

REVISION
WESTERN RIVERSIDE COUNTY
MULTIPLE SPECIES HABITAT CONSERVATION PLAN
CONSISTENCY ANALYSIS

OAK VALLEY NORTH COMMERCE CENTER PROJECT
9950 AND 10300 CALIMESA BOULEVARD
CITY OF CALIMESA, RIVERSIDE COUNTY, CALIFORNIA

Permittee:

City of Calimesa
Community Development Department, Planning Division
Kelly Lucia, Planning Manager
908 Park Avenue
Calimesa, CA 92320
Phone: 909.795.9801 x229
klucia@cityofcalimesa.net

Applicant:

Lindsey Mansker
Birtcher Development
450 Newport Center Drive, Suite 220
Newport Beach, CA 92660
Phone: 949.440.1052
s.mulkey@birtcher.com

Consultant:

Leslie Irish
L&L Environmental, Inc.
700 East Redlands Blvd., #U351
Redlands, CA 92373
Phone: 909.335.9897
lirish@lleviroinc.com

OCTOBER 2022, REVISED JANUARY 2023, JUNE 2023, SEPTEMBER 2024

TABLE OF CONTENTS

1.0) EXECUTIVE SUMMARY	5
2.0) INTRODUCTION	9
2.1) Project Area	9
2.2) Project Description	9
2.3) Covered Roads	9
2.4) Covered Public Access Activities	10
2.5) General Setting	10
Table 1a. Precipitation Data Summary	12
Table 1b. Monthly Precipitation 2022 Water Year	12
3.0) RESERVE ASSEMBLY	17
4.0) VEGETATION MAPPING	20
4.1) Methods	20
Table 2. Botanical Survey Dates, Times, and Weather Conditions	21
4.2) Existing Conditions and Results	24
Table 3. Vegetation Communities Present	24
4.3) Impacts	26
4.4) Mitigation	26
5.0) PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS	31
5.1) Riparian/Riverine	31
5.1.1) Methods	31
Table 4. Summary of Wetlands Vegetation Indicator Categories	34
5.1.2) Existing Conditions and Results	34
Table 5. Mapped Soils	35
Table 6. Precipitation and NRCS WETS	37
4.5.1) Drainage 1/Riverine 1	37
4.5.2) Drainage 2/Riverine 2	37
4.5.3) Drainage 3	38
4.5.4) Drainage 4/Riverine 4	38
Table 7a. CDFW Streambeds/State Waters	38
Table 7b. MSHCP Riverine	39
5.1.3) Impacts	44
5.1.4) Mitigation	44
5.2) Vernal Pools	44
5.2.1) Methods	44
5.2.2) Existing Conditions and Results	46
5.2.3) Impacts	47
5.2.4) Mitigation	47
5.3) Fairy Shrimp	47
5.3.1) Methods	47
5.3.2) Existing Conditions and Results	47
5.3.3) Impacts	48
5.3.4) Mitigation	48
5.4) Riparian Birds	48
5.4.1) Methods	48

5.4.2) Existing Conditions and Results	48
5.4.3) Impacts	49
5.4.4) Mitigation	49
5.5) Other Section 6.1.2 Species	49
Table 8. Potential for Occurrence of Section 6.1.2 Species	50
6.0) PROTECTION OF NARROW ENDEMIC PLANT SPECIES.....	54
6.1) Methods	54
6.2) Existing Conditions and Results	54
6.3) Impacts.....	56
6.4) Mitigation.....	56
7.0) ADDITIONAL SURVEY NEEDS AND PROCEDURES	57
7.1) Criteria Area Plant Species.....	57
7.2) Amphibians	57
7.3) Burrowing Owl.....	57
7.3.1) Methods.....	57
Table 9. Burrowing Owl Survey Dates, Times, and Weather Conditions.....	57
7.3.2) Existing Conditions and Results.....	58
7.3.3) Impacts	59
7.3.4) Mitigation	59
7.4) Mammals.....	61
8.0) INFORMATION ON OTHER SPECIES	62
8.1) Delhi Sands Flower Loving Fly	62
8.2) Species Not Adequately Conserved	62
Table 10. Potential for Occurrence of Species Not Adequately Conserved.....	63
9.0) GUIDELINES PERTAINING TO THE URBAN WILDLANDS INTERFACE.....	67
MSHCP Table 6-2. Plants to be Avoided Adjacent to the MSHCP Conservation Area....	68
10.0) BEST MANAGEMENT PRACTICES	70
11.0) REFERENCES	72
11.0) REFERENCES	72
APPENDIX A.) BIOLOGICAL RESOURCES ASSESSMENT, BURROWING OWL, NESTING RAPTOR, BOTANICAL AND NARROW ENDEMIC PLANT, AND TREE SURVEY	75
APPENDIX B.) WR-MSHCP SECTION 6.1.2 RIPARIAN/RIVERINE DELINEATION	76
APPENDIX C.) DBESP WR-MSHCP SECTION 6.1.2 RIPARIAN/RIVERINE DELINEATION	77

TABLE OF FIGURES

FIGURE 1 PROJECT VICINITY.....13
FIGURE 2 PROJECT LOCATION14
FIGURE 3 AERIAL IMAGE15
FIGURE 4 SOILS MAP16
FIGURE 5 BIOLOGICAL SURVEY AREA23
FIGURE 6 BURROWING OWL & NESTING RAPTOR SURVEY AREA27
FIGURE 8 VEGETATION COMMUNITIES29
FIGURE 9 VEGETATION COMMUNITIES WITH SITE PLAN30
FIGURE 10 CDFW STREAMBEDS / STATE WATERS.....40
FIGURE 11 MSHCP RIVERINE41
FIGURE 12 DRAINAGES AND SITE PLAN42
FIGURE 13 WET & DRY SEASON FAIRY SHRIMP SURVEY MAP43

1.0) EXECUTIVE SUMMARY

The Oak Valley North Commerce Center Project (Project) located in the City of Calimesa in western Riverside County.

The proposed Project consists of a ±95.6-acre business park and light industrial area with four (4) large warehouses and parking and a high-density residential or church land use area of ±11.2 acres (up to 223 dwelling units). The balance of the acreage (3.4 acres) would be designated as roadway. An existing vacant residence and other remnant agricultural structures and equipment present on the site will be removed.

The offsite impact areas consist of road improvements along Calimesa Boulevard and Beckwith Avenue adjacent to the southwest and northeast Project site boundaries, respectively. A portion of the western corner of the site and adjacent offsite areas along Calimesa Boulevard will be impacted by City road improvements that will be implemented prior to the construction of the Project (referred to in this report at the City Road Project Overlap Area).

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. MSHCP Conserved Lands are located about 0.5 mile to the northeast, 0.6 mile to the southwest, and about 0.8 mile to the northwest of the site. Public/Quasi-Public (PQP) Conserved Lands are also located about 0.6 mile to the southwest. MSHCP Proposed Constrained Linkage 23 is located about 0.25 mile north of the Project site.

Surveys required by the MSHCP are a habitat assessment to address riparian/riverine and vernal pool habitats and associated species, burrowing owl (*Athene cunicularia*), and narrow endemic plant species Marvin's (Yucaipa) onion (*Allium marvinii*) and many-stemmed dudleya (*Dudleya multicaulis*). If suitable habitat for these species is present, focused surveys are required.

The site has been historically disturbed by residential and agricultural uses. Vegetation on the site and offsite areas consists of non-native grasslands and wildflower fields, disturbed/developed areas with ornamental plants, and pockets of native coastal sage – chaparral scrub. There are no riparian or other sensitive vegetation communities present. Impacts to vegetation communities and associated habitat would be less than significant and no mitigation is proposed.

Narrow endemic plant species Marvin's onion and many-stemmed dudleya were not observed during surveys, suitable habitat is lacking, and these species are considered absent. No impact to narrow endemic plant species would occur and no mitigation is proposed.

No state or federally listed plant species were observed on the site during surveys. Listed plant species known from the region are either absent from the site or not expected to occur. The site is not within designated critical habitat for any federally listed plant species.

No special status plant species were observed on the site during surveys. Three special status plant species have a moderate potential for occurrence: Plummer's mariposa lily (*Calochortus plummerae*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), and Parry's spineflower (*Chorizanthe parryi* var. *parryi*). Plummer's mariposa lily and Parry's spineflower are covered species under the MSHCP and considered adequately conserved (RCA 2022b). The MSHCP does not require surveys for these species. Smooth tarplant is a covered species under the MSHCP. Surveys for smooth tarplant are required within the MSHCP Criteria Area Species Survey Area (CASSA) and mitigation is required if the species is present. However, the Project is not within the CASSA and surveys and mitigation are not required for smooth tarplant for the Project. No impacts to special status plants other than these three species would occur and no mitigation is proposed.

A tree survey found 166 oaks and non-oak trees on the site consisting of 54 native scrub oaks (*Quercus berberidifolia*), 18 other native trees, and 94 non-native ornamental trees. A total of 29 of the trees have a diameter breast height (DBH) of 24 inches or greater. All of the scrub oaks and the 29 larger trees will be impacted and are regulated by the City of Calimesa (Zoning Code Chapter 18.80 and Section 18.70.120). Most of the smaller (non-oak) trees will also be impacted but are not regulated by the City. Proposed mitigation includes planting replacement oaks and other trees with five (5) years of monitoring. Impacts to oaks and other trees regulated by the City of Calimesa would be less than significant with implementation of proposed mitigation.

No state or federally listed wildlife species were observed on the site during surveys. The site is not within designated critical habitat for any federally listed wildlife species. Listed wildlife species with moderate or high potential to occur on the site are white-tailed kite (foraging) (*Elanus leucurus*), Stephens' kangaroo rat (*Dipodomys stephensi*), and crotch bumble bee (*Bombus crotchii*). White-tailed kite and Stephens' kangaroo rat are MSHCP covered species and considered adequately conserved. Project-related impacts (if any) to Stephens' kangaroo rat would be a covered impact under the MSHCP and no mitigation is proposed. However, state and federal permits issued for the MSHCP do not allow direct mortality or take of white-tailed kite. No direct mortality or take of adult white-tailed kites is anticipated and no mitigation is proposed. The MSHCP also does not provide take authorization for nesting birds, including nesting white-tailed kites (discussed below).

Crotch bumble bee is not a covered species under the MSHCP. Proposed mitigation includes focused surveys, pre-construction surveys, avoidance buffers, and incidental take permitting if the species will be impacted. Focused surveys for crotch bumble bee completed in Fall 2023 were negative for the presence of the bee. However, measures are included which would reduce any potential impacts to crotch bumble bee to a level of less than significant.

Seasonal ponding is present along Calimesa Boulevard and Beckwith Avenue and as a result focused wet and dry season protocol surveys were conducted in 2023-24. No vernal pool plants

were observed on the site and no listed fairy shrimp were observed. The common versatile fairy shrimp (*Branchinecta lindahli*) is present. There would be no impact to listed fairy shrimp species and no mitigation is proposed.

There is no suitable habitat for riparian bird species least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), or western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) on or adjacent to the site. There would be no impact to these riparian bird species and no mitigation is proposed.

Potentially suitable habitat for burrowing owl is present on the site but no owls or owl sign was observed. A preconstruction clearance survey will be required within 30 days prior to the start of site disturbance. If burrowing owls are found on the site at that time, additional mitigation will be required as defined by the MSHCP. Impacts to burrowing owl would be less than significant with implementation of proposed mitigation.

Three (3) special status wildlife species were observed during surveys: orange-throated whiptail (*Aspidoscelis hyperythrus*), Cooper's hawk (*Accipiter cooperii*), and California horned lark (*Eremophila alpestris actia*). All three are covered species under the MSHCP and considered adequately conserved. Project-related impacts (if any) to these species would be a covered impact under the MSHCP and no mitigation is proposed. However, the MSHCP does not provide take authorization for nesting birds (discussed below).

Several other special status wildlife species have not been observed on the site but have a moderate or high potential to occur. Many of these are covered species under the MSHCP and considered adequately conserved. Project-related impacts (if any) to these species would be a covered impact under the MSHCP and no mitigation is proposed. Of the special status species that have moderate or high potential to occur, a few are not covered under the MSHCP. 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 (with the exception of nesting birds and special status bats, discussed below).

Habitat is present for three special status bat species, pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western mastiff bat (*Eumops perotis californicus*), which have a moderate potential to forage and roost on the site. These species are not covered under the MSHCP. A habitat assessment for bats proposed mitigation that includes avoidance of maternity roosts, preconstruction surveys, supervision of tree removal and structure demolition by a bat biologist, exclusion devices, and installation and monitoring of artificial bat roosts to replace occupied roosts. Focused surveys for special status bats will be conducted in 2024. Impacts to special status bats 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. Proposed mitigation includes pre-construction surveys and avoidance buffers. Impacts to nesting birds would be less than significant with implementation of proposed mitigation.

The site provides local movement opportunities for species that live within the site and immediately adjacent undeveloped lands. However, it is outside of the MSHCP Criteria Cells that make up Proposed Constrained Linkage 23, the connectivity area identified in the MSHCP. Therefore, Project-related impacts to wildlife corridors would be less than significant and no mitigation is proposed.

No USGS mapped blue line streams are present, however three (3) ephemeral drainages on the site plus a roadside ditch along Calimesa Boulevard are present. A total of 1.26 acres of CDFW streambed/State waters is present, of which 1.14 acres is also an MSHCP riverine resource subject to Section 6.1.2 of the MSHCP. No state wetland/MSHCP riparian habitat is present, and no federal waters or wetlands are present. The roadside ditch is a manmade feature and therefore not subject to MSHCP Section 6.1.2. The delineation assumes that all of the CDFW streambed/State waters and MSHCP riverine resources on the site will be impacted.

Impacts to CDFW streambed/State waters require permits from CDFW and the Regional Water Quality Control Board (RWQCB). Impacts to MSHCP riverine resources requires preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP). A DBESP has been prepared separately. Proposed mitigation includes regulatory permitting and compensation for impacts at a ratio of no less than 2:1. Project-related impacts to CDFW streambed/State waters and MSHCP riverine resources on the site would be less than significant with implementation of proposed mitigation.

Other proposed mitigation includes biological monitoring and clearance surveys, Workers Environmental Awareness Program (WEAP), flagging or fencing of disturbance areas, and measures to address invasive species, wildlife hazards, and trash. Implementation of these proposed measures, in conjunction with the mitigation summarized above, would avoid and minimize impacts to sensitive biological resources.

2.0) INTRODUCTION

The purpose of this Consistency Analysis (Analysis) is to summarize the biological data collected for the Oak Valley North Commerce Center Project proposed by Birtcher Development and to document the Project's consistency with the goals and objectives of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

Additional information can be found in Appendices A, B, and C.

2.1) Project Area

The Project site consists of Assessor's Parcel Numbers (APNs) 413-260-018, 413-280-016, 413-280-018, 413-280-021, 413-280-030, 413-280-036, 413-280-037, and 413-280-043, totaling ±109.52 acres. In addition, offsite road improvements will impact portions of APNs 413-260-014, 413-260-017, 413-260-019, 413-260-020, and 413-260-052, totaling ±8.13 acres.

2.2) Project Description

The proposed Project is identified as the Oak Valley North Commerce Center and consists of a ±95.6-acre business park and light industrial area with four (4) large warehouses and parking and a high-density residential or church land use area of ±11.2 acres (up to 223 dwelling units). The balance of the acreage (3.4 acres) would be designated as roadway. An existing vacant residence and other remnant agricultural structures and equipment present on the site will be removed. The entire site will be impacted, and all impacts will be permanent. A conceptual site plan is provided in Appendix I.

The offsite impact areas consist of road improvements along Calimesa Boulevard and Beckwith Avenue adjacent to the southwest and northeast Project site boundaries, respectively. A portion of the western corner of the site and adjacent offsite areas along Calimesa Boulevard will be impacted by City road improvements that will be implemented prior to the construction of the Project (referred to in this report at the City Road Project Overlap Area).

2.3) Covered Roads

The proposed Project includes offsite road improvements to Calimesa Boulevard and Beckwith Road. Calimesa Boulevard runs along the southwestern boundary of the site and is identified on the MSHCP Information Map (RCA 2022a) as a covered major road. Beckwith Road runs along a portion of the northeastern boundary of the site and is not an MSHCP covered road.

A City of Calimesa road improvement project along Calimesa Boulevard will overlap a portion of the western corner of the site (City Road Project Overlap Area).

2.4) Covered Public Access Activities

The Project does not include any covered public access activities.

2.5) General Setting

The Project site address is 9950 and 10300 Calimesa Boulevard. The Project site is within the City of Calimesa in western Riverside County, California. It is generally located immediately northeast of Interstate 10 (I-10 freeway) on the northeast side of Calimesa Boulevard, about 500 feet southeast of Singleton Road and about 0.4-mile northwest of Cherry Valley Boulevard. Existing portions of Beckwith Avenue are adjacent to the northeastern boundary of the site (Figure 1).

The site is situated within Township 2 South, Range 2 West, Sections 24 and 25 as shown on the U.S. Geological Survey (USGS) El Casco 7.5' series topographic quadrangle map (Figure 2). Offsite impact areas are also located within these sections.

The site is generally bounded as follows: to the southwest by Calimesa Boulevard and the I-10 freeway with vacant lands, residential developments, and San Timoteo Canyon, the Norton Younglove Reserve, and the Badlands beyond; to the northwest by vacant lands and Singleton Road with scattered commercial/industrial, mobile home park, and residential development beyond; to the northeast by Beckwith Avenue, vacant lands, and residential development with MSHCP conserved lands beyond; to the southeast by a mobile home park, vacant and agricultural lands, and commercial/industrial development with Cherry Valley Boulevard beyond (Figure 3).

The site has been historically disturbed by residential and agricultural uses. Two unpaved driveways enter the site from Calimesa Boulevard. The northernmost driveway (identified as Roberts Road) leads to an abandoned and unsecured single-family residence on a small hilltop, along with remnant foundations of other structures. The southernmost driveway (unnamed) leads to an area that previously had a number of structures (visible on 2006 aerial images) that no longer exist. Piles of old pipes and other debris are present, as well as remnants of old agricultural equipment and small structures. Fencing (mainly barbed wire) is present along portions of the site boundaries. Review of historic aerial images (Google Earth 2022, NETRonline 2022) shows that the site has been disturbed since at least 1959 and is regularly disked for weed abatement.

Vegetation on the site consists of non-native grasslands and wildflower fields, disturbed/developed areas and ornamental plants, and pockets of native coastal sage – chaparral scrub. There are no riparian or other sensitive vegetation communities present. The MSHCP mapped vegetation layer (1994 baseline) depicts the site as mainly grassland with areas of developed/disturbed land along the southeastern side. There is a small area of coastal sage scrub mapped in the easternmost corner. No riparian or Riversidean alluvial fan sage scrub is mapped on the parcel in the 1994 baseline (RCA 2022a).

There are three (3) ephemeral drainages on the site plus one manmade roadside ditch along Calimesa Boulevard. No flowing or ponded water was observed in any of the drainages during surveys.

Topographically, the site is a mixture of relatively flat areas and low relief rolling hills, with elevations ranging from approximately 2,278 feet (694 meters) above mean sea level (amsl) to approximately 2,413 feet (735 meters) amsl. Soils on the majority of the site are mapped as Hanford coarse sandy loam (2 to 8 percent slopes) and (8 to 15 percent slopes, eroded). Other soils present are Ramona sandy loam (8 to 15 percent slopes, severely eroded), Gorgonio gravelly loamy fine sand (2 to 15 percent slopes), Terrace escarpments, and Tujunga loamy sand (channeled, 0 to 8 percent slopes) (NRCS 2022) (Figure 4).

Available precipitation data from the Beaumont and Cranston Remote Automated Weather Stations (RAWS) are summarized in Tables 1a and 1b (WRCC 2022). Data is presented for “water years” (October 1 through September 30). The Beaumont RAWS is located 4.0 miles southeast of the site at an elevation of 2,604 feet (794 meters). The Cranston RAWS is located 19.6 miles southeast of the site at an elevation of 1,950 feet (594 meters).

Average annual precipitation for Beaumont and Cranston RAWS for water years 2012 through 2022 is 12.35 inches and 11.17 inches, respectively (Table 1a). Average annual precipitation for the region (1981 to 2010) is 15 to 20 inches (WRCC 2018). Precipitation during the 2022 water year¹ was 9.14 inches at the Beaumont RAWS and 6.97 inches at the Cranston RAWS with the majority of precipitation falling from December through April (Table 1b).

¹ A water year is October through September. The 2022 water year includes October 2021 through September 2022.

Table 1a. Precipitation Data Summary

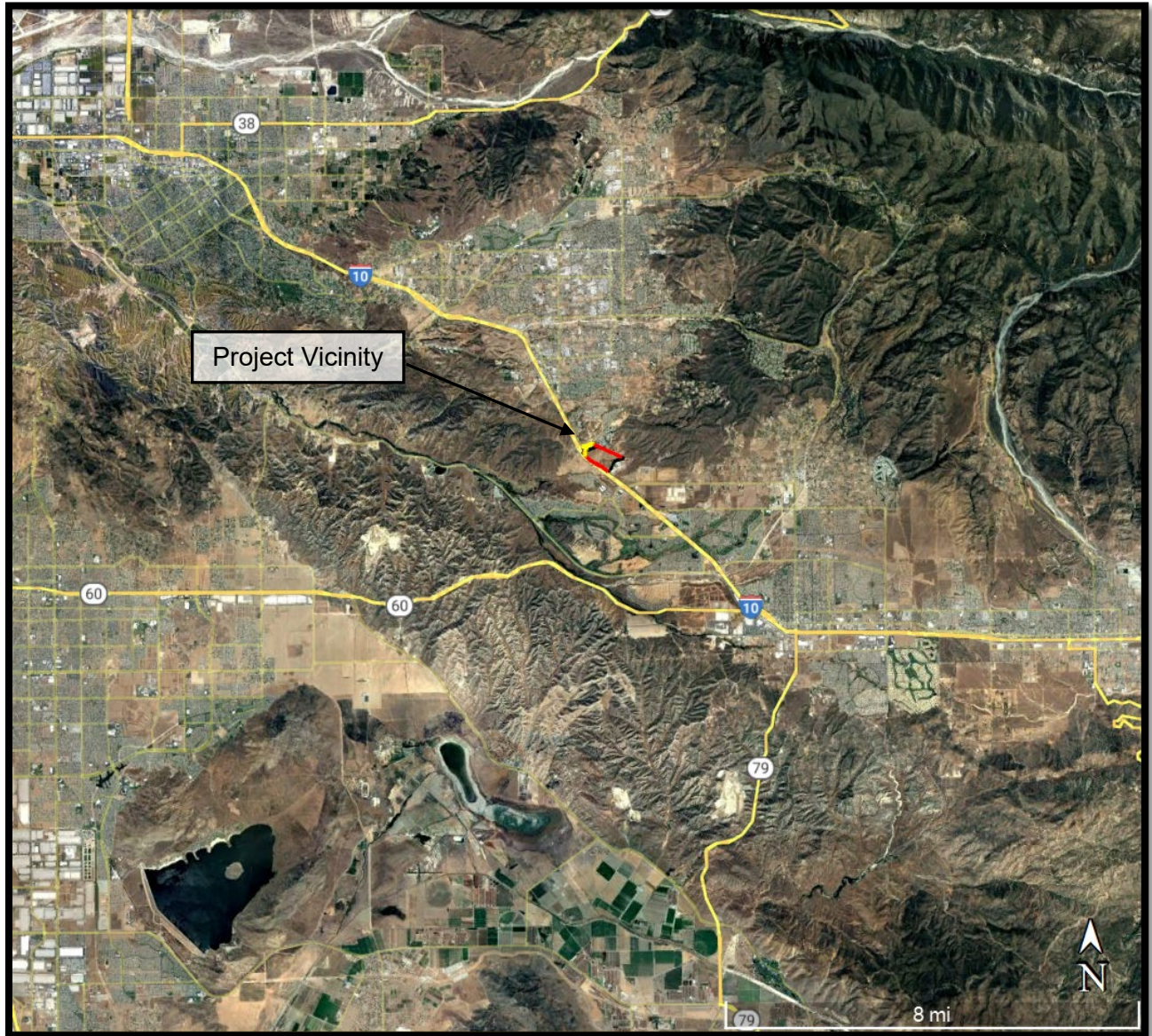
Water Year	Precipitation (inches)	
	Beaumont RAWS	Cranston RAWS
2012	12.36	11.75
2013	9.71	6.31
2014	8.67	9.59
2015	14.64	14.00
2016	11.79*	9.25*
2017	19.04	16.35*
2018	7.24	6.20
2019	19.76	19.83*
2020	16.46	15.89
2021	7.05	6.75
2022	9.14	6.97
Average (2012-2022)	12.35*	11.17*

*missing data.

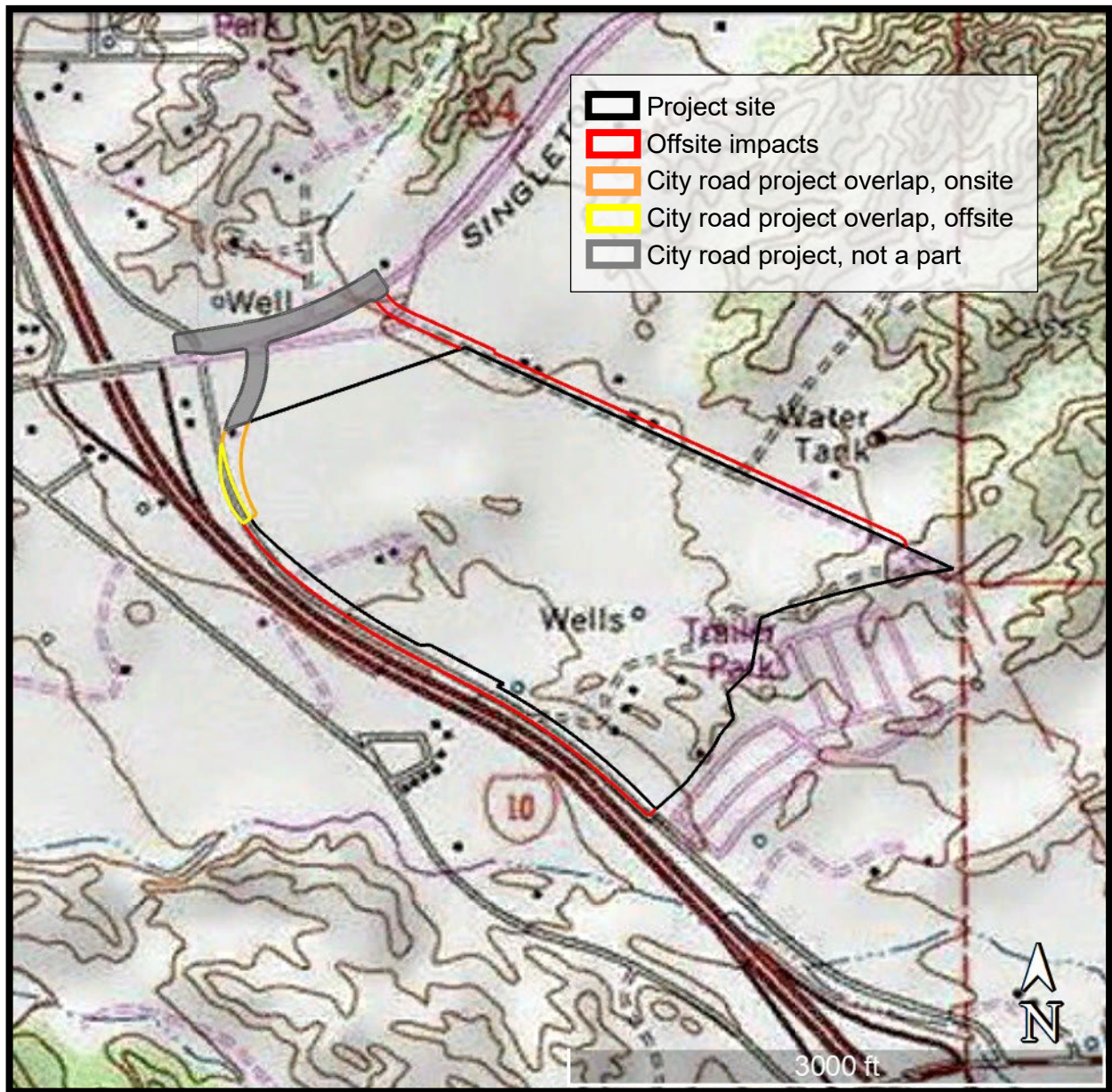
Table 1b. Monthly Precipitation 2022 Water Year

Month	Precipitation (inches)	
	Beaumont RAWS	Cranston RAWS
10.2021	0.88	0.99
11.2021	0	0*
12.2021	5.87	3.41*
01.2022	0.03	0.16
02.2022	0.49	0.83
03.2022	1.22	0.94
04.2022	0.19	0.36
05.2022	0.03	0.02
06.2022	0	0
07.2022	0	0
08.2022	0	0
09.2022	0.43	0.26
Total	9.14	6.97*

*missing data.



Oak Valley North Commerce Center
City of Calimesa, Riverside County, California
Project Vicinity
Figure 1

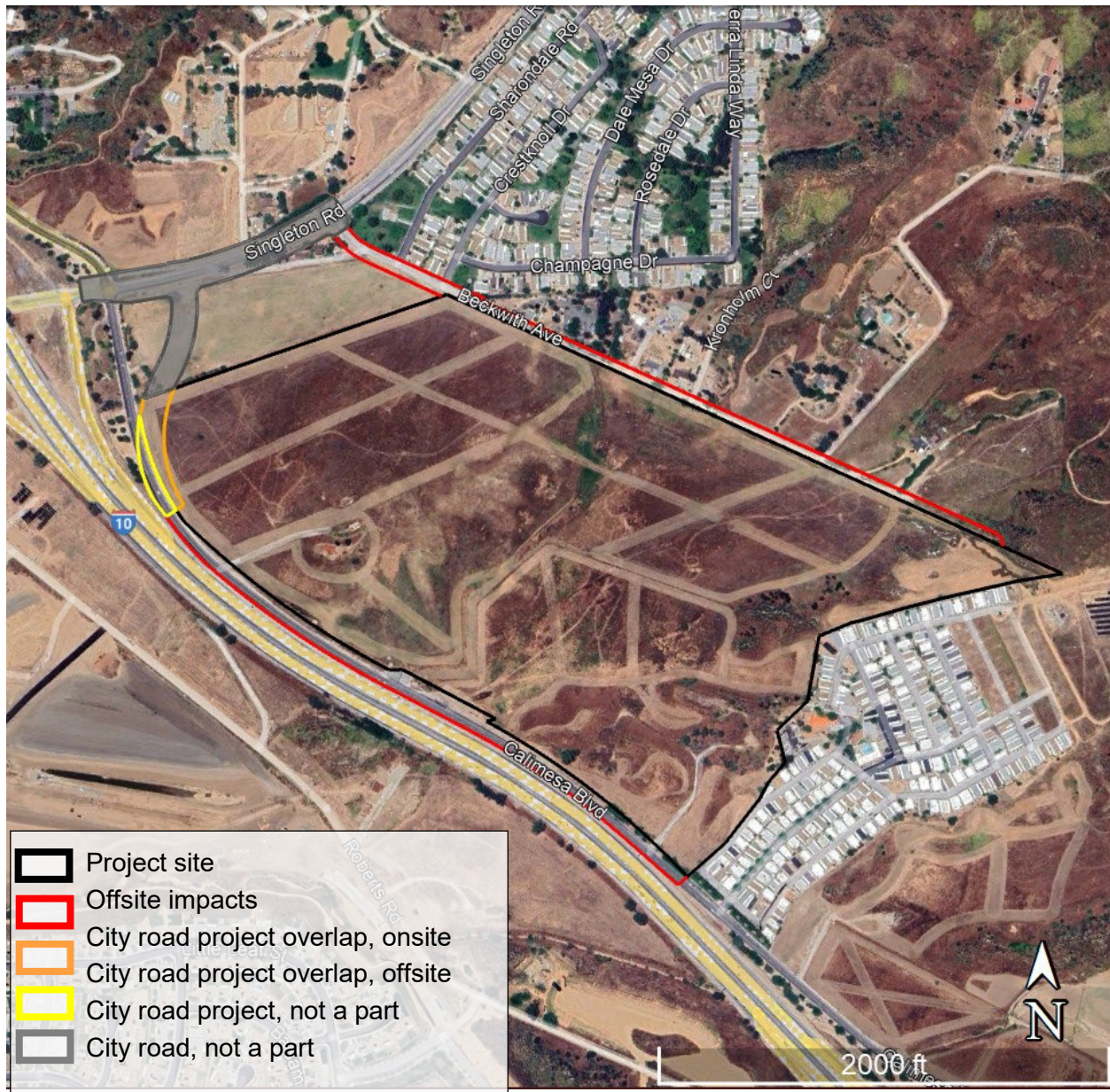


Oak Valley North Commerce Center
City of Calimesa, Riverside County, California

Project Location

Figure 2

(USGS El Casco [2022] Quadrangle,
Township 2 South, Range 2 West, Sections 24 and 25)



Oak Valley North Commerce Center
City of Calimesa, Riverside County, California
Aerial Image
Figure 3
(Aerial obtained from Google Earth, May 2023)



Figure 4 Soils Map

Oak Valley North Commerce Center
 City of Calimesa, Riverside County, California

Soils Map

Figure 4

(Aerial obtained from Google Earth, May 2023; data from NRCS [2023])

3.0) RESERVE ASSEMBLY ANALYSIS

The Project site is not within any MSHCP Criteria Cells or Cell Groups and a reserve assembly analysis is not required.

MSHCP conserved lands are located about 0.5 mile northeast, about 0.6 mile southwest, and about 0.8 mile northwest of the site. The conserved lands to the northeast and northwest are identified as Western Riverside County Regional Conservation Authority (RCA) Conserved Lands. Conserved lands to the southwest are identified as MSHCP Conserved Lands and Public Quasi-Public (PQP) Conserved Lands managed by the Rivers and Lands Conservancy (formerly the Riverside Land Conservancy) (RCA 2022a). There are no other PQP or MSHCP Conserved Lands within a mile of the site.

Additional conserved lands associated with the Norton Younglove Reserve are located further to the southwest, about 1.6 miles from the Project site. The Reserve is owned and managed by the Riverside County Regional Park and Open Space District. Figure 5 shows the Project site in relation to MSHCP core areas and linkages.

The Project site is within Subunit 2: Badlands/San Bernardino National Forest of the MSHCP Pass Area Plan (Dudek 2003). The Biological Issues and Considerations for this subunit are:

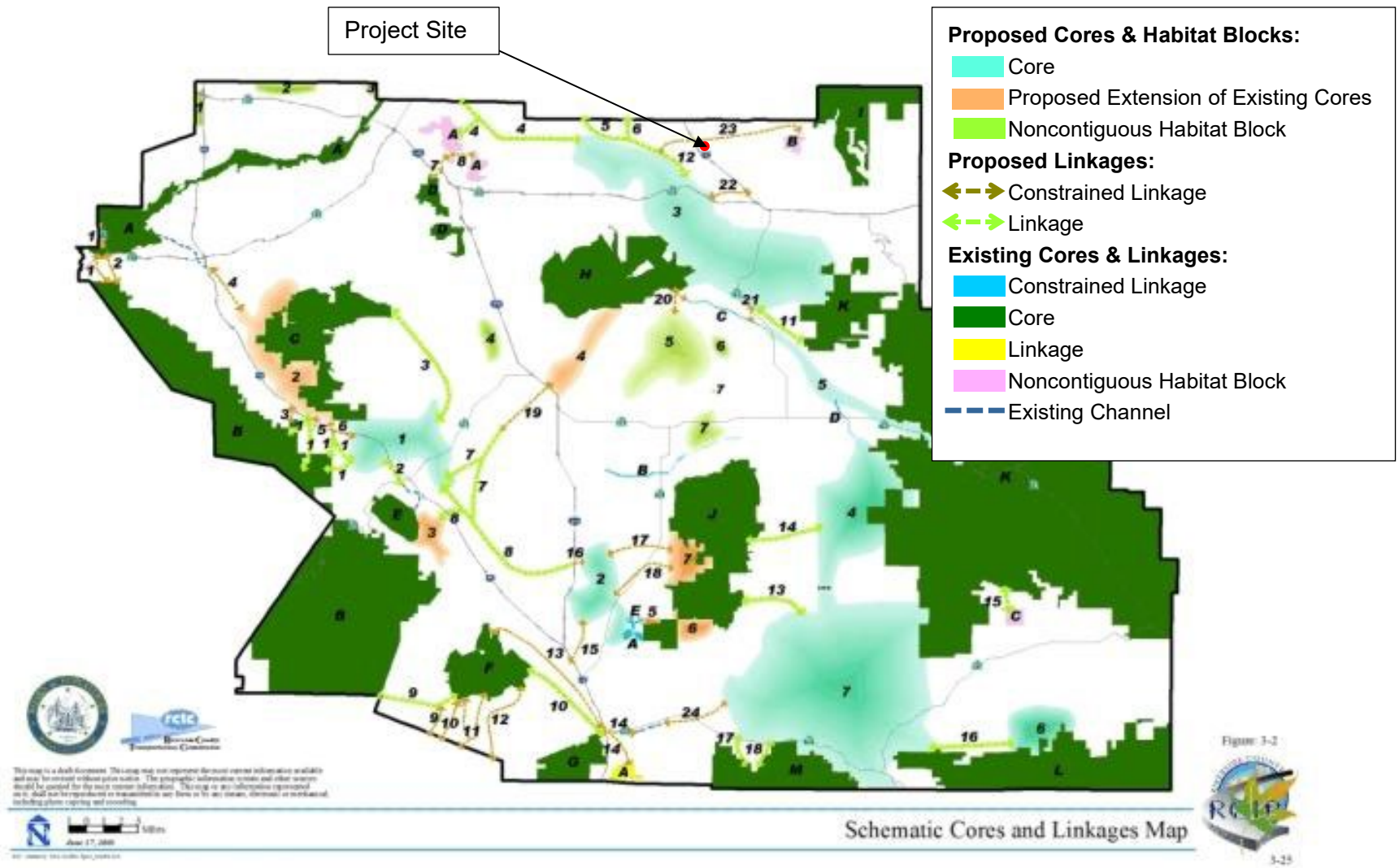
- Provide a connection in the Cherry Valley area from the Badlands to Bogart Park, providing opportunities inside and outside of the Plan Area to San Bernardino County. It is recognized that this connection traverses an urban area, however Conservation of existing natural Habitat and incorporation of ditches or other drainage features into reserve design will assist in providing this contiguous connection.
- Maintain a wetland connection via Noble Creek. It is recognized that this creek is improved in some areas.
- Determine presence of potential linkage area for bobcat (*Lynx rufus*).
- Determine presence of potential Core Area for Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) in tributaries to San Timoteo Creek.
- Maintain Core Area for San Bernardino mountain kingsnake (*Lampropeltis zonata [parvirubra]*).

MSHCP Proposed Constrained Linkage 23 is located about 0.25 mile north of the Project site. Proposed Constrained Linkage 23 is an upland linkage located in the vicinity of Cherry Valley, which provides a connection to Bogart County Park and San Timoteo Creek for certain species. This linkage is constrained by surrounding existing urban and rural residential development in the City of Calimesa. Planning species for which habitat is provided within this linkage include Bell's sage sparrow, Los Angeles pocket mouse, and San Bernardino mountain kingsnake. This linkage likely also provides for movement of common mammals such as bobcat (Dudek 2003).

MHSCP Proposed Core 3 (Badlands/Potrero) is located about 1.6 miles southwest of the Project site. This Core consists mainly of private lands but also contains a few Public/Quasi-Public parcels. The Core is connected to Proposed Linkage 12 (north San Timoteo Creek), Proposed Linkage 4 (Reche Canyon), Proposed Constrained Linkage 22 (east San Timoteo Creek), Existing Core H (Lake Perris), Existing Core K (San Jacinto Mountains), Proposed Linkage 11 (Soboba/Gilman Springs), and Proposed Constrained Linkage 21. The Core also functions as a Linkage, connecting the San Bernardino National Forest to the southwest with San Bernardino County and other conserved areas to the north of the Core. Within the Core, important live-in and movement habitat is provided for Bell's sage sparrow (*Artemisiospiza belli belli*), loggerhead shrike (*Lanius ludovicianus*), cactus wren (*Campylorhynchus brunneicapillus*), Stephens' kangaroo rat (*Dipodomys stephensi*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and mountain lion (*Puma concolor*), which have key populations in the Badlands (Dudek 2003).

MSHCP Proposed Linkage 12 is located about 1.6 miles southwest of the Project site. Proposed Linkage 12 is comprised of riparian habitats associated with San Timoteo Creek. Planning Species which use this Linkage include yellow warbler (*Setophaga petechia*), white-tailed kite (*Elanus leucurus*), yellow-breasted chat (*Icteria virens*), least Bell's vireo (*Vireo bellii pusillus*), and Los Angeles pocket mouse. This Linkage likely provides for movement of common mammals such as bobcat connecting to San Bernardino County and Core Areas in the Badlands (Dudek 2003).

The Project site is not located within or immediately adjacent to existing or proposed MSHCP Conservation Areas. However, flows leaving the Project site are likely hydrologically connected to San Timoteo Creek within Public/Quasi-Public (PQP) Conserved Lands, located approximately 2.2 miles south of the site, and ultimately flowing to the Santa Ana River. Thus, the Project is subject to MSHCP Section 6.1.4, Urban Wildland Interface Guidelines (see Section 9.0).



MSHCP Cores and Linkages Figure 5.

4.0) VEGETATION MAPPING

4.1) Methods

Vegetation community mapping of the site was conducted in 2022 utilizing aerial images and field observations. Field mapping was done by L&L biologist Guy Bruyeyea during botanical surveys of the site from March to September 2022. All vegetation communities onsite were visited on foot. Vegetation communities correspond to the California Natural Community List (CDFW 2022d) and Sawyer et al. (2009). Portions of offsite areas along Beckwith Avenue were not identified until after the surveys had been completed and were not included in 2022 field surveys. Surveys of these offsite areas were completed in Fall 2023. Vegetation mapping of these areas was completed after the first publication of this report.

L&L biologist Guy Bruyeyea conducted botanical surveys of the site from March to September 2022. Approximately 57.5 person-hours were spent walking over the entire site in a meandering pattern to assure sufficient coverage (Table 2). All field surveys were conducted during daylight hours. Digital photographs were taken to record site conditions during the survey. As noted above, portions of offsite areas were not included in botanical field surveys. These areas will be addressed with future surveys and an updated report. The botanical survey area is shown in Figure 6.

Mr. Bruyeyea also spent an additional 3.5 hours visiting reference sites to determine if special status and narrow endemic plants were flowering and identifiable. Reference sites were visited for Marvin's onion, many-stemmed dudleya, Plummer's mariposa lily (*Calochortus plummerae*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), and smooth tarplant (*Centromadia pungens* ssp. *laevis*).

The methodology used is consistent with recommendations by the California Native Plant Society (CNPS 2001), CDFW (2018), and USFWS (2000). Botanical surveys were floristic in nature, meaning that every plant taxon observed was identified to the taxonomic level necessary to determine conservation status. All plant species observed were identified in the field or collected for later identification or confirmation. All species were recorded in field notes and the locations of listed and special status plants (if any) were documented using GPS. Plants of uncertain identity were collected and subsequently identified from keys, descriptions, and illustrations in Baldwin et al. (2012), Abrams (1923, 1944, 1951), Abrams and Ferris (1960), Munz (1974), and Parker (1999).

Table 2. Botanical Survey Dates, Times, and Weather Conditions

Date	Time	Weather	Wind Speed (mph)
03.09.2022	1130-1500	Clear, 58-67°F	1-4
03.16.2022	1300-1700	Clear, 79-84°F	3-7
03.25.2022	1030-1430	Clear, 74-89°F	1-4
04.03.2022	1130-1530	Partly Cloudy, 65-75°F	1-3
04.16.2022	1000-1400	Clear, 65-72°F	1-5
04.21.2022	0630-1130	Partly Cloudy, 57-66°F	0-2
04.29.2022	0830-1130	Clear, 57-68°F	1-5
05.07.2022	0645-1100	Clear, 67-79°F	0-4
05.13.2022	0700-1200	Clear, 68-85°F	0-2
05.16.2022	0600-0945	Clear, 59-67°F	1-3
05.23.2022	0700-1100	Marine Layer/Clear, 58-72°F	0-4
05.29.2022	0945-1230	Clear (Hazy), 68-78°F	1-2
06.20.2022	0630-1130	Marine Layer/Clear, 70-80°F	2-3
07.16.2022	0730-0930	Clear, 75-81°F	1-2
08.10.2022	0730-0915	Clear, 74-79°F	0-1
09.04.2022	0630-0800	Clear, 79-85°F	0-1
02.21.2023	1100-1300	Cloudy, 48-53°F	1-4
03.08.2023	1200-1430	Partly Cloudy, 55-61°F	2-6
03.25.2023	1100-1600	Partly Cloudy, 54-65°F	1-5
04.13.2023	0930-1500	Mostly Cloudy, 54-60°F	1-7
04.21.2023	1130-1500	Clear, 83-88°F	1-5
05.05.2023	0800-1330	Cloudy, 54-65°F	0-3
05.11.2023	1200-1500	Marine Layer/Clear, 68-75°F	1-5
05.22.2023	1100-1400	Clear, 70-76°F	0-3
06.02.2023	1100-1500	Marine Layer/Clear, 65-77°F	2-8
06.17.2023	0900-1300	Clear, 72-86°F	0-5
07.18.2023	0800-1100	Clear, 79-91°F	1-3
08.13.2023	0745-0945	Partly Cloudy, 70-75°F	0-2

Pertinent literature was reviewed to identify local occurrences and habitat requirements of special status species and communities occurring in the region. Literature reviewed included compendia provided by resource agencies (CDFW 2022a, 2022b) and a search of the California Natural Diversity Database (CNDDB; CDFW 2022c) and the California Native Plant Society Inventory of Rare and Endangered Plants (CNPS 2022) for the El Casco quad and adjacent quads (Redlands, Yucaipa, Forest Falls, Sunnymead, Beaumont, Perris, Lakeview, and San Jacinto). A search of the Information for Planning and Consultation database (IPAC; USFWS 2022) was also conducted for the Project site. Survey data collected on the site by L&L in 2020 was also reviewed.

Scientific names of plants follow Baldwin et al. (2012) with updates from the online Jepson eFlora (Jepson 2022). Scientific names of animals follow Stebbins (1985), Jameson and Peeters (1988), Cornell (2022), Sibley (2000), and Arnett (2000) with updates from academic sources. Current conservation status of plant and wildlife species determined from CDFW (2022a, 2022b). Vegetation community classifications follow Sawyer et al. (2009) with updates from CDFW (2022d). State ranks (S ranks) for vegetation communities are from CDFW (2022d).

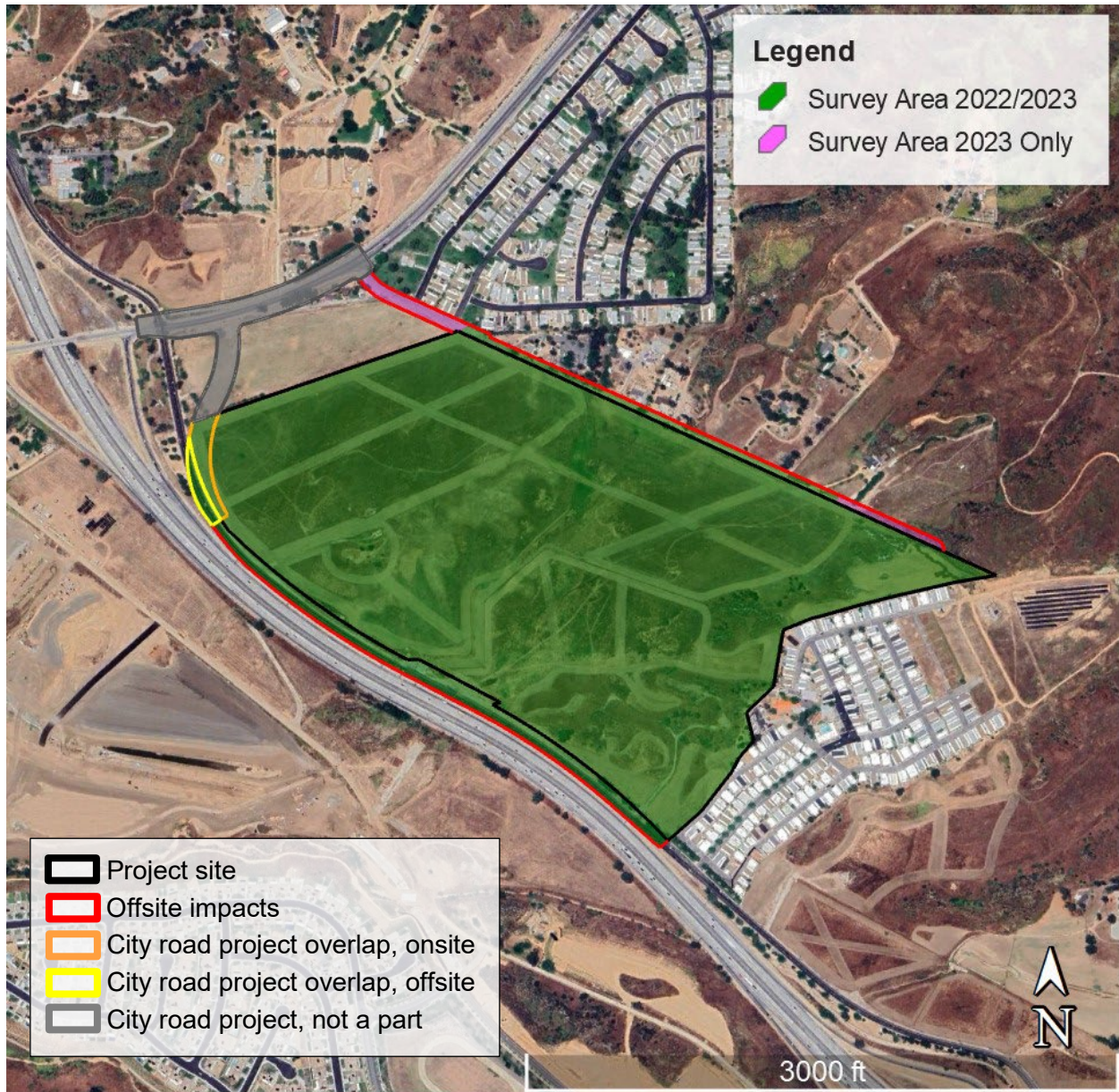


Figure 5 Biological Survey Area

Oak Valley North Commerce Center
City of Calimesa, Riverside County, California
Biological Survey Area
Figure 5
(Aerial obtained from Google Earth, May 2023)

4.2) Existing Conditions and Results

The site has been historically disturbed by residential and agricultural uses. Vegetation on the site and offsite areas consists of non-native grasslands and wildflower fields, disturbed/developed areas with ornamental plants, and pockets of native coastal sage – chaparral scrub. There are no riparian or other sensitive vegetation communities present on the site. Vegetation communities are mapped on Figures 8 & 9 and acreages of each community are provided in Table 3. The City Road Project Overlap Area is calculated separately and is a subset of the total Project acreage.

The MSHCP mapped vegetation layer (1994 baseline) depicts the site as mainly grassland with areas of developed/disturbed land along the southeastern side. There is a small area of coastal sage scrub mapped in the easternmost corner. No riparian or Riversidean alluvial fan sage scrub is mapped on the parcel in the 1994 baseline (RCA 2022a).

Table 3. Vegetation communities present

Vegetation Community	Area Present (acres)					
	Project Site			City Road Project Overlap Area		
	Onsite	Offsite	Total	Onsite	Offsite	Total
Non-native Grasslands and Fields	100.18	0	100.18	0.91	0	0.91
Coastal Sage – Chaparral Scrub	3.91	0.22	4.13	0	0	0
Disturbed/Developed/Ornamental	6.11	8.28	14.39	0	0.47	0.47
Total	110.20	8.50	118.70	0.91	0.47	1.38

Non-native Grasslands and Wildflower Fields

Much of the site consists of former agricultural fields. Some areas are densely vegetated with mostly non-native grasses and other weedy annuals, while other areas have been recently disked. Non-native grassland is dominated by non-native grass species, but may include native, as well as non-native herbs and forbs. The native species common fiddleneck (*Amsinckia intermedia*) is tolerant of disturbed places and is abundant throughout much of the site.

Plants commonly observed in these areas of the site include non-native species ripgut brome (*Bromus diandrus*), red brome (*Bromus rubens*), hare barley (*Hordeum murinum*), wild oats (*Avena fatua*), common bindweed (*Convolvulus arvensis*), and winter vetch (*Vicia villosa*), as well as native species western sunflower (*Helianthus annuus*) and common fiddleneck.

The non-native grasslands and fields on the site are best classified as a mixture of non-native brome grasslands (*Bromus species* Semi-Natural Herbaceous Stands), wild oats grasslands (*Avena species* Semi-Natural Herbaceous Stands), and native fiddleneck fields (*Amsinckia intermedia* Herbaceous Alliance). Fiddleneck fields are ranked by CDFW as S4 (apparently secure, uncommon but not rare) and are not considered sensitive. Brome and wild oats

grasslands are not ranked (CDFW does not assign an S rank to non-native vegetation communities) and are not considered sensitive.

Coastal Sage – Chaparral Scrub

Pockets of disturbed coastal sage – chaparral scrub are found in the southeastern portion of the site. Conspicuous perennials observed in these areas include blue elderberry (*Sambucus mexicana*), scrub oak (*Quercus berberidifolia*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), chamise (*Adenostoma fasciculatum*), and deerweed (*Acmispon glaber*). Native species observed within open patches in these areas include vinegar weed (*Trichostema lanceolatum*), slender wild buckwheat (*Eriogonum gracile*), California sun cup (*Camissoniopsis bistorta*), slender pectocarya (*Pectocarya linearis*), and dove lupine (*Lupinus bicolor*). Non-native grasses dominate the understory in most areas.

This vegetation community is best classified as a mix of California sagebrush – California buckwheat scrub (*Artemisia californica* – *Eriogonum fasciculatum* Shrubland Alliance) and scrub oak chaparral (*Quercus berberidifolia* Shrubland Alliance). CDFW ranks both California sagebrush – California buckwheat scrub and scrub oak chaparral as S4 (apparently secure, uncommon but not rare) and they are not considered sensitive.

Disturbed/Developed/Ornamental

Developed and disturbed areas onsite include existing structures, foundations or remnants of structures, roads/driveways, and other areas that have been disturbed by human activities. Non-native ornamental trees are present in association with current and former onsite residences and other structures. Non-native/ornamental trees and shrubs observed in these areas include ornamental pine (*Pinus species*), ornamental fir (*Abies species*), olive (*Olea europea*), Cootamundra wattle (*Acacia baileyana*), Brazilian pepper tree (*Schinus terebinthifolius*), Chinese elm (*Ulmus parviflora*), firethorn (*Pyrocantha coccinea*), and other ornamentals. Native California fan palms (*Washingtonia filifera*) are also present, but were likely planted on the site.

Disturbed areas of the site, particularly along site margins or roads, have many non-native plant species including (but not limited to) Mediterranean grass (*Schismus barbatus*), redstem filaree (*Erodium cicutarium*), long-beak filaree (*Erodium botrys*), tocalote (*Centaurea melitensis*), mustards (*Brassica*, *Hirschfeldia*, and *Sisymbrium species*), common groundsel (*Senecio vulgaris*), common sow thistle (*Sonchus oleraceus*), prickly lettuce (*Lactuca serriola*), pineapple weed (*Matricaria discoidea*), Russian thistle (*Salsola tragus*), and cheeseweed (*Malva parviflora*). A few native plant species found in disturbed areas include common fiddleneck, doveweed (*Croton setiger*), horseweed (*Erigeron canadensis*), and telegraph weed (*Heterotheca grandiflora*).

4.3) Impacts

Onsite and offsite Project impacts include 100.18 acres of non-native grassland and wildflower fields, 13.34 acres of disturbed/developed/ornamental areas, and 4.13 acres of coastal sage – chaparral scrub (Table 3). Grading impacts include the entire site.

4.4) Mitigation

Non-native grasslands and disturbed/developed/ornamental areas are not native vegetation communities, and the loss of these areas would have no impact on the extent of native vegetation communities in the region. No mitigation is proposed.

Native fiddleneck fields are mixed with the non-native grasslands. Fiddleneck fields are found throughout western Riverside County as well as other coastal southern and central California counties (Sawyer et al. 2009). The permanent loss of fiddleneck fields on the Project site would not have a substantial effect on the extent of this vegetation community in the region, the impact would be less than significant, and no mitigation is proposed.

The types of coastal sage – chaparral scrub present (California sagebrush – California buckwheat scrub and scrub oak chaparral) are not sensitive vegetation communities and are both ranked by CDFW as S4 (apparently secure, uncommon but not rare). These vegetation communities are found throughout western Riverside County as well as other coastal southern and central California counties (Sawyer et al. 2009). The permanent loss of coastal sage – chaparral scrub on the Project site would not have a substantial effect on the extent of this vegetation community in the region, the impact would be less than significant, and no mitigation is proposed.

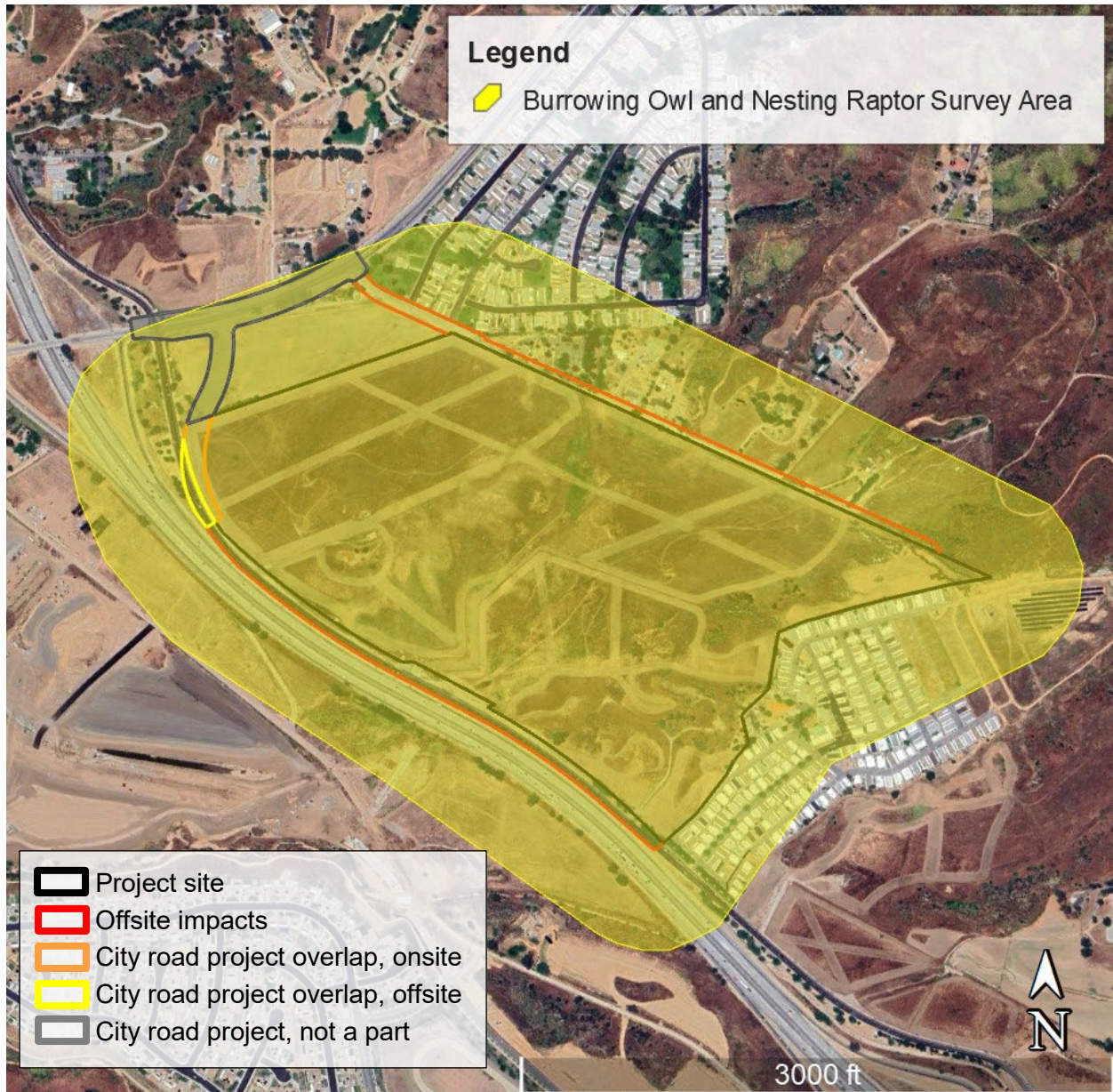


Figure 6 Burrowing Owl & Nesting Raptor

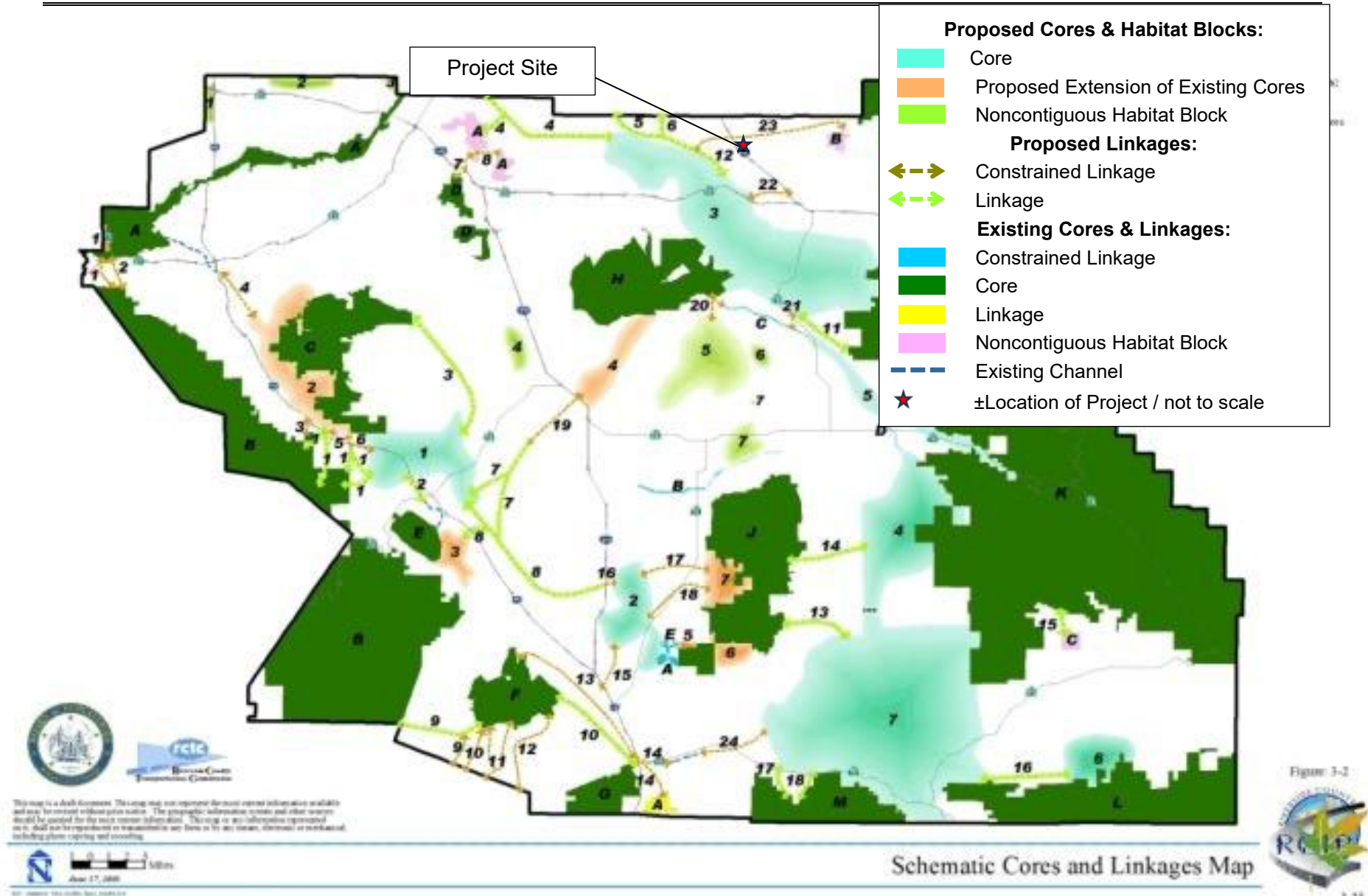
Oak Valley North Commerce Center
City of Calimesa, Riverside County, California

Burrowing Owl and Nesting Raptor Survey Area

Figure 6

(Aerial obtained from Google Earth, May 2023)

Survey area with 500-foot buffer shown in yellow fill.



MSHCP Cores and Linkages Oak Valley North Commerce Center, Figure 7



Figure 7 Vegetation Communities

Oak Valley North Commerce Center
City of Calimesa, Riverside County, California

Vegetation Communities

Figure 8

(Aerial obtained from Google Earth, May 2023)

Green = coastal sage – chaparral scrub, blue = disturbed/developed/ornamental, uncolored = non-native grassland and wildflower fields. .

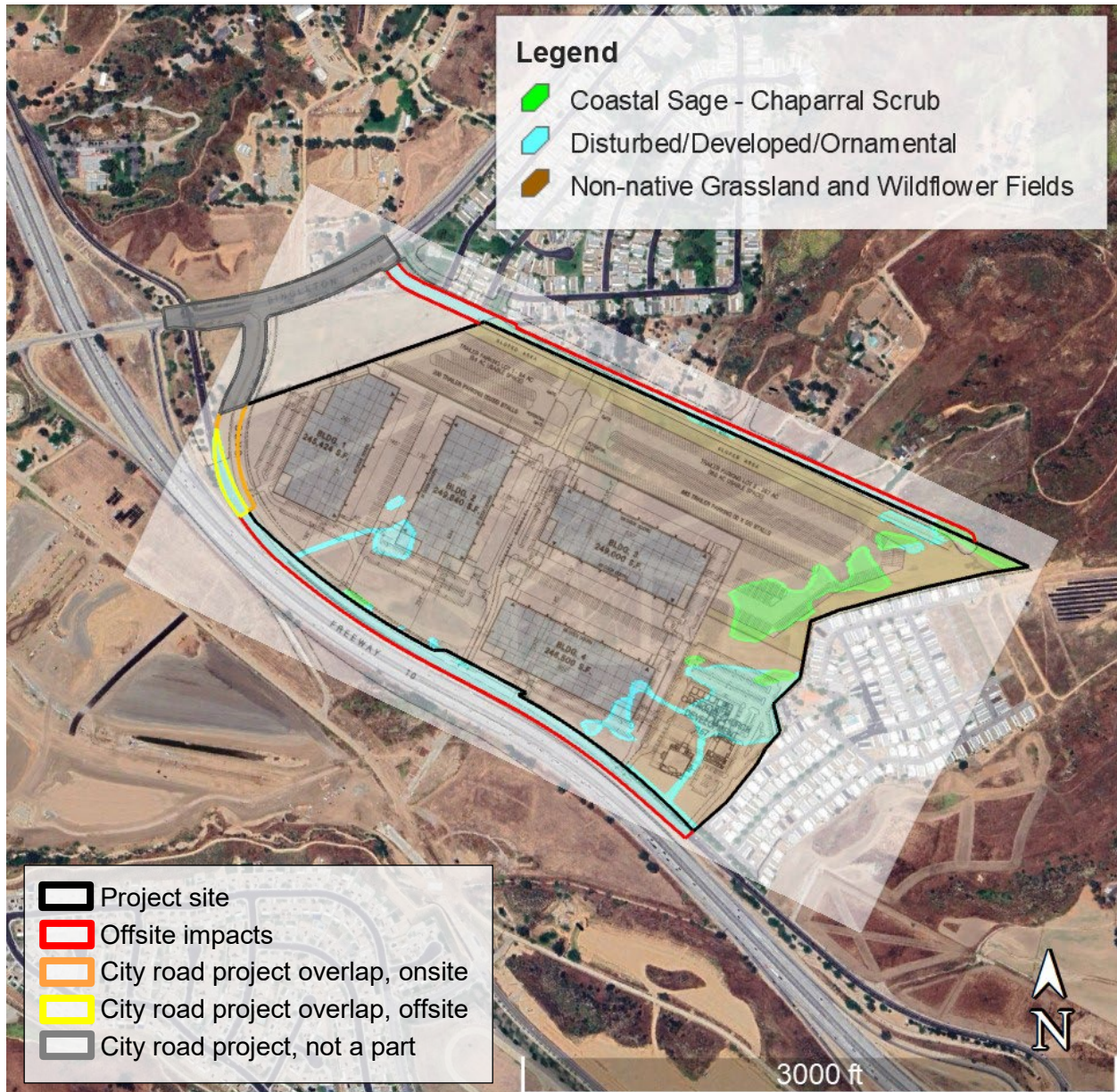


Figure 8 Vegetation Communities with Site

Oak Valley North Commerce Center
 City of Calimesa, Riverside County, California
Vegetation Communities

Figure 9

(Aerial obtained from Google Earth, May 2023)

Green = coastal sage – chaparral scrub, blue = disturbed/developed/ornamental, uncolored = non-native grassland and wildflower fields. .

5.0) PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS (SECTION 6.1.2)

5.1) Riparian/Riverine

5.1.1) Methods

Pre-Survey Research Methods and Purpose

A wealth of information is available online and is updated at regular intervals by agencies and universities. To ensure efficiency and greater accuracy in the field, areas of interest are identified during the research stage prior to conducting the field survey. Useful maps are uploaded to handheld GPS and applications are downloaded in preparation for real-time data inquiries and field data collection. The potential for jurisdictional features (riparian/riverine) to occur onsite is assessed via aerial photography, topographic mapping, soil types, trends to hydric conditions, area hydrology, and prior wetlands inventory mapping, etc. Finally, the potential condition of area drainages is forecast based on available rainfall data.

Online data sources include wildlife agencies, California Native Plant Society (CNPS), California Natural Diversity Database (CNDDDB), WebSoil, GlobeXplorer, Google Earth, 2016 Arid West Regional Wetland Plant List, Natural Resources Conservation Service, University of California at Davis, Agriculture and Natural Resources, California Soil Resources Lab, U. S. Department of the Interior Geological Survey and the following web pages:

- <https://www.wunderground.com/dashboard/pws/KCAMONRO6> (Accessed March 2022)
- http://wetland-plants.usace.army.mil/nwpl_static/v33/home/home.html (Accessed March 2022)
- <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> (Accessed March 2022)
- <https://www.fws.gov/wetlands/Data/Mapper.html> (Accessed March 2022)
- <https://viewer.nationalmap.gov/basic/> (Accessed March 2022)
- <http://agacis.rcc-acis.org/?fips=06065> (Accessed March 2022)
- FIRMette Map (Accessed March 2022)
- <https://viewer.nationalmap.gov/basic/> (Accessed March 2022)
- https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ca (Accessed March 2022)
- <https://msc.fema.gov/portal/search?AddressQuery=singleton%20road%20calimesa#searchresultsanchor>

Field Survey Methods and Purpose

Field work was conducted on March 8, 2022, April 5, 2022, May 17, 2022, and May 31, 2022 during which 16 person hours were expended. Test pits were excavated by Joshua Ball under the direction of Leslie Irish on July 22, 2022. During our analysis, L&L personnel used indicators of wetlands vegetation as listed in Table 4.

The project boundaries were investigated to identify areas where water is received onto the property or transmitted offsite to downstream resources. These areas were then walked, measured, and assessed via three (3) criteria to determine presence or absence of evidence of flow, hydrophilic vegetation, or hydric soil conditions. Where evidence of flow is present, combined with or without hydrophytes, soils are examined for anoxic conditions. Soils identified as suitable for development of hydric conditions are given special attention. Soil color characteristics are evaluated using a "Munsell color chart" and all data are reported on appropriate Arid West Wetland Determination Data Forms (WD). The hydrology criterion is satisfied by the observation of standing or flowing water or two (2) or more secondary indicators. The soil condition is satisfied by the development of saturated soils with anoxic conditions. The vegetation criterion is satisfied if half or more of the dominant plant species within a feature are ranked as "obligate wetland," "facultative wetland," or "facultative" species (OBL, FACW, or FAC, respectively, see Table 4) for federal jurisdiction, presence of any of these species for state/local jurisdiction, or the presence of woody facultative species for MSHCP jurisdiction. A Wetland Data Point (WDP) is collected for each test pit location and a WD Form is completed.

Vernal Pools

During our investigation, the property was searched for vernal pools. To meet the definition of a vernal pool three (3) factors must be addressed: (1) suitable soil and soil conditions, (2) proper hydrology, and (3) one or more indicator species.

Nomenclature

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 (Plan) area all naturally occurring state drainages are also considered riverine habitat and woody wetland vegetation is considered riparian, while manmade features in otherwise upland areas are not.

Hydric Soils

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support growth and reproduction of hydrophytic vegetation. (<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>)

The NTCHS definition identifies general soil properties that are associated with wetness. To determine whether a specific soil is a hydric soil or nonhydric soil more specific information, such as the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff 1999), "Keys to Soil Taxonomy" (Soil Survey Staff 2014), and the Soil Survey Manual" (Soil Survey Division Staff 2017).

If soils are wet for long enough to be considered hydric, they should exhibit certain properties easily observed in the field. These visible properties are indicators of hydric soils and are specified in "Field Indicators of Hydric Soils in the United States" (Vasilas, Hurt, and Noble 2010). Where appropriate, soils are examined in the field via test pit.

Table 4. Summary of wetlands vegetation indicator categories

Indicator Status	Symbol	Definitions
Obligate	OBL	Almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface.
Facultative Wetland	FACW	Usually occur in wetlands but may occur in non-wetlands. These plants predominantly occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.
Facultative	FAC	Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.
Facultative Upland	FACU	Usually occur in non-wetlands but may occur in wetlands. These plants predominantly occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.
Upland	UPL	Almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

5.1.2) Existing Conditions and Results

Topographically, the site is a mixture of flatlands and low relief rolling hills. Elevation onsite varies, but generally slopes downward from east to west. Soil Survey Geographic (SSURGO) Database shapefiles and Web-Soils identify soils onsite as sandy loams, with a few small areas of terrace escarpments (Figure 4). All soils mapped on the property have a hydric rating of zero, with the exception of Tujunga loamy sand (TvC) that has a rating of 10 (Table 5).

The site has been recently and historically (+45 years) utilized for residential, agricultural, and ranching purposes. Vegetation in the drainages is consistent with the disturbed areas of the site and in some places contains ornamental vegetation.

Soil types are not consistent with an alkali playa or vernal pool complex and pools or depressions characteristic of vernal pool habitat were not noted as present on the subject property.

The Project Site had 0.45 inch of rain in April and 0.03 inch of rain in May. Cumulative rainfall from September 2021 through May 2022 totaled 9.82 inches (Table 6).

Table 5. Mapped soils.

Map unit symbol	Map unit name	Hydric Rating
GmD	Gorgonio gravelly loamy fine sand, 2 to 15 percent slopes	0
HcC	Hanford coarse sandy loam, 2 to 8 percent slopes	0
HcD2	Hanford coarse sandy loam, 8 to 15 percent slopes	0
RaD3	Ramona sandy loam, 8 to 15 percent slopes, severely eroded	0
RaC3	Ramona sandy loam, 5 to 8 percent slopes, severely eroded	0
TeG	Terrace escarpments	0
TvC	Tujunga loamy sand, channeled (0-8% slopes)	10

Soils on the surface of the ground were drained and no water was observed in the test pits on the days of field work. Test pits were located at the lowest point of the drainage or depression near to an inlet structure if present or where other surface indicators are present (Figure 8). No hydric soils or undisturbed vegetation was present in any of the streambeds. All of the test pits excavated in the streambeds/waters stopped at a depth of 10 to 12 inches where an impervious layer was encountered.

Site Specific Hydrology

The U.S. Geological Survey (USGS) the U.S. Fish and Wildlife Service (USFWS) Wetland Mapper shows one (1) Riverine feature running some distance away and parallel to the northwestern boundary of the Project Site, adjacent to Singleton Road. A second unnamed blue-line and Riverine feature is located to the east and flows southwest adjacent to Cherry Valley Boulevard. Flows from within and surrounding the parcel are tributary to San Timoteo Canyon, near Cienega Canyon Preserve.

Geologically, the Project falls within old and young alluvial valley deposits between the San Bernardino Mountains and the San Timoteo Badlands (above Redlands and below Banning Pass). The Project contains low profile disturbed and rerouted erosional feature channels within (Qa) Alluvial sand, gravel, and clay of level areas, covered by residual soil (Holocene), (Qoa) Alluvial gravel and sand, light reddish brown and of granitic and gneissic detritus of San Bernardino Mountains in north areas, brownish gray in south area; top surface slopes slightly from source terrains (Pleistocene/Holocene) (QTsg); Conglomerate/fanglomerate, brownish gray, crudely bedded, of poorly sorted subrounded clasts of granitic and gneissic detritus in sandy matrix, base unexposed, overlain by older alluvium; probably proximal facies of upper part (QTst); exposed adjacent to Banning fault (Pliocene/Pleistocene) (QTst) Upper part, sandstone, light gray to tan, fine to coarse grained arkosic and minor conglomerate of mostly granitic detritus, some gneissic and quartzitic detritus; includes thin layers of soft greenish to light reddish silty claystone, overlain by older alluvium (Pliocene/Pleistocene). The geology of the area is a mix of conditions

caused by faulting that reversed and filled former streambeds. Some erosional events are visible along the I-10 freeway within these depositional soils.

Received Flows

Currently flow is received onto the property at four (4) locations. Two (2) from culverts under the road from the north, one (1) manmade roadside ditch from the southeast corner, and one (1) sheet flow condition from the northeast corner of the project.

Water is transported off the Project in three (3) locations, all via storm drain inlets along Calimesa Road.

Source of Received Flows

Flows received onto the Project are generated in the foothills of the San Bernardino Mountains located to the north. These flows originate within tributaries below the ridgeline just south of and parallel to Kehl Canyon. This topography is oriented in a southwestern direction which directs and controls the flows as well. The area tributary to the Project includes lands south of the ridgeline ($\pm 3,000$ ft. amsl), west of Roberts Street and north of Calimesa/Cherry Valley Boulevard ($\pm 2,500$ ft. amsl). Flows from Kehl Canyon skirt the Project further east along what is now Singleton Road which at the point closest to the Project is located at an elevation of $\pm 2,800$ ft. amsl.

Locally, surface hydrology and tributary features have been truncated and rerouted by development upstream. Where once eroded features of the alluvial fan would have funneled water through the Project it is now routed through a development to the northeast and confined into side yard ditches to be picked up in storm water systems connected subsurface beneath Singleton Road.

Climate and Growing Season

The City of Calimesa and surrounding areas experience seasonal variation in monthly rainfall. The rainy season lasts for five (5) months on average, between November 7 to April 7. Recordings indicate that the most rainfall (1.9 in.) occurs during the 31 days centered around February. The typical growing season in Calimesa lasts from March 19 to November 29, totaling 255 days. Average rainfall for the City of Calimesa is 21.8 inches per year. (<https://weatherspark.com/y/1929/Average-Weather-in-Calimesa-California-United-States-Year-Round>).

Precipitation

Information is available from Natural Resources Conservation Service Wetlands Climate Tables (NRCS WETS) for Riverside County, from neighboring City of Beaumont 2.1 ESE, CA

(CoCoRaHS) (Table 6). During the study period of March, April, and May the project experience 1.93 inches of rain. The Project had an additional 1.01 inches of rain in the 28 days before the study period. Total rainfall in 2022 leading up to the study period was 3.1 inches. The preceding year (in 2021) total rainfall in the project area was 13.38 inches. L&L delineators concluded from this information that if hydric conditions were to exist onsite some form of evidence would be present during the field surveys (<http://agacis.rcc-acis.org/?fips=06065>, (accessed 5/10/22)).

Table 6. Precipitation and NRCS WETS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2018	M	M	M	M	0.55	0.00	0.68	0.11	0.00	1.06	2.31	2.21	M
2019	3.92	9.80	2.34	0.79	2.89	0.00	0.00	0.00	0.19	0.00	3.46	3.55	26.94
2020	0.42	0.99	5.50	4.37	0.03	0.17	0.00	0.08	0.00	0.00	0.58	1.47	13.61
2021	2.52	0.33	2.45	0.67	0.05	0.05	0.59	T	0.08	1.02	0.00	5.62	13.38
2022	0.16	1.01	1.45	0.45	0.03	M	0.00	M	M	M	M	M	M
Mean	1.76	3.03	2.93	1.57	0.71	0.06	0.25	0.05	0.07	0.52	1.59	3.21	17.98

Identified Features

Identified features are listed in Tables 7a and 7b and shown on Figures 10, 11, 12.

Drainage 1/Riverine 1

Drainage 1 (D1)(R1) is a (0.59 acre) non-wetland, non-riparian drainage that enters the Project at Beckwith Avenue via an excavated ditch and extends southward. (D1)(R1) is primarily unvegetated or contains isolated upland vegetation and is regularly disturbed. It is poorly defined away from its northern origins. Portions are compacted or recently tilled. Dominant vegetation is non-native grasses, mustard, and *Amsinckia*. Water was not present on the days of surveys. (D1)(R1) qualifies as state streambed, WoS and MSHCP riverine habitat.

Drainage 2/Riverine 2

Drainage 2 (D2)(R2) is 0.14-acre non-wetland, non-riparian drainage that enters the Project at Beckwith Avenue via a swale and extends southward for a short distance, where it joins with (D1)(R1). (D2)(R2) is unvegetated or contains upland vegetation. It is poorly defined away from the northern origins. (D2)(R2) is regularly disturbed by discing or tilling of the soils. Dominant

vegetation includes mustard, *Amsinckia*, ornamental and non-native trees (almond and tree of heaven). Water was not present on the day of the surveys. (D2)(R2) is a state streambed, WoS and MSHCP riverine habitat (Tables 4a and 4b).

Drainage 3

Drainage 3 (D3) is a roadside ditch parallel to Calimesa Boulevard near the southwestern corner of the project and adjacent to a row of ornamental trees. D3 is a manmade excavated soft bottom feature measuring 0.12 acre. D3 is unvegetated or contains non-native ornamental/non-native trees (Figure 9). No water was present on the days of the surveys. D3 qualifies as a state Streambed and WoS but is not considered MSHCP riparian/riverine, as it is manmade in an otherwise upland area.

Drainage 4/Riverine 4

Drainage 4 (D4)(R4) is is 0.41-acre non-wetland, non-riparian drainage originating at the northeast corner of the property, running in a westward direction parallel to Beckwith Avenue then curving and flowing southward towards Calimesa Blvd. (D4)(R4) is unvegetated or contains upland species with compacted soils and poorly defined beds and banks the entire length. Dominant vegetation is non-native grasses, *Amsinckia* and *Artemisia californica-Erigonum fasciculatum* (Figure 10). Water was not present on the day of the surveys. (D4)(R4) qualifies as state streambed, WoS and MSHCP riverine habitat.

Table 7a. CDFW Streambeds/State Waters.

Name	Square Feet (acres)	Type of Waters	Lat/Long	HGM Code	Comment
D 1	0.59	Riverine Streambed	33°58'41.96"N 117° 2'28.59"W	Riverine	
D 2	0.14	Riverine Streambed	33°58'41.02"N 117° 2'25.47"W	Riverine	
D 3	0.12	Roadside Ditch	33°58'22.18"N 117° 2'27.19"W		Excavated Roadside Ditch
D 4	0.41	Riverine Streambed	33°58'32.81"N 117° 2'5.52"W	Riverine	
Total	1.26				
Impacted	1.26				

Table 7b. MSHCP Riverine.

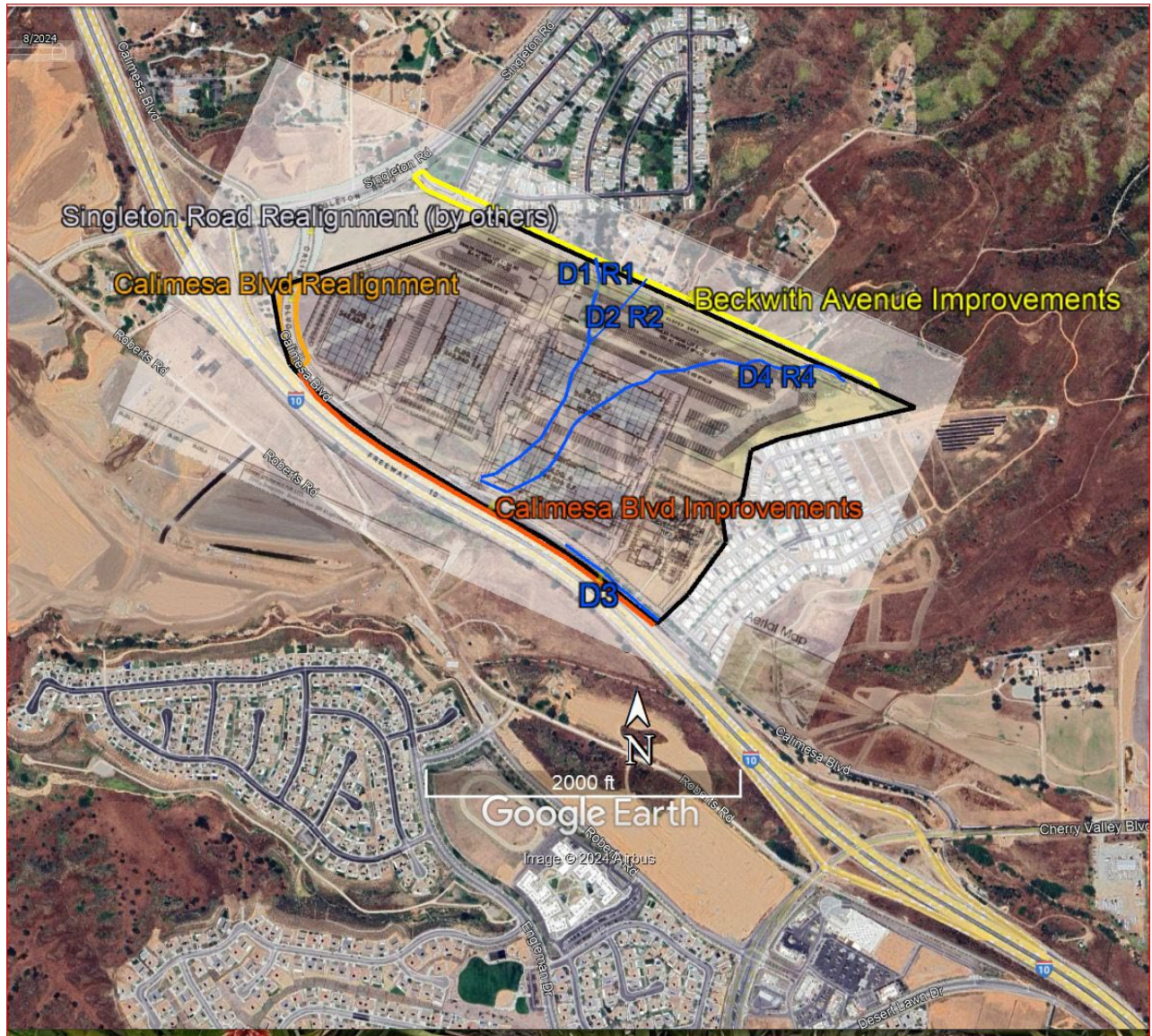
Name	Present Square Feet (acres)	Type of Waters	Lat/Long	HGM Code	Comment
R1	0.59	Riverine	33°58'41.96"N 117° 2'28.59"W	Riverine	
R2	0.14	Riverine	33°58'41.02"N 117° 2'25.47"W	Riverine	
R4	0.41	Riverine	33°58'32.81"N 117° 2'5.52"W	Riverine	
Total	1.14				
Impacted	1.14				



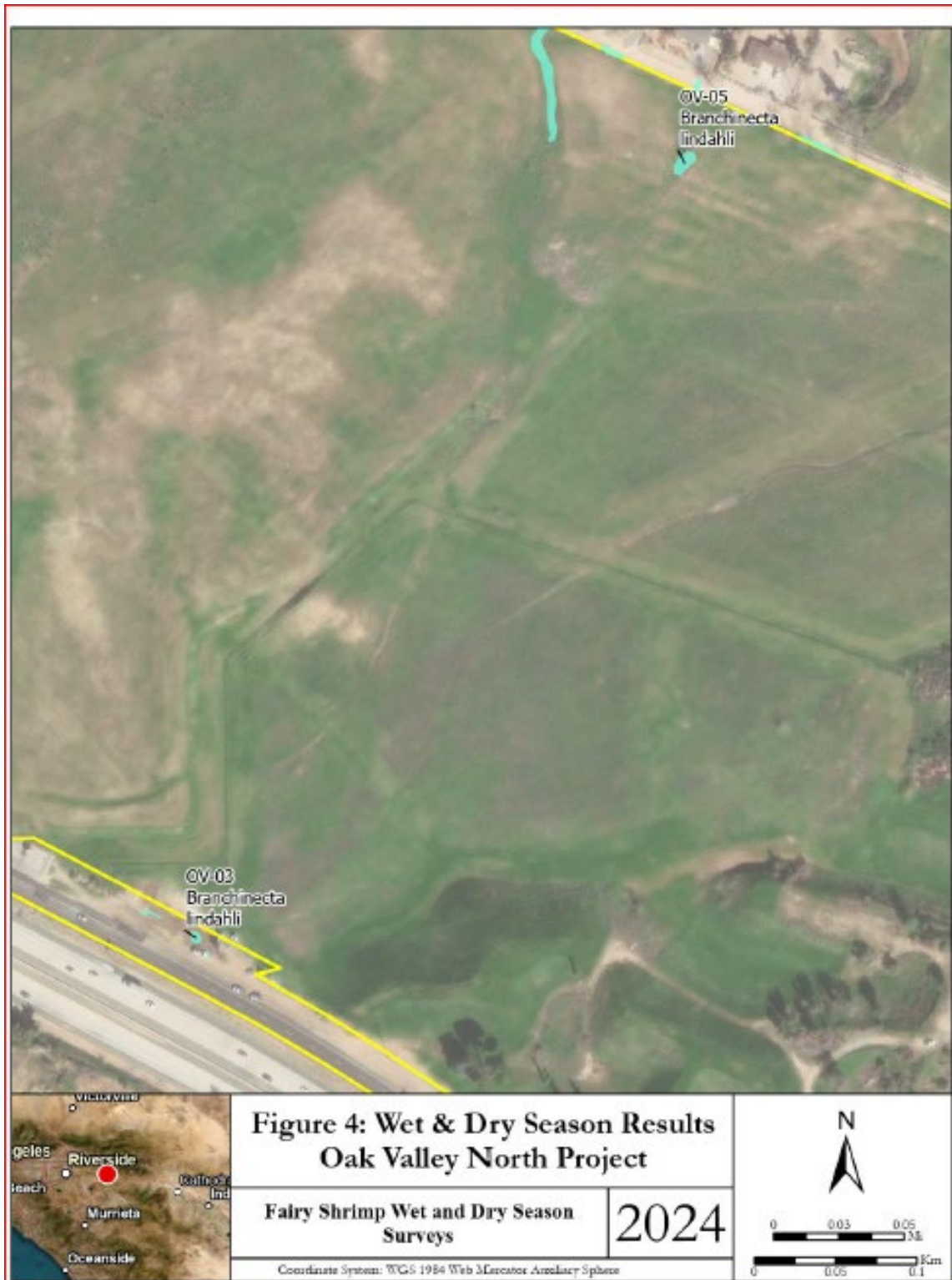
Oak Valley North Commerce Center
City of Calimesa, Riverside County, California
CDFW Streambeds/State Waters
Figure 10



ak Valley North Commerce Center
City of Calimesa, Riverside County, California
MSHCP Riverine Resources
Figure 11



Oak Valley North Commerce Center
City of Calimesa, Riverside County, California
Drainages with Site Plan
Figure 12



Oak Valley North Commerce Center City of Calimesa, Riverside County, California
Wet & Dry Season Fairy Shrimp Survey Map Figure 13

5.1.3) Impacts

A jurisdictional delineation found three (3) ephemeral drainages on the site plus a roadside ditch. A total of 1.26 acres of CDFW streambed/State waters is present, of which 1.14 acres is also MSHCP riverine resources subject to Section 6.1.2 of the MSHCP (Figures 10 & 11). No state wetlands/MSHCP riparian habitat is present, and no federal waters or wetlands are present. The roadside ditch is a manmade feature and therefore not subject to MSHCP Section 6.1.2.

The delineation assumes that all the CDFW streambed/State waters and MSHCP riverine resources on the site will be impacted (Figure 12).

5.1.4) Mitigation

The Project proposes mitigation at no less than a 2:1 ratio for impacts to MSHCP riverine resources. Credits will be obtained prior to issuance of a grading permit or commencing ground-disturbing activities that would impact waters of the state and/or MSHCP riverine resources. Purchase of 1.14 acres of re-establishment and 1.14 acres of rehabilitation mitigation credits within the Riverpark Mitigation Bank (if credits become available for purchase prior to the start of construction) for a total of 2.28 acres of mitigation credits or (1) the purchase of credits of equal or greater value as approved by the city of Calimesa and the USFWS and CDFW (Wildlife Agencies) prior to the start of construction or (2) a permittee responsible mitigation providing an equal or greater functional value to the avoidance of 1.14 acres of onsite riverine habitat in its current condition.

5.2) Vernal Pools

5.2.1) Methods

Biological surveys were conducted on the site from March to September 2022 (see Section 4.1), as well as a jurisdictional delineation conducted from March to July 2022 (see Section 5.1.1). Each survey included an assessment of the potential for vernal pools or ponding areas and associated species. A habitat assessment of seasonal ponding occurred in 2023. Dry season fairy shrimp surveys completed in the fall of 2023. Wet Season Survey occurred in winter of 2023 through late spring 2024 (Hoffman, 2024²).

² Wet season fairy shrimp studies were completed after the original publication of this report and have negative findings for listed species, Hoffman 2024, wet and dry season fairy shrimp final report.

Habitat Assessment

Biologist Garrett Huffman (TE-20186A-3.2) of Huffman Environmental visited the site and conducted an assessed of seasonal ponding in late 2023 to map ponding areas and to determine habitat suitability for supporting fairy shrimp.

Dry Season Focused Survey for Fairy Shrimp

Dry season soil samples were collected from the Project site on October 13, 2023, in accordance with the USFWS Survey Guidelines for Listed Large Branchiopods (USFWS 2017), by Garrett Huffman. Soil samples were collected when the soil (substrate) was dry.

A hand spade was used to collect the sample at each feature taking from the top 1 to 3 centimeters of pool sediment. The USFWS Survey Guidelines provide a formula recommending the number of samples collected per feature based on the approximate size of the feature in square meters. Six ponding features were estimated to be between 2.5 and 24 square meters (0.005 acres), requiring a minimum of 10 collected soil samples for each. Four features were estimated to be between 25 and 235 square meters (0.05 acres), requiring a minimum of 25 collected soil samples. Regardless of feature size, all samples were collected in volumes of 50 to 100 milliliters each. Each sample was collected from the lowest topographic areas within the pool to maximize the potential detection of cysts.

Biologist Charles Black (TE-835549-8) of Ecological Restoration Service conducted dry sample processing and cyst hatching. Soils were processed and examined for cyst presence. 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 6.3-570x 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 ostracod shells and cladoceran ephippia (if any) were also noted in samples.

Cysts were then cultured for identification. Individual Project samples were combined by pool number and hydrated in approximately 500 ml of Arrowhead Mountain Spring water. Plastic culture tubs were placed in a shady location in a San Diego outdoor location (night low temperatures in the low to mid-60s, daily highs in the low 70s to high 80s). Two days after hydration, cultures were fed with several ml of a yeast culture produced by dissolving a gram of table sugar and a gram of instant dry yeast in 50 ml 95 F degree filtered water. Water was added

daily to tubs to replace water lost to evaporation. Mature shrimp were removed periodically from each culture as they became large enough to identify and examined under an Olympus Zoom dissecting microscope.

Wet Season Focused Survey for Fairy Shrimp

Wet season protocol surveys for fairy shrimp was conducted January through May 2024 by Garrett Huffman in accordance with the USFWS Survey Guidelines for Listed Large Branchiopods (USFWS 2017).

Per the USFWS (2017) Guidelines, the wet season generally occurs in California between October and June. Wet season surveys commence once appropriate habitat has become inundated. Appropriate habitat is considered to be inundated when it holds greater than 3 centimeters of standing water 24 hours after a rain event.

All potential habitats must be adequately sampled at 7-day intervals after initial inundation of habitat. Sampling will continue within each potential habitat until it dries or a minimum of 120 consecutive days of inundation has occurred. Sampling will be reinitiated within 7 days of an individual habitat drying and inundating during the same wet season.

Beginning on January 11, 2024 each wet season visit, representative portions of the bottom, edges, and vertical water column of the feature was sampled using a seine, dip net or aquarium net appropriate for the size of the feature until all features were dry which occurred by May 4, 2024 marking the end of the survey season. Data collected for the feature includes average and maximum water depth, water and air temperature, length, width, degree and form of disturbance, presence of fairy shrimp, and observations of any other benthic macroinvertebrates. Vouchering of the species collected will be conducted and delivered to the LA History Museum per USFWS Protocol Guidelines. Survey visits will be discontinued after the features go dry for the season.

5.2.2) Existing Conditions and Results

Soil types mapped on the site are not consistent with an alkali playa or vernal pool complex (Bauder et al 2011). Naturally occurring pools or depressions characteristic of vernal habitat were not observed on the site and no wetland or vernal pool plant species were present. Seasonal ponding is present within road ruts and low points along Calimesa Boulevard and Beckwith Avenue.

No MSHCP species listed for protection associated with riparian/riverine areas and vernal pools were observed. No listed fairy shrimp species was observed during surveys. No vernal pool plants were observed (Figure 13).

5.2.3) Impacts

No naturally occurring vernal pools are present on the site and none would be impacted.

5.2.4) Mitigation

The Project would have no impact to listed or protected vernal pools species and no mitigation is proposed.

5.3) Fairy Shrimp

5.3.1) Methods

Biological surveys were conducted on the site from March to September 2022 (see Section 4.1), as well as a jurisdictional delineation conducted from March to July 2022 (see Section 5.1.1). Each survey included an assessment of the potential for vernal pools or ponding areas and associated species. Dry season fairy shrimp surveys completed in the fall of 2023 found the common, not listed, common versatile fairy shrimp (*Branchinecta lindahli*). Wet Season Survey results, completed in the winter of 2023 through late spring 2024 are consistent with the Dry Season Surveys finding only versatile fairy shrimp (Hoffman, 2024³) and mitigation for impacts is not required.

5.3.2) Existing Conditions and Results

Soil types mapped on the site are not consistent with an alkali playa or vernal pool complex (Bauder et al 2011). Naturally occurring vernal pool depressions and associated native vernal pool vegetation were not observed on the site and no wetland or vernal pool plants were observed. Seasonal ponding occurs within frequently disturbed road ruts/tracks and low points is present along Calimesa Boulevard and Beckwith Avenue where traffic impact are frequent daily.

Dry samples were collected from 10 features and underwent a process to filter out fairy shrimp cysts. Two of the features (OV-03 and OV-05) were positive for *Branchinecta* fairy shrimp cysts. These cysts were introduced to a simulated environment by submerging in water to hatch and then raised to maturity for identification. All fairy shrimp individuals that reach maturity were identified as Lindahl's fairy shrimp.

Wet samples were conducted on 11 features between Feb to April when ponding occurred. Mature fairy shrimp were identified in feature OV-3 and identified as Lindahl's fairy shrimp. OV-05, positive for fairy shrimp during the dry season sampling did not receive enough precipitation to sustain fairy shrimp life cycles. All other features were negative for the presence of fairy shrimp.

³ Wet season fairy shrimp studies were completed after the original publication of this report and have negative findings for listed species, Hoffman 2024, wet and dry season fairy shrimp final report.

No MSHCP species listed for protection associated with riparian/riverine areas and vernal pools were observed. No listed fairy shrimp was observed during surveys.

5.3.3) Impacts

All seasonal ponds within the site will be impacted by the Project. No listed fairy shrimp or listed vernal pool plants was observed on the site and none would be impacted.

5.3.4) Mitigation

The Project would have no impact to listed fairy shrimp and no mitigation is proposed.

5.4) Riparian Birds

5.4.1) Methods

Vegetation mapping was conducted as described in Section 4.1. No protocol surveys for riparian birds were conducted.

5.4.2) Existing Conditions and Results

Least Bell's vireo (*Vireo bellii pusillus*) is state and federally listed as endangered. It is a covered species under the MSHCP and considered adequately conserved, but surveys are required in suitable habitat as described in MSHCP Section 6.1.2 and mitigation is required if the species is present. This species is migratory and breeds in California, arriving in March and departing by September or October. Males establish and defend territories in riparian woodlands and riparian scrub. Territory size ranges from 0.5 to 7.5 acres (USFWS 1998). Dense shrub cover is required for nesting.

There is one CNDDDB documented occurrence of nesting least Bell's vireo within five (5) miles of the site. This occurrence was observed from 1978 to 2013 and is located in riparian habitat in San Timoteo Canyon, about 1.4 miles southwest of the Project site. There is no riparian habitat on or adjacent to the site and no suitable habitat for least Bell's vireo.

Southwestern willow flycatcher (*Empidonax traillii extimus*) is state and federally listed as endangered. It is a covered species under the MSHCP and considered adequately conserved, but surveys are required in suitable habitat as described in MSHCP Section 6.1.2 and mitigation is required if the species is present. This species inhabits dense riparian forests with ample numbers of willows and other associated trees and shrubs.

There are two CNDDDB documented occurrences of nesting southwestern willow flycatcher within five (5) miles of the site. Both occurrences are from 2004 in riparian habitat along Cooper's Creek,

about 3.0 and 3.3 miles south-southeast of the Project site. There is no riparian habitat on or adjacent to the site and no habitat for southwestern willow flycatcher.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is federally listed as threatened and state listed as endangered. It is a covered species under the MSHCP and considered adequately conserved, but surveys are required in suitable habitat as described in MSHCP Section 6.1.2 and mitigation is required if the species is present. This species inhabits extensive riparian thickets or forests with dense, low-level or understory foliage abutting on slow-moving watercourses, backwaters, or seeps.

There are no CNDDDB documented occurrences of nesting western yellow-billed cuckoo within five (5) miles of the site. There is no riparian habitat on or adjacent to the site and no habitat for western yellow-billed cuckoo.

There is no suitable habitat for least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo on or adjacent to the site and these species are considered absent.

5.4.3) Impacts

There is no suitable habitat for least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo on or adjacent to the site, these species are considered absent, and there would be no impact to least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo.

5.4.4) Mitigation

The Project would have no impact to least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo and no mitigation is proposed.

5.5) Other Section 6.1.2 Species

Other Section 6.1.2 species are either absent or not expected to occur, with the exception of smooth tarplant (Table 8).

Smooth tarplant was not observed on the site during surveys conducted during the flowering period for the species. This species has a CRPR of 1B.1 (rare or endangered in California and elsewhere, seriously threatened in California). Smooth tarplant is a covered species under the MSHCP. Surveys for smooth tarplant are required within the MSHCP Criteria Area Species Survey Area (CASSA) and mitigation is required if the species is present in the CASSA. However, the Project is not within the CASSA and surveys and mitigation are not required for smooth tarplant for the Project. A reference site for smooth tarplant was visited on May 4, 2022 along Warren Road in Hemet (about 14 miles south of the Project site at an elevation of 1,510 feet) and

the plants were found to be flowering and identifiable. Smooth tarplant has a low to moderate potential to occur on the site.

If smooth tarplant is present, implementation of the Project could impact this species through loss of habitat and loss of individuals or populations within the disturbance area. Since this species is covered under the MSHCP and the Project is outside of the CASSA, Project-related impacts (if any) to smooth tarplant would be a covered impact under the MSHCP and no mitigation is proposed.

Table 8. Potential for Occurrence of Section 6.1.2 Species

Species	Habitat and Distribution	Potential for Occurrence
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.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<i>Rana muscosa</i> Southern mountain yellow-legged frog	Always encountered within a few feet of water. Tadpoles may require up to 2 years to complete development.	Absent; no perennial aquatic habitat.
<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.	Absent; no perennial aquatic habitat.
BIRDS		
<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.	Absent (foraging and nesting); no suitable habitat, no documented occurrences within 5 mi. (nesting and wintering), a few eBird records within 5 mi. (near water), not observed during surveys.
<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.	Not expected (foraging), absent (nesting); no or marginal foraging habitat, no documented (nesting) occurrences within 5 mi., few eBird records in vicinity (2014-2021, Fisherman's Retreat, Noble Creek Park, Badlands, Wildwood Cyn/Wildwood Creek area), not observed during surveys.
FISH		
<i>Catostomus santaanae</i> Santa Ana sucker	Small to medium permanent streams. LA & San Gabriel drainage, lower Santa Ana River.	Absent; no perennial aquatic habitat.
PLANTS		

Species	Habitat and Distribution	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. Flowers Mar-Jun.	Absent; no or marginal habitat, well above elevation range. no documented occurrences within 5 mi., not observed during surveys.
<i>Orcuttia californica</i> California Orcutt grass	Annual grass. Vernal pools at 15-660m elevation. LA, Orange, Riverside, San Diego, Ventura Co., Baja. Flowers Apr-Aug.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<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. Flowers Mar-Aug.	Absent; no or marginal habitat, conspicuous plant not observed during surveys.
<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. Flowers Mar-Jul(Aug). Not tracked in CNDDB.	Absent; no or marginal habitat, no mapped CCH records within 5 mi., conspicuous plant not observed during surveys.
<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). Flowers Mar-Jun. Not tracked in the CNDDB.	Absent; potentially suitable habitat, conspicuous plant not observed during surveys.
<i>Polygala cornuta 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. Flowers May-Aug. Not tracked in CNDDB.	Absent; no or marginal habitat, no mapped CCH records within 5 mi., not observed during surveys.
<i>Holocarpha virgata ssp. elongata</i> Graceful (curving) tarplant	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland at 60-1100m elevation. Orange, Riverside, San Diego Cos. Known in Riverside County only from the Santa Rosa Plateau. Flowers May-Nov. Not tracked in CNDDB.	Absent; potentially marginal habitat, no mapped CCH records within 5 mi., outside known geographic range, not observed during surveys.
<i>Lilium parryi</i> Lemon lily	Perennial bulbiferous herb. Mesic soils in upper and lower montane coniferous forest, riparian forest, meadows and seeps at 1220-2745m elevation. LA, Riverside, San Bernardino, San Diego Co, Arizona, Sonora Mex. Flowers Jul-Aug.	Absent; no suitable habitat, well below elevation range, no documented occurrences within 5 mi., not observed during surveys.
<i>Deinandra mohavensis</i> Mojave tarplant	Annual herb. Mesic areas in chaparral, coastal scrub, riparian scrub at 640-1600m. Inyo, Kern, Riverside, San Diego, Tulare Cos. Presumed extirpated in San Bernardino Co. Flowers (May)Jun-Oct(Jan).	Absent; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys.

Species	Habitat and Distribution	Potential for Occurrence
<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. Flowers Mar-Oct.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<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 elevation. 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. Flowers Mar-Jul(Aug).	Absent; no suitable habitat, no mapped CCH records within 5 mi., not observed during surveys.
<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. Flowers May-Jul.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<i>Limnanthes alba</i> ssp. <i>parishii</i> Parish's meadowfoam	Annual herb. Vernal mesic areas in lower montane coniferous forest, meadows and seeps, vernal pools at 600-2000m elevation. Riverside and San Diego Cos. Flowers Apr-Jun.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<i>Navarretia prostrata</i> Prostrate vernal pool navarretia	Annual herb. Mesic areas in coastal scrub, valley and foothill grassland (alkaline), meadows and seeps, vernal pools at 3-1210m elevation. Locations in northern, central, and southern CA. Flowers Apr-Jun.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<i>Eryngium aristulatum</i> var. <i>parishii</i> San Diego button-celery	Annual/perennial herb. Mesic areas in coastal scrub, valley and foothill grassland, vernal pools at 20-620m elevation. Riverside, LA, Orange, San Diego Cos. and Baja. Flowers Apr-Jun.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<i>Atriplex coronata</i> var. <i>notatior</i> San Jacinto Valley crownscale	Annual herb. Alkaline soils in playas, mesic areas of valley and foothill grassland, vernal pools at 139-500m elevation. Western Riverside Co. Flowers Apr-Aug.	Absent; no or marginal habitat, above elevation range, no documented occurrences within 5 mi., not observed during surveys.
<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. Flowers Mar-Jul.	Absent; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys.
<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. Flowers Apr-Sep.	Absent; no suitable habitat, one documented occurrence within 5 mi. (1923, Wildwood Canyon, exact location unknown, mapped 2.3 mi. N), not observed during surveys.

Species	Habitat and Distribution	Potential for Occurrence
<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. Flowers Apr-Jun.	Not expected; no or marginal habitat, one documented occurrence within 5 mi. (1923, exact location unknown, mapped 2.8 mi. N, possibly extirpated), not observed during surveys.
<i>Centromadia pungens</i> ssp. <i>laevis</i> Smooth tarplant	Annual herb. Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland at 0-640m elevation. Also fallow fields, drainage ditches; mainly in SW Riverside Co., a few sites in interior valleys of LA, San Bernardino, San Diego Cos. Flowers Apr-Sep.	Low to moderate; no or marginal habitat, slightly above typical elevation range, six documented occurrences within 5 mi. (1992-2020; closest is 1.6 mi. SW of the site, most in San Timoteo Canyon), not observed during surveys.
<i>Navarretia fossalis</i> Spreading navarretia	Annual herb. Chenopod scrub, shallow freshwater marshes and swamps, playas, vernal pools at 30-655m elevation. LA, Riverside, San Diego, San Luis Obispo Cos., Baja. Flowers Apr-Jun.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<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. Flowers Mar-Jun.	Not expected; potentially suitable or marginal habitat, no documented occurrences within 5 mi., not observed during surveys.
<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. Flowers Mar-Jun. Not tracked in the CNDDDB.	Not expected; no or marginal habitat, no mapped CCH records within 5 mi., not observed during surveys.

"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.

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.

6.0) PROTECTION OF NARROW ENDEMIC PLANT SPECIES (SECTION 6.1.3)

The MSHCP Information Map (RCA 2022a) indicates that a habitat assessment is required for narrow endemic plant species Marvin's (Yucaipa) onion (*Allium marvinii*) and many-stemmed dudleya (*Dudleya multicaulis*). If suitable habitat is present, focused surveys are required.

6.1) Methods

Botanical surveys were conducted by L&L biologist Guy Bruyera from March to September 2022 (see Section 4.1). This survey included an assessment of potentially suitable habitat for Marvin's onion and many-stemmed dudleya and focused surveys for these species.

6.2) Existing Conditions and Results

Based on long-term and ongoing disturbance of the site, lack of clay soils, thick growth of non-native grasses, few or no documented occurrences in the Project vicinity, and negative survey results, suitable habitat to support Marvin's onion and many-stemmed dudleya is not present onsite and these species are considered absent.

Marvin's Onion

Marvin's (Yucaipa) onion (*Allium marvinii*) is a perennial bulb-forming herb in the Alliaceae (Onion) family. It flowers from April through May and is found in openings within chaparral on clay soils. The species' elevation range is 2,500 to 3,500 feet. It is found only in Riverside and San Bernardino Counties (CNPS 2022). Marvin's onion may not flower in dry years; without flowers, the plant is difficult to locate and identify (Dudek 2003).

The species is not state or federally listed; it has a California Rare Plant Rank (CRPR) of 1B.2 (rare, threatened, or endangered in California and elsewhere; moderately threatened in California). Under the MSHCP, Marvin's onion is considered adequately conserved, but surveys are required in certain areas.

There are three (3) documented occurrences of Marvin's onion in the CNDDDB within five (5) miles of the Project site. The first is Element Occurrence (EO) #1 located about 3.6 miles northeast of the site. This occurrence was found in a clay soil opening in chamise chaparral and was observed in 1993, 2001, and 2005. About 1,000 plants were observed in 2005.

The second and third documented occurrences are EO #43 and #44. EO #43 consisted of 19 plants and was found along a transmission line corridor in 2017. It is located about 0.6 mile south of the site. EO #44 was observed in 2013 within sparse Riversidean sage scrub with relatively abundant non-native bromes. Soils were noted as gravelly loamy with possible clay inclusion. This occurrence is located 1.0 mile east of the site.

Marvin's onion was not observed on the site during surveys conducted on the site during the flowering period for this species. Precipitation was below average in 2022. However, a reference site for Marvin's onion was visited on April 5, 2022, at Bogart Regional Park in the Cherry Valley area (approximately 4.8 miles west-northwest of the Project site at an elevation of 3,200 feet) and the plants were found to be flowering and identifiable.

Based on disturbances associated with current and past land use, most of the site does not provide potentially suitable habitat for Marvin's onion. Remnant chaparral habitat onsite has a thick understory of non-native grasses. Clay soils have not been mapped onsite and none were observed during surveys.

Based on long-term and ongoing disturbance of the site, lack of clay soils, thick growth of non-native grasses in remnant chaparral habitat, and negative survey results, suitable habitat to support Marvin's onion is not present onsite and this species is considered absent.

Many-stemmed Dudleya

Many-stemmed dudleya (*Dudleya multicaulis*) is a perennial herb in the Crassulaceae (Stonecrop) family. It flowers from April through July and is found in chaparral, coastal scrub, and valley and foothill grassland, often on clay soils. The species elevation range is 50 to 2,600 feet above mean sea level. It is found in coastal southern California (CNPS 2022).

Many-stemmed dudleya is associated with openings and thinly vegetated areas in chaparral, coastal sage scrub, and grasslands underlain by clay and cobbly clay soils of the Altamont, Auld, Bosanko, Claypit, and Porterville series. In western Riverside County the majority of known populations are from Temescal Canyon, Gavilan Hills, and Alberhill areas and the Santa Ana Mountains (Dudek 2003).

Many-stemmed dudleya is typically associated with clay soils in barrens, rocky places, and ridgelines as well as thinly vegetated openings in chaparral, coastal sage scrub, and southern needlegrass grasslands on clay soils. Most populations are associated with coastal sage scrub (Dudek 2003).

The species is not state or federally listed; it has a CRPR of 1B.2 (rare, threatened, or endangered in California and elsewhere; moderately threatened in California). Under the MSHCP, many-stemmed dudleya is considered adequately conserved, but surveys are required in certain areas.

There are no CNDDDB documented occurrences of many-stemmed dudleya within five (5) miles of the site. The nearest occurrence is about 25 miles to the southwest.

Many-stemmed dudleya was not observed on the site during surveys conducted during the flowering period for the species. Precipitation was below average in 2022. However, a reference

site for many-stemmed dudleya was visited on May 2, 2022 in Temescal Canyon (about 28 miles southwest of the Project site at an elevation of about 1,040 feet) and the plants were found to be flowering and identifiable.

Based on disturbances associated with current and past land use, most of the site does not provide potentially suitable habitat for many-stemmed dudleya. The site has thick growth of non-native grasses throughout. Clay soils have not been mapped onsite and none were observed during surveys.

Based on long-term and ongoing disturbance of the site, lack of clay soils, thick growth of non-native grasses, absence of documented occurrences in the Project vicinity, and negative survey results, suitable habitat to support many-stemmed dudleya is not present onsite and this species is considered absent.

6.3) Impacts

Marvin's onion and many-stemmed dudleya and suitable habitat support these species are absent from the site and there would be no impact to these species.

6.4) Mitigation

The Project would have no impact to Marvin's onion or many-stemmed dudleya and no mitigation is proposed.

7.0) ADDITIONAL SURVEY NEEDS AND PROCEDURES (SECTION 6.3.2)

7.1) Criteria Area Plant Species

The proposed Project is not within a mapped survey area for Criteria Area plant species and no surveys for Criteria Area plant species are required (RCA 2022a).

7.2) Amphibians

The proposed Project is not within a mapped survey area for amphibian species and no surveys for amphibian species are required (RCA 2022a).

7.3) Burrowing Owl

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.

7.3.1) Methods

L&L field biologist Guy Bruyey visited the Project site during April, May, and June 2022 to conduct protocol breeding season burrowing owl surveys (Table 9). Mr. Bruyey has extensive experience with surveys for burrowing owl and nesting birds.

The burrowing owl assessment for suitable habitat was conducted consistent with MSHCP Burrowing Survey Instructions (RCA 2006), including a Step I habitat assessment conducted on April 21, 2022. Once suitable habitat was determined present, Step II-A, a focused burrow survey, was triggered, conducted on April 21, 2022. Because small mammal burrows or other potentially suitable burrows were found, a focused burrowing owl survey was conducted consistent with Step II-B. This survey requires four separate visits, conducted on April 21, May 7, May 23, and June 20, 2022 (Table 9).

Table 9. Burrowing Owl Survey Dates, Times, and Weather Conditions

Date	Time	Sunrise*	Weather	Wind (mph)
04.21.2022	0630-1130	0614	Partly Cloudy, 57-66° F	0-2
05.07.2022	0645-1100	0557	Clear, 67-79° F	0-4
05.23.2022	0700-1100	0546	Marine Layer/Clear, 58-72° F	0-4
06.20.2022	0630-1130	0541	Marine Layer/Clear, 70-80° F	2-3

*sunrise times from www.timeanddate.com

A total of about 18.25 person-hours were spent onsite during burrowing owl surveys. The site was examined for suitable burrow sites and for signs of occupation by burrowing owl, including pellets, feathers, whitewash, prey remains, and eggshell fragments, as well as individual owls. A

search for potentially suitable burrows within dirt, wood, and rock debris piles, artificially created berms, and other locations was conducted during the surveys.

The surveys were concentrated in areas identified as potential burrowing owl habitat, including open areas onsite and areas where California ground squirrel and other small mammal activity (i.e., suitable burrows) was expected. An additional 150-meter (500-foot) buffer area surrounding the site was visually inspected, where possible, in areas identified as potential burrowing owl habitat (Figure 10). Any developed areas were visually surveyed with binoculars due to trespassing concerns on private property. Portions of the site lacking suitable burrowing owl habitat were not surveyed. Offsite areas that were not identified prior to surveys (see Section 4.1) were included in the burrowing owl survey buffer.

Transects were walked throughout the property where suitable habitat is present. Coupled with binocular surveys of any restricted areas, this allowed for complete visual ground coverage of the survey area. The distance between transects was approximately 15 to 20 meters.

The surveys were conducted in accordance with the Burrowing Owl Survey Instructions for the MSHCP (RCA 2006). MSHCP Burrowing Owl Survey Instructions require four (4) daylight surveys on separate days conducted during the breeding season from March 1 to August 31. The instructions specify that surveys should be conducted during weather conditions that are conducive to detecting owls and owl sign. Surveys are not acceptable if they are conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90° F. The current survey was conducted during suitable weather conditions, as summarized in Table 9.

7.3.2) Existing Conditions and Results

Burrowing owl (*Athene cunicularia*) is protected under the federal Migratory Bird Treaty Act and California Fish and Game Code as a CDFW Species of Special Concern. Under the MSHCP, surveys for burrowing owl are required in certain areas and mitigation is required if the species is present.

Burrowing owl is a small, ground-dwelling owl found in open dry grassland, desert, or shrubland areas and in uncultivated agricultural areas, rangelands, and other open areas with low-growing vegetation. Burrows are an essential element of burrowing owl habitat. Although the burrowing owl is capable of excavating its own burrows in soft soils, it typically modifies and inhabits abandoned burrows of small burrowing mammals, such as ground squirrels and pocket gophers. Burrowing owls have also been known to use man-made structures such as cement culverts, debris piles, and other artificial burrows.

Occupancy of burrowing owl habitat can be verified at a site by observation of at least one (1) owl or owl sign (molted feathers, cast pellets, prey remains, eggshell fragments, or excrement) at or near a burrow entrance. A site is considered occupied if at least one (1) owl has been identified

onsite in the past three (3) years, because (if undisturbed) burrowing owls exhibit high site fidelity (CDFG 2012, CBOC 1993).

There are no CNDDDB documented occurrences of burrowing owl within five (5) miles of the site, but there are two eBird records (eBird 2022). Observations at eBird are submitted by “citizen scientists” and should be interpreted with caution. The closest of these is located at Noble Creek Park about 3.3 miles southeast of the site. This observation is from July 2018 and consists of a breeding pair and five (5) juveniles in a field adjacent to the park. This observation includes clear photographs of two adult burrowing owls and three (3) juveniles. The second observation is near Redlands, about 4.8 miles northeast of the site. This observation is from March 2021 and consists of one burrowing owl.

Burrowing owl habitat assessments were conducted in 2020 and 2022 and protocol breeding season surveys were conducted 2022. Potentially suitable habitat and small mammal burrows are present on the site and in undeveloped areas of the buffer. No burrowing owls, occupied burrows, or burrowing owl sign (pellets, excrement, feathers, tracks, etc.) were observed on the site or in the buffer during surveys.

7.3.3) Impacts

Burrowing owl has not been detected on the site during surveys, although surveys determined that potentially suitable habitat (including suitable burrows) is present on the site. While no burrowing owls or their sign were found during focused owl surveys, suitable habitat is present and owls could occupy the site prior to construction activities. Because burrowing owls will tend to shelter in their burrows rather than flee from disturbance, adults as well as eggs, chicks, and juveniles could be harmed by Project activities.

7.3.4) Mitigation

Project construction shall be scheduled outside of the burrowing owl nesting season, if feasible. The nesting season is defined in the MSHCP as February 1 to August 31 but may be extended earlier or later based on the recommendation of the Project biologist.

A preconstruction clearance survey for burrowing owl shall be conducted by a qualified biologist and the written results submitted to the City of Calimesa Planning Department within no more than 30 calendar days prior to any site disturbance, including any ground or vegetation disturbance, vegetation clearing/grubbing, grading/excavation, fence installation, demolition, material delivery, etc. This survey shall be required both within and outside of the nesting season and follow the latest CDFW protocol (CDFG 2012 or more recent guidance if available). The written results of the burrowing owl pre-construction survey(s) shall be submitted to the City of Calimesa Planning Department prior to any site disturbance.

The survey shall be conducted as close to the actual initiation of site disturbance as possible and shall include all areas of the Project site that will be disturbed within 30 calendar days plus a buffer of 500 feet. The survey is valid for 30 calendar days. If work does not commence within the 30 days, the survey shall be repeated. If work starts and is suspended for 30 or more calendar days, the survey shall be repeated.

Due to the size of the Project, the survey shall be repeated as needed to ensure that all construction areas have a clearance survey within 30 days prior to any site disturbance. The biological monitor shall also inspect for burrowing owls, active burrows, and owl sign during daily clearance sweeps of work sites and adjacent areas.

If burrowing owls are found on the site during the pre-construction survey, or any time during construction, the Project biologist shall consult with the City of Calimesa Planning Department and CDFW to develop and implement a mitigation plan. Mitigation shall 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 only through coordination with CDFW.
 - 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. Other exclusion buffer requirements shall adhere to the Staff Report on Burrowing Owl Mitigation (CDFG 2012). Buffers may be able to be reduced, but only if done so in coordination with CDFW.
 - 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 that burrows are vacant (through site monitoring and scoping).
 - c. Prior to implementation of exclusion and/or relocation, a Burrowing Owl Protection and Relocation Plan shall be prepared for review and approval by CDFW. This plan shall include, but not be limited to, the following:
 - Project Overview
 - Species Biology
 - Summary of Burrowing Owl Surveys and Results
 - Relocation Methods, including location of adjacent suitable habitat and replacement (natural) burrows, conservation and management of relocation area, enhancement of replacement burrows and/or construction of artificial burrows, ratio of replacement burrows to removed burrows, timing of relocation, burrow exclusion, and burrow inspection and excavation of removed burrows
 - Monitoring and Reporting, including but not limited to, relocation efforts, surveys, cleaning and maintenance and/or replacement of artificial burrows, duration of monitoring, and reporting requirements

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 shall be conserved onsite.

7.4) Mammals

The proposed Project is not within a mapped survey area for mammal species and no surveys for mammal species are required (RCA 2022a).

8.0) INFORMATION ON OTHER SPECIES

8.1) Delhi Sands Flower Loving Fly

There is no Delhi soils mapped on the site and there is no habitat present for Delhi sands flower-loving fly. The proposed Project is not within an area with Delhi soil mapped within the MSHCP baseline data and no surveys for Delhi sands flower-loving fly are required.

8.2) Species Not Adequately Conserved

Of the 28 species listed on Table 9-3 of the MSHCP, none were observed on the Project site during surveys. The conservation requirements for nine of the 28 species have been met and these nine species are now considered adequately conserved. The remaining 19 species are absent or not expected to occur on the Project site (Table 10), with the exception of Lincoln's sparrow (*Melospiza lincolnii*).

Lincoln's sparrow is a migrant in the Project region and can be seen moving through the area in spring and fall. The Project site may provide potentially suitable foraging habitat for this species during migration, and it has a moderate potential to occur. Habitat during migration includes shrub-dominated habitats providing cover, particularly riparian sites, urban/suburban environments, brushy forest edges, weedy fields, hedgerows, marshes, and blackberry (*Rubus*) thickets (Cornell 2022). Implementation of the Project would result in loss of potential foraging habitat for this species, particularly during migration. There are hundreds of eBird records of this species throughout most of southern California and apparently large areas of suitable habitat during migration. Loss of the potential foraging habitat on the site would not be expected to substantially affect populations of Lincoln's sparrow and no mitigation is proposed.

Table 10. Potential for Occurrence of Species Not Adequately Conserved

Species	Habitat and Distribution	Potential for Occurrence
REPTILES		
<i>Lampropeltis zonata (parvirubra)</i> California mountain kingsnake (San Bernardino pop.)	Forests & chaparral with rock outcrops or talus, often riparian, 1200-8100ft. elev. San Gabriel, San Bernardino, & San Jacinto Mts. Not tracked in the CNDDB.	Absent; no or marginal habitat, well below elevation range, outside known geographic range, not observed during surveys.
<i>Lampropeltis zonata (pulchra)</i> California mountain kingsnake (San Diego pop.)	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. Not tracked in the CNDDB.	Absent; no suitable habitat, well below elevation range, outside known geographic range, not observed during surveys.
<i>Charina umbratica</i> Southern rubber boa	Found in a few locales in San Bernardino & San Jacinto Mtn. ranges. Moist coniferous forest and woodlands from about 5000-9000 ft. elev. Fossorial, nocturnal, sometimes crepuscular. Hibernates in rock outcrops, rotting logs, or other underground refuges. Active April-October. Thick duff and downed logs are important for cover. Usually found within several hundred meters of water.	Absent; no suitable habitat, well below elevation range, two one documented occurrence within 5 mi. (1970s and 1995, 7600 and 6000 feet, location information suppressed to protect the species, at least 2.7 mi. NE), not observed during surveys.
<i>Sceloporus graciosus vandenburgianus</i> Southern sagebrush lizard	Shrublands, chaparral, open pine and Douglas fir forests, mainly found in the mountains above 5000 ft. elevation. Prefers open, sunny areas with scattered low shrubs. Hibernates during winter in rock cracks and mammal burrows. LA, Orange, San Bernardino, Riverside, and San Diego Cos. Not tracked in the CNDDB.	Absent, no or marginal habitat, well below elevation range, not observed during surveys.
BIRDS		
<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.	Absent (foraging and nesting); no suitable habitat, below elevation range, no documented occurrences within 5 mi.
<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. CNDDB only tracks nesting.	Not expected (foraging and nesting); marginal habitat, no documented occurrences (nesting) within 5 mi., one eBird record in vicinity (from 2001, Oak Valley golf course), not observed during surveys.

Species	Habitat and Distribution	Potential for Occurrence
<i>Melospiza lincolnii</i> Lincoln's sparrow	Winter transient and migrant in southern California, rare breeder in mountains. Shrubby areas, particularly riparian, brushy forest edges, weedy fields, marshes, thickets; breeds in montane riparian and wet meadows. Not tracked in the CNDDB.	Moderate (foraging/migration), absent (nesting); potentially suitable or marginal habitat, several eBird records in vicinity (may be seen in migration), not observed during surveys.
<i>Sphyrapicus thyroideus</i> Williamson's sapsucker	Summer resident in conifer forests at 5500-9500 ft. elevation, nests in lodgepole pine, aspens next to stands of fir/pine. Requires snags or rotted trees for nest cavities. May be resident in breeding habitat or descend into lower elevation conifer habitats. Mountains of No and Central CA, San Bernardino, San Gabriel, and San Jacinto Mts of So CA. Not tracked in the CNDDB.	Absent; no suitable habitat, no eBird records within 5 mi. of site, well below elevation range, outside geographic range, not observed during surveys.
MAMMALS		
<i>Glaucomys oregonensis</i> (<i>sabrinus</i>) <i>californicus</i> San Bernardino flying squirrel	Mature mixed conifer forest (white fir, Jeffrey pine, & black oak) with large trees & snags, closed canopy, downed woody debris, & riparian areas. 4000-8500 ft. elev. San Bernardino & San Jacinto Mt. Ranges (may be extirpated in the San Jacinto Mts.).	Absent. No suitable habitat, well below elevation range, outside geographic range.
PLANTS		
<i>Arctostaphylos rainbowensis</i> Rainbow manzanita	Perennial evergreen shrub. Chaparral at 205-670m elevation. Riverside and San Diego Cos. Flowers Dec-Mar.	Not applicable, Table 9-3 requirement met (RCA 2022b).
<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. Flowers May-Jul.	Not applicable, Table 9-3 requirement met (RCA 2022b).
<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. Flowers May-Aug. Not tracked in the CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2022b).
<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. Flowers Apr-Jun.	Not applicable, Table 9-3 requirement met (RCA 2022b).
<i>Deinandra mohavensis</i> Mojave tarplant	Annual herb. Mesic areas in chaparral, coastal scrub, riparian scrub at 640-1600m. Inyo, Kern, Riverside, San Diego, Tulare Cos. Presumed extirpated in San Bernardino Co. Flowers (May)Jun-Oct(Jan).	Absent; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys.

Species	Habitat and Distribution	Potential for Occurrence
<i>Diplacus (Mimulus) clevelandii</i> Cleveland's bush monkeyflower	Perennial rhizomatous herb. Gabbroic, rocky, often in disturbed areas and openings in chaparral, cismontane woodlands, lower montane coniferous forest at 450-2000m elevation. Orange, Riverside, San Diego Co., Baja. Flowers Apr-Jul. Not tracked in CNDDB.	Absent; no suitable habitat, no mapped CCH records within 5 mi., not observed during surveys.
<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. Flowers May-Jun.	Not expected; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys.
<i>Galium californicum</i> ssp. <i>primum</i> Alvin meadow bedstraw	Perennial herb. Granitic, sandy soils in chaparral, lower montane coniferous forest at 1350-1700m elevation. Riverside, San Bernardino Cos. Flowers May-Jul.	Absent; no or marginal habitat, well below elevation range, no documented occurrences within 5 mi., not observed during surveys.
<i>Heuchera hirsutissima</i> Shaggy-haired alumroot	Perennial rhizomatous herb. Rocky, granitic soils in subalpine and upper montane coniferous forest at 1520-3500m elevation. Riverside and San Bernardino Cos. Flowers (May)Jun-Jul.	Absent; no suitable habitat, well below elevation range, no documented occurrences within 5 mi., not observed during surveys.
<i>Holocarpha virgata</i> ssp. <i>elongata</i> Graceful (curving) tarplant	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland at 60-1100m elevation. Orange, Riverside, San Diego Cos. Known in Riverside County only from the Santa Rosa Plateau. Flowers May-Nov. Not tracked in CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2022b).
<i>Hulsea vestita</i> ssp. <i>parryi</i> Parry's sunflower	Perennial herb. Granitic or carbonate soils, rocky areas, openings in pinyon and juniper woodlands, upper and lower montane coniferous forest at 1370-2895m elevation. Kern, LA, Mono, San Bernardino, Ventura Cos. Flowers Apr-Aug	Not applicable, Table 9-3 requirement met (RCA 2022b).
<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 elevation. 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. Flowers Mar-Jul(Aug). Not tracked in the CNDDB.	Not expected. No or marginal habitat, no mapped CCH records within 5 mi.
<i>Lilium parryi</i> Lemon lily	Perennial bulbiferous herb. Mesic soils in upper and lower montane coniferous forest, riparian forest, meadows and seeps at 1220-2745m elevation. LA, Riverside, San Bernardino, San Diego Co, Arizona, Sonora Mex. Flowers Jul-Aug.	Absent. No suitable habitat, well below elevation range, no documented occurrences within 5 mi.

Species	Habitat and Distribution	Potential for Occurrence
<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. Flowers Mar-May. Not tracked in CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2022b).
<i>Muhlenbergia californica</i> California muhly	Perennial rhizomatous herb. Mesic areas, seeps, and streambanks in chaparral, coastal scrub, lower montane coniferous forest at 100-2000m elevation. LA, Riverside, San Bernardino Co. Flowers Jun-Sep.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<i>Polygala cornuta</i> var. <i>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. Flowers May-Aug. Not tracked in CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2022b).
<i>Potentilla rimicola</i> Cliff cinquefoil	Perennial herb. Granitic, rocky soils in subalpine and upper montane coniferous forest at 2400-2800m elevation. Riverside Co. (San Jacinto Mts.), Baja. Flowers Jul-Sep.	Absent; no suitable habitat, well below elevation range, no documented occurrences within 5 mi., not observed during surveys.
<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. Flowers Mar-Jul(Aug). Not tracked in CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2022b).
<i>Sidotheca (Oxytheca) caryophylloides</i> Chickweed oxytheca	Annual herb. Sandy soils in lower montane coniferous forest at 1114-2600m elevation. LA, Riverside, San Bernardino, Tulare, Ventura Co. Flowers Jul-Sep(Oct). Not tracked in CNDDB.	Absent; no suitable habitat, well below elevation range, no documented occurrences within 5 mi., not observed during surveys.

See Table 8 for legend.

9.0) GUIDELINES PERTAINING TO THE URBAN/WILDLANDS INTERFACE (SECTION 6.1.4)

The Urban/Wildlands Interface Guidelines in Section 6.1.4 of the MSHCP are intended to address indirect effects associated with development near MSHCP Conserved Areas. The Project site is not located within or near MSHCP existing or proposed Conservation Areas. Flows leaving the project site hydrologically connect to San Timoteo Creek within Public/Quasi-Public (PQP) Conserved Lands about 1.3 miles south of the site and are therefore subject to MSHCP Section 6.1.4, Urban Wildland Interface Guidelines. The Urban Wildland Interface Guidelines require that projects address indirect effects associated with locating development in proximity to MSHCP Conservation Areas, where applicable. These effects are drainage, toxics, lighting, noise, invasives, barriers, and grading/land development. Due to the distance and the existing development between the Project site and the PQP Lands, there would be no substantial indirect effects associated with lighting, noise, barriers, or grading/land development and these effects are not addressed further.

Drainage and Toxics

The potential indirect effects associated with drainage and toxics will be mitigated through implementation of a Water Quality Management Plan (WQMP). Additionally, the Project would be required to comply with all applicable water quality regulations, including obtaining and complying with those conditions established in a Regional Water Quality Control Board Clean Water Act Section 401 Water Quality Certification and/or Waste Discharge Requirements and a National Pollutant Discharge Elimination System (NPDES) permit. Both of these permits include the treatment of all surface runoff from paved and developed areas, the implementation of applicable BMPs during construction activities and the installation and proper maintenance of structural BMPs to ensure adequate long-term treatment of water before entering into any stream course.

Invasives

Under MSHCP Section 6.1.4, when approving landscape plans for Development that is proposed adjacent to the MSHCP Conservation Area, Permittees shall consider the invasive, non-native plant species listed in MSHCP Table 6-2 (included below) and shall require revisions to landscape plans (subject to the limitations of their jurisdiction) to avoid the use of invasive species for the portions of Development that are adjacent to the MSHCP Conservation Area.

Prior to issuance of building permits, Project landscape plans shall be reviewed by the City of Calimesa Planning Department to ensure invasive plants listed on MSHCP Table 6-2 (Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area) are not included on project landscape plans.

MSHCP Table 6-2. Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area (Taken Directly from MSHCP Section 6.1.4)

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. sellowiana</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
<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

MSHCP Table 6-2. Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area
(Continued)

BOTANICAL NAME	COMMON NAME
<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, soapwort
<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>Tropaeolum 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.

10.0) BEST MANAGEMENT PRACTICES (VOLUME 1, APPENDIX C)

Volume 1, Appendix C of the MSHCP includes best management practices (BMPs) to be implemented if project activities could directly or indirectly impact MSHCP resources. Based on the potential for direct or indirect impacts to MSHCP resources, the Project will implement BMPs #1, 2, 3, 8, 12, 13, 14, and 15 and these will be added as notes in the grading plans.

Avoidance of MSHCP riverine resources is not proposed for the Project and BMPs #4, 5, and 9 are not applicable. There are no sensitive or riparian habitats on the site and BMP #6 is not applicable. Diversion of stream flow is not anticipated and BMP #7 is not applicable. Biological monitoring is proposed for initial vegetation clearing, ground disturbance, and demolition, but not for the entire duration of construction (BMP #10). There are no temporary impacts associated with the Project and no recontouring or revegetation activities are proposed (BMP #11).

The MSHCP BMPs are:

1. A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.
2. Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB [Regional Water Quality Control Board] requirements.
3. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.
4. The upstream and downstream limits of project disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.
5. Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.
6. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian [species] identified in MSHCP Global Species Objective No. 7.
7. When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing of other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments offsite. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.

8. Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, FWS [U.S. Fish and Wildlife Service], and CDFG [California Department of Fish and Wildlife], [and] RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.
9. Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.
10. The qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint.
11. The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated with appropriate native species.
12. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.
13. To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).
14. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.
15. The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.

11.0) REFERENCES

- Abrams, L. 1923, 1944, 1951. Illustrated Flora of the Pacific States, Volumes I-III. Stanford University Press, Stanford, California.
- Abrams, L. and R. Ferris. 1960. Illustrated Flora of the Pacific States, Volume IV. Stanford University Press, Stanford, California.
- Arnett, Ross H. Jr. 2000. American Insects: A Handbook of the Insects of America North of Mexico. CRC Press, New York, New York. 1003 pp.
- Baldwin, B.G., D.H. Goldman, D.J., Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley.
- Bauder, E.T., Bohonak, A.J., Hecht, B., Simovich, M.A, Shaw, D., Jenkins, D.G., and Rains, M. 2011. A Draft Regional Guidebook for Applying the Hydrogeomorphic Approach to Assessing Wetland Functions of Vernal Pool Depressional Wetlands in Southern California. San Diego State University. San Diego, California.
- CBOC (California Burrowing Owl Consortium). 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines.
- CDFG (California Department of Fish and Wildlife formerly California Department of Fish and Game). 2012. Staff Report on Burrowing Owl Mitigation. March 7.
- CDFW (California Department of Fish and Wildlife). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. March 20.
- _____. 2022a. Special Vascular Plants, Bryophytes, and Lichens List. Periodic publication. July.
- _____. 2022b. Special Animals List. Periodic publication. July.
- _____. 2022c. California Natural Diversity Data Base. Rare Find 5.
- _____. 2022d. California Natural Community List. July 5.
<https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities>
- CNPS (California Native Plant Society). 2001. CNPS Botanical Survey Guidelines.
http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf
- _____. 2022. Inventory of Rare and Endangered Plants of California.
<https://rareplants.cnps.org/Search/Simple>.
- Cornell (Cornell Laboratory of Ornithology). 2022. Birds of the World Online.
<https://birdsna.org/Species-Account/bna/home>
- Dudek (Dudek & Associates, Inc.) 2003. Western Riverside County MSHCP. Vol. I. The Plan and Vol. II-A through E. The MSHCP Reference Document.

- eBird. 2022. National Audubon Society and Cornell Laboratory of Ornithology. www.ebird.org
- Google Earth. 2022. Google Earth Pro 7.3.4.8642. Aerial and street view images.
- Huffman, Garrett, 2024. Oak Valley North Project, Fairy Shrimp Wet and Dry Season Final Report.
- Jameson, E. W. and H. J. Peeters. 1988. California Mammals. Univ. of California Press, Berkeley.
- Jepson eFlora. 2022. Jepson Flora Project. <http://ucjeps.berkeley.edu/eflora/>
- Munz, Philip A. 1974. A Flora of Southern California. University of California Press, Berkeley, California.
- NETRonline (Nationwide Environmental Title Research, LLC). 2022. Historical aerial images. <https://www.historicaerials.com/viewer>.
- NRCS (Natural Resources Conservation Service). 2022. U.S. Department of Agriculture. Web Soil Survey. <https://websoilsurvey.nrcs.usda.gov/>
- Parker, Robert et al. 1999. Weeds of the West. The Western Society of Weed Science. Newark, California. 630 pp.
- RCA (Western Riverside County Regional Conservation Authority). 2006. Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area. <http://www.wrc-rca.org/mshcp-species-survey-protocols/>
- _____. 2022a. Western Riverside County Multiple Species Habitat Conservation Plan Information Map. Accessed October 2022. <https://wrcrca.maps.arcgis.com/apps/webappviewer/index.html?id=a73e69d2a64d41c29ebd3acd67467abd>
- _____. 2022b. Status of Covered Species Not Adequately Conserved. January 21. <http://www.wrc-rca.org/about-rca/annual-reports/>
- Sawyer, J. O., Keeler-Wolf, T, and Evens, J. M. 2009. A Manual of California Vegetation, 2nd Edition. California Native Plant Society, Sacramento, California. 1,300 pp.
- Sibley, David Allen. 2000. The Sibley Guide to Birds. Alfred A. Knopf, Inc., New York, New York. 545 pp.
- Stebbins, R. C. 1985. Western Reptiles and Amphibians. Houghton Mifflin Company, Boston Mass.
- USFWS (U. S. Fish and Wildlife Service). 1998. Draft Recovery Plan for the least Bell's vireo. Portland, OR. 139 pp.
- _____. 2000. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. January.

<https://www.fws.gov/sites/default/files/documents/botanical-plant-inventory-guidelines.pdf>

_____. 2022. Information for Planning and Consultation (IPaC). <https://ecos.fws.gov/ipac/>

USGS (U.S. Geological Survey). 2022. El Casco topographic quadrangle. <https://ngmdb.usgs.gov/topoview/viewer/#4/40.01/-100.06>

WRCC (Western Regional Climate Center). 2018. Precipitation Maps: PRISM Precipitation Maps 1981-2010. https://wrcc.dri.edu/Climate/prism_precip_maps.php

_____. 2022. Monthly Summary Time Series Precipitation Data for the Beaumont and Cranston Remote Automated Weather Stations (RAWS). <https://raws.dri.edu/>

APPENDIX A: BIOLOGICAL RESOURCES ASSESSMENT, BURROWING OWL, NESTING RAPTOR, BOTANICAL AND NARROW ENDEMIC PLANT, AND TREE SURVEYS

APPENDIX B: WR-MSHCP SECTION 6.1.2 RIPARIAN/RIVERINE DELINEATION

**APPENDIX C: DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR
PRESERVATION WR-MSHCP SECTION 6.1.2 RIPARIAN/RIVERINE DELINEATION**