)	3.81 (ac)		1.73 (ac)	0

¹ The resources subject to temporary impacts onsite were already included in the total resources present outlined under the permanent impacts section above.

APPENDIX B: SITE PHOTOS



(1) South of Mabey Canyon facing southwest. Overview 2024.



(2) Near center of the Project Area facing south-southwest. Overview 2024.



(3) Near FPWE facing west. Mabey Canyon Wash and basin visible on the right. Overview 2024.



(4) Near center west of the Project Area facing southeast. Overview 2024.



(5) Eastern edge of the survey area near FPWE and Border Avenue facing south. Overview 2024.



(6) Near center east edge of the Project Area facing west. Drainage 3 visible crossing the center of photo. Overview 2024.



(7) Near center east edge of the Project Area facing south. Manufactured slopes and basin at the eastern end of Drainage 3.



(8) Eastern edge of the survey area near FPWE and Border Avenue. Ponding locations.



(9) Northern edge of the survey area facing north. Wardlow Wash visible in the center.



(10) Center of the Project site view north.



(11) Western survey area near Mabey Canyon view south.



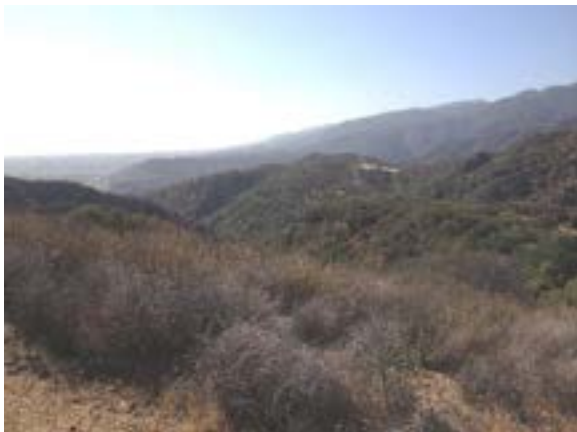
(12) Northern portion of the survey area facing east.



(13) Western survey area view south.



(14) Center west survey area view west.



(15) Eastern survey area view southeast.



(16) Center east survey boundary view east. W. Foothill Parkway visible.



(17) East survey boundary view northwest.



(18) Southwest survey area view south.



(19) Center of the survey area view west.



(20) *Quercus agrifolia* on-site.



(21) Southeast survey boundary near Trudy Way, view west.



(22) Eucalyptus alliance on-site adjacent to Mabey Canyon Wash.



(23) California sycamore on-site.



(24) Southwest survey area view NW.



(25) *Baccharis salicifolia* on-site.



(26) *Salix lasiolepis* on-site.



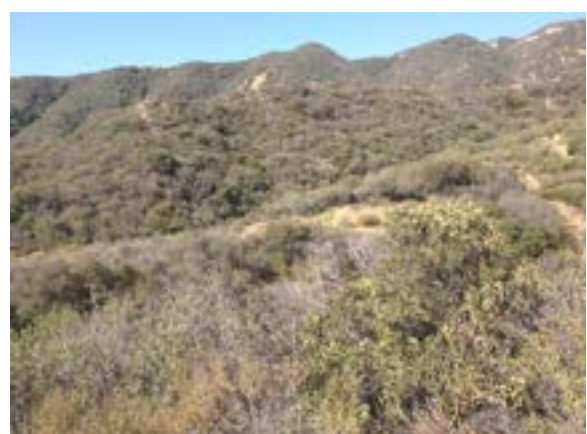
(27) *Schinus* alliance on-site adjacent to Mabey Canyon Wash.



(28) Sage scrub alliance on-site.



(29) Ca. annual grassland alliance on-site.



(30) Chaparral alliance on-site.



(31) Coulter's Matilija Poppy preferred habitat.



(32) CSS south-facing slope (left) dense chaparral north-facing slope (right).



(33) Mabey Canyon Wash on-site.



(34) CSS on ridgeline.



(35) Mabey Canyon Wash (2) on-site.



(36) Unnamed blue-line stream on-site.



(37) Scrub oak (*Quercus berberidifolia*)



(38) Needle Grass Grassland.



(39) *Keckiella antirrhinoides* with
Adenostoma fasciculatum, *Malosma laurina*.



(40) Dense Scale Broom Scrub Mabey
Canyon.



(41) Brittle Bush Scrub.



(42) Scale Broom Scrub/Coast Live Oak.



(43) Dense chaparral, north-facing slope with chaparral nolina understory.



(44) *Ceanothus crassifolius* with *Nolina cismontana* understory.



(45) Scale Broom Scrub.



(46) High density chaparral nolina.



(47) Scale Broom Scrub / Sycamore.



(48) *C. weedii intermedius*.



(49) *Nolina cismontana*.



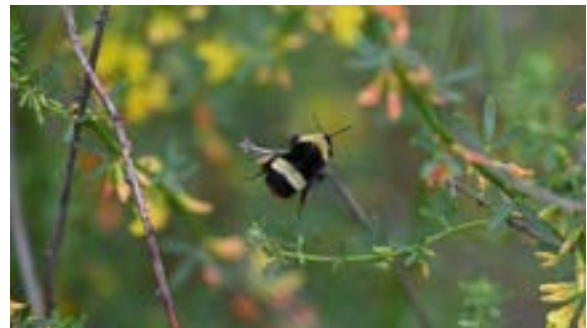
(51) Chaparral nolina with *Ceanothus crassifolius*.



(54) *Polygala cornuta fishiae*.



(50) *Romneya coulteri*.



(52/53) *Bombus crotchii*.



(55) *Bombus crotchii* observation habitat.

**APPENDIX C: PLANTS TO BE AVOIDED ADJACENT TO
THE MSHCP CONSERVATION AREA**

**TABLE 6-2 From the Riverside County MSHCP:
 PLANTS THAT SHOULD BE AVOIDED ADJACENT TO THE MSHCP CONSERVATION AREA**

BOTANICAL NAME	COMMON NAME
<i>Acacia</i> spp. (all species)	acacia
<i>Achillea millefolium</i> var. <i>millefolium</i>	common yarrow
<i>Ailanthus altissima</i>	tree of heaven
<i>Aptenia cordifolia</i>	red apple
<i>Arctotheca calendula</i>	cape weed
<i>Arctotis</i> spp. (all species & hybrids)	African daisy
<i>Arundo donax</i>	giant reed or arundo grass
<i>Asphodelus fistulosus</i>	asphodel
<i>Atriplex glauca</i>	white saltbush
<i>Atriplex semibaccata</i>	Australian saltbush
<i>Carex</i> spp. (all species*)	sedge
<i>Carpobrotus chilensis</i>	ice plant
<i>Carpobrotus edulis</i>	sea fig
<i>Centranthus ruber</i>	red valerian
<i>Chrysanthemum coronarium</i>	annual chrysanthemum
<i>Cistus ladanifer</i>	(incl. hybrids/varieties) gum rockrose
<i>Cortaderia jubata</i> [syn. <i>C. Atacamensis</i>]	jubata grass, pampas grass
<i>Cortaderia dioica</i> [syn. <i>C. sellowana</i>]	pampas grass
<i>Cotoneaster</i> spp. (all species)	cotoneaster
<i>Cynodon dactylon</i>	(incl. hybrids varieties) Bermuda grass
<i>Cyperus</i> spp. (all species*)	nutsedge, umbrella plant
<i>Cytisus</i> spp. (all species)	broom
<i>Delosperma 'Alba'</i>	white trailing ice plant
<i>Dimorphotheca</i> spp. (all species)	African daisy, Cape marigold
<i>Drosanthemum floribundum</i>	rosea ice plant
<i>Drosanthemum hispidum</i>	purple ice plant
<i>Eichhornia crassipes</i>	water hyacinth
<i>Elaeagnus angustifolia</i>	Russian olive
<i>Eucalyptus</i> spp. (all species)	eucalyptus or gum tree
<i>Eupatorium coelestinum</i> [syn. <i>Ageratina</i> sp.]	mist flower
<i>Festuca arundinacea</i>	tall fescue
<i>Festuca rubra</i>	creeping red fescue
<i>Foeniculum vulgare</i>	sweet fennel
<i>Fraxinus uhdei</i>	(and cultivars) evergreen ash, shamel ash
<i>Gaura</i> (spp.) (all species)	gaura
<i>Gazania</i> spp. (all species & hybrids)	gazania
<i>Genista</i> spp. (all species)	broom
<i>Hedera canariensis</i>	Algerian ivy
<i>Hedera helix</i>	English ivy
<i>Hypericum</i> spp. (all species)	St. John's Wort
<i>Ipomoea acuminata</i>	Mexican morning glory

BOTANICAL NAME	COMMON NAME
<i>Lampranthus spectabilis</i>	trailing ice plant
<i>Lantana camara</i>	common garden lantana
<i>Lantana montevidensis</i> [syn. <i>L. sellowiana</i>]	lantana
<i>Limonium perezii</i>	sea lavender
<i>Linaria bipartita</i>	toadflax
<i>Lolium multiflorum</i>	Italian ryegrass
<i>Lolium perenne</i>	perennial ryegrass
<i>Lonicera japonica</i>	(incl. 'Halliana') Japanese honeysuckle
<i>Lotus corniculatus</i>	birdsfoot trefoil
<i>Lupinus arboreus</i>	yellow bush lupine
<i>Lupinus texanus</i>	Texas blue bonnets
<i>Malephora crocea</i>	ice plant
<i>Malephora luteola</i>	ice plant
<i>Mesembryanthemum nodiflorum</i>	little ice plant
<i>Myoporum laetum</i>	myoporum
<i>Myoporum pacificum</i>	shiny myoproum
<i>Myoporum parvifolium</i>	(incl. 'Prostratum') ground cover myoporum
<i>Oenothera berlandieri</i>	Mexican evening primrose
<i>Olea europea</i>	European olive tree
<i>Opuntia ficus-indica</i>	Indian fig
<i>Osteospermum</i> spp. (all species)	trailing African daisy, African daisy,
<i>Oxalis pes-caprae</i>	Bermuda buttercup
<i>Parkinsonia aculeata</i>	Mexican palo verde
<i>Pennisetum clandestinum</i>	Kikuyu grass
<i>Pennisetum setaceum</i>	fountain grass
<i>Phoenix canariensis</i>	Canary Island date palm
<i>Phoenix dactylifera</i>	date palm
<i>Plumbago auriculata</i>	cape plumbago
<i>Polygonum</i> spp. (all species)	knotweed
<i>Populus nigra</i> 'italica	' Lombardy poplar
<i>Prosopis</i> spp. (all species*)	mesquite
<i>Ricinus communis</i>	castorbean
<i>Robinia pseudoacacia</i>	black locust
<i>Rubus procerus</i>	Himalayan blackberry
<i>Sapium sebiferum</i>	Chinese tallow tree
<i>Saponaria officinalis</i>	bouncing bet, soapwart
<i>Schinus molle</i>	Peruvian pepper tree, California pepper
<i>Schinus terebinthifolius</i>	Brazilian pepper tree
<i>Spartium junceum</i>	Spanish broom
<i>Tamarix</i> spp. (all species)	tamarisk, salt cedar
<i>Trifolium fragiferum</i>	strawberry clover
<i>Tropaelolum majus</i>	garden nasturtium
<i>Ulex europaeus</i>	prickly broom
<i>Vinca major</i>	periwinkle
<i>Yucca gloriosa</i>	Spanish dagger

An asterisk (*) indicates some native species of the genera exist that may be appropriate.

Sources: California Exotic Pest Plant Council, United States Department of Agriculture-Division of Plant Health and Pest Prevention Services, California Native Plant Society, Fremontia Vol. 26 No. 4, October 1998, The Jepson Manual; Higher Plants of California, and County of San Diego-Department of Agriculture.

ADDITIONAL SPECIES TO BE AVOIDED PER CNPS AND CDFW

BOTANICAL NAME

Atriplex canescens

Baccharis pilularis

Romneya coulteri and *R. trichocalyx* hybrid

COMMON NAME

fourwing saltbush

coyotebrush

White Cloud matilija poppy

APPENDIX D: REGULATORY ENVIRONMENT

The following summary of the regulatory environment is provided for information purposes and is not intended for review or comment by the lead or wildlife agencies.

1) Federal Endangered Species Act

Section 9 of the federal Endangered Species Act (FESA), 1973 (as amended) prohibits “take” of federally listed threatened and endangered species. Candidate species receive no protection under FESA, but the USFWS encourages conservation of these species. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. “Harm” is further defined to include habitat modification or degradation when it actually kills or injures wildlife by impairing essential behavioral patterns including breeding, feeding, or sheltering.

Incidental take results from, but is not the purpose of, carrying out an otherwise lawful activity. Incidental take of federally listed species may be authorized under Section 7 of FESA for federal properties or where federal actions (i.e., federal permitting or federal funding) are involved or under Section 10 of FESA for non-federal actions.

Section 7 requires all Federal agencies, in "consultation" with the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in destruction or adverse modification of critical habitat. The Section 7 process requires preparation of a federal Biological Assessment to determine whether a proposed major construction activity under the authority of a Federal action agency is likely to adversely affect listed species, proposed species, or designated critical habitat. After formal consultation, the USFWS will issue a Biological Opinion stating whether or not a federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

Section 10 lays out the guidelines under which a permit may be issued to authorize the take of endangered or threatened species (in the absence of any federal nexus). Application for an incidental take permit under Section 10 is subject to certain requirements, including preparation by the permit applicant of a conservation plan, generally known as a "Habitat Conservation Plan" or "HCP." An HCP is a plan that outlines ways of maintaining, enhancing, and protecting a given habitat type needed to protect species. The plan usually includes measures to minimize impacts, such as provisions for permanently protecting land, restoring habitat, and relocating plants or animals to another area.

2) Jurisdictional Waters and Wetlands

Three agencies generally regulate activities within streams, wetlands, and riparian areas in California: (1) the U.S. Army Corps of Engineers (USACE) regulates activities under Section 404 of the federal Clean Water Act; (2) the Regional Water Quality Control Board (RWQCB) regulates activities under Section 401 of the federal Clean Water Act and the State Porter-Cologne Water

Quality Control Act; and (3) the California Department of Fish and Wildlife (CDFW) regulates activities under California Fish and Game Code Sections 1600-1616.

2.1) Federal Clean Water Act: Section 404

Section 404 of the federal Clean Water Act (CWA) applies to "Waters of the United States" (WoUS). By definition these include waterways that could be used for interstate commerce and their tributaries, including any waters that flow into traditional navigable waters. In non-tidal waters, the limits of jurisdiction are "ordinary high water marks" (OHWM) such as stream banks.

There have been recent changes to the definition of WoUS. See the jurisdictional delineation report for details. Final determination and delineation of federal jurisdiction is made by the USACE and not by the project biologists. Therefore, fieldwork and documentation of the site conditions are done as a preliminary delineation until the USACE reviews and concurs with the results.

2.2) Federal Clean Water Act: Section 401 and Porter-Cologne

The RWQCB has jurisdiction over wetlands, WoUS, and Waters of the State under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne) under the California Water Code (§ 13000, et seq.) Permitting is required for activities that will result in a discharge of soils, nutrients, chemicals, detrital materials, or other pollutants into WoUS, Waters of the State, or adjacent wetlands that will affect the water quality of those bodies and the watershed.

2.3) California Fish and Game Code, Section 1600

The CDFW, through provisions of the California Fish and Game Code (Sections 1600-1616), is empowered to issue agreements ("Lake and Streambed Alteration Agreements") for projects that will adversely affect wildlife habitat associated with any river, stream, or lake edges. The Lake and Streambed Alteration Agreement will typically include required measures to mitigate impacts.

3) California Environmental Quality Act

The California Environmental Quality Act (CEQA) and CEQA Guidelines (§ 15000 et seq.) require identification of environmental effects from discretionary projects. Significant effects are to be mitigated by avoidance, minimization, rectification, or compensation whenever possible.

Effects to all state and federal listed species are considered significant under CEQA. In addition to formally listed species, CEQA considers effects to species that are demonstrably endangered or rare as important or significant. These definitions can include state designated species of special concern, federal candidate and proposed species, California Natural Diversity Database (CNDDB) tracked species, and California Rare Plant Rank (CRPR) 1B and 2 plants.

Appendix G of the CEQA Guidelines specifically addresses biological resources and encompasses a broad range of resources to be considered.

4) California Endangered Species Act

California Endangered Species Act (CESA) definitions of endangered and threatened species parallel those defined in the FESA. The CESA defines an endangered species as “. . . a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes including loss of habitat, change in habitat, over exploitation, predation, competition or disease.” Endangered species are in serious danger of becoming extinct and threatened species are likely to become endangered species in the foreseeable future (according to Sections 2062 and 2067, respectively, of the California Fish and Wildlife Code). Candidate species are those under formal review by the CDFW for listing as endangered or threatened (Section 2067). Prior to being considered for protected status, the CDFW designates a species as being of special concern. Species of Special Concern are those for which the CDFW has information indicating population decline.

5) California Natural Diversity Database

The California Natural Diversity Database (CNDDDB) is a database that ranks overall condition of listed and special status species and sensitive vegetation communities on global (throughout its range) and state (within California) levels. The CNDDDB includes documented occurrences of listed and special status species that have been reported to CDFW. State ranking is numerical, ranging from one to five (S1 to S5), with one indicating very few remaining individuals or little remaining habitat and five indicating a demonstrably secure to ineradicable population condition.

6) California Rare Plant Rank

The California Native Plant Society (CNPS) Inventory of Rare and Endangered Species includes documented occurrences of special status plant species that are available through the Consortium of California Herbaria and other sources. The CNPS, in coordination with CDFW, has cataloged California's rare and endangered plants into lists according to population distributions and viability. These lists are numbered and indicate the following California Rare Plant Ranks (CRPR): (1A) presumed extinct in California; (1B) rare, threatened, or endangered throughout their range; (2A) presumed extirpated in California, but more common in other states; (2B) threatened or endangered in California, but more common in other states; (3) more information is needed to establish rarity; and (4) plants of limited distribution in California (i.e., naturally rare in the wild), but whose populations do not appear to be susceptible to threat. A CRPR may also have an extension (e.g., 1B.x) that indicates current level of threat: seriously threatened (x.1), moderately threatened (x.2), or not very threatened (x.3).

7) Information for Planning and Consultation

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) is a database that includes federally listed endangered or threatened species and species proposed for listing, designated critical habitat, Birds of Conservation Concern, and other federally regulated lands and biological resources.

8) Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711) is an international treaty that made it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Executive Order 13186 ensures that environmental analyses of federal actions required by the National Environmental Policy Act (NEPA) or other established environmental review processes evaluate the effects of actions on migratory birds, with emphasis on species of concern. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) or loss of habitat upon which the birds depend could be considered “take.”

9) Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) provides for the protection of the bald eagle and the golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit (16 U.S.C. 668(a); 50 CFR 22). “Take” includes to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. “Disturb” means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause injury to an eagle, a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior, or nest abandonment.

10) California Fish and Game Code, Sections 3503 and 3513

California Fish and Game Code Section 3503 prohibits take, possession, or needless destruction of bird nests or eggs except as otherwise provided by the Code; Section 3503.5 prohibits take or possession of birds of prey or their eggs except as otherwise provided by the Code; and Section 3513 provides for the adoption of the provisions of the federal Migratory Bird Treaty Act, described above.

11) Western Riverside County Multiple Species Habitat Conservation Plan

The County of Riverside, including eight (8) additional land jurisdictions and 14 cities, have prepared a Multiple Species Habitat Conservation Plan (MSHCP) for western Riverside County.

The MSHCP will build upon existing preserves and provide connectivity and wildlife corridors throughout the region. The MSHCP proposes to conserve approximately 500,000 acres and 146 different species.

The MSHCP was approved by the county on June 17, 2003, and an Implementation Agreement (IA) between the USFWS, the CDFW, and the County was executed and an associated USFWS Section 10(a)(1)(B) Permit (No. TE-088609) was issued on June 22, 2004. The permit grants take authorization for certain species identified in the permit as "Covered Species Adequately Conserved."

The MSHCP establishes seven (7) core reserve areas and associated linkages between proposed and existing core areas. The MSHCP divides areas into Criteria Cells using USGS coordinates and establishes conservation goals for each Cell. If a property is located in a Cell, the proponent will be required to undergo a Habitat Acquisition and Negotiation Strategy (HANS) determination with the County of Riverside.

Focused surveys are required for species identified as not adequately conserved under the MSHCP if suitable habitat is present onsite. If focused surveys are determined necessary and species identified as not adequately conserved under the MSHCP occur onsite, the proponent may be required to undergo a Habitat Acquisition and Negotiation Strategy (HANS) determination with the County of Riverside. If a single-family home or mobile home is to be placed on an existing legal lot, permitting will be reviewed according to the procedures outlined in MSHCP Section 6.1.1, *Expedited Review Process for Single-Family Homes or Mobile Homes To Be Located on an Existing Lot Within the Criteria Area*.

Section B (Species Accounts) of Volume 2 of the MSHCP (Dudek 2003) lists the following objectives for burrowing owl conservation/protection:

Objective 1

Include within the MSHCP Conservation Area at least 27,470 acres of suitable primary habitat for the burrowing owl including grasslands.

Objective 2

Include within the MSHCP Conservation Area at least 5 Core Areas and interconnecting linkages. Core areas may include the following: (1) Lake Skinner/Diamond Valley Lake area (Existing Core C plus Proposed Extension of Existing Cores 5, 6, 7; 29,060 acres); (2) playa west of Hemet (Proposed Noncontiguous Habitat Block 7; 1,250 acres); (3) San Jacinto Wildlife Area/Mystic Lake area including Lake Perris area (Existing Core H; 17,470 acres); (4) Lake Mathews (Existing Core C plus Proposed Extension of Existing Cores 2; 23,710 acres); and (5) along the Santa Ana

River (9,670 acres). The Core Areas should support a combined total breeding population of approximately 120 burrowing owls with no fewer than five pairs in any one Core area.

Objective 3

Include within the MSHCP Conservation Area at least 22,120 acres of suitable secondary habitat for the burrowing owl including playas and vernal pools, and agriculture outside of the Core Areas identified above. Areas where additional suitable habitat could be conserved include west of the Jurupa Mountains, near Temescal Wash (i.e., vicinity of Alberhill), near Temecula Creek, within the Lakeview Mountains, Banning, the Badlands, Gavilan Hills, and Quail Valley.

Objective 4

Include within the MSHCP Conservation Area the known nesting locations of the burrowing owl at Lake Perris, Mystic Lake/San Jacinto Wildlife area, Lake Skinner area, the area around Diamond Valley Lake, playa west of Hemet, Lakeview Mountains, Lake Mathews/Estelle Mountain Reserve and Sycamore Canyon Regional Park.

Objective 5

Surveys for burrowing owl will be conducted as part of the project review process for public and private projects within the burrowing owl survey area where suitable habitat is present (see Burrowing Owl Survey Area Map, Figure 6-4 of the MSHCP, Volume I). The locations of this species determined as a result of survey efforts shall be conserved in accordance with procedures described within Section 6.3.2, MSHCP, Volume I and the guidance provided below:

Burrowing owl surveys shall be conducted utilizing accepted protocols as follows. If burrowing owls are detected on the project site, then the action(s) taken will be as follows:

- 1) If the site is within the Criteria Area, then at least 90 percent of the area with long-term conservation value will be included in the MSHCP Conservation Area. Otherwise:
- 2) If the site contains or is part of an area supporting less than 35 acres of suitable habitat or the survey reveals that the site and the surrounding area supports fewer than 3 pairs of burrowing owls, then the on-site burrowing owls will be passively or actively relocated following accepted protocols.
- 3) If the site (including adjacent areas) supports three or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat and is non-contiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and burrowing owl pairs will be conserved onsite.

The survey and conservation requirements stated in this objective will be eliminated when it is demonstrated that Objectives 1 – 4 have been met.

Objective 6

Pre-construction presence/absence surveys for burrowing owl within the survey area where suitable habitat is present will be conducted for all Covered Activities through the life of the permit. Surveys will be conducted within 30 days prior to disturbance. Take of active nests will be avoided. Passive relocation (use of one-way doors and collapse of burrows) will occur when owls are present outside the nesting season.

Objective 7

Translocation sites for the burrowing owl will be created in the MSHCP Conservation Area for the establishment of new colonies. Translocation sites will be identified, taking into consideration unoccupied habitat areas, presence of burrowing mammals to provide suitable burrow sites, existing colonies and effects to other Covered Species. Reserve Managers will consult with the Wildlife Agencies regarding site selection prior to translocation site development.

12) City of Corona General Plan

Chapter 5 of the City of Corona General Plan addresses Environmental Resources within the City of Corona Corporate Boundaries and provides direction regarding the conservation and development of natural resources. Considered in this report are those sections on hydrological and biological resources, including habitats, drainages, and species. Where state, federal, or MSHCP exceed the Corona General Plan requirements we considered them in those sections above because many of these goals are considered routinely in project design based on constraints from the State of California, USACE, and CDFW permit processing and the Riverside County MSHCP. For example: Goal 10.1.2, to "...minimize adverse impacts on water resources through the use of Best Management Practices," is also a goal of the CDFW and the MSHCP and is considered in the DBESP and the Jurisdictional Mitigation Plan.

However, two goals are not otherwise addressed in these processes specifically and are assessed in this report:

- Goal 10.10.5: "Conserve the oak tree resources in the City and SOI areas," and
- Goal 10.9.1: "Where riparian corridors are retained, they shall be protected by an adequate buffer with a minimum 100-foot protection zone from the edge of the tree, shrub, or herb canopy."

APPENDIX E: GEC BURROWING OWL SURVEY REPORT

APPENDIX F: GEC RARE PLANT SURVEY REPORT

APPENDIX G: GEC LEAST BELL'S VIREO SURVEY REPORT

APPENDIX H: L&L 2017 BOTANICAL SURVEY REPORT

APPENDIX I: 2024 CROTCH BUMBLE BEE SURVEY REPORT

**APPENDIX J: HUFFMAN 2024 WET AND DRY SEASON
FAIRY SHRIMP SURVEYS**