

Biological Technical Report for the Mission Trail Apartments Project

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ACRONYMS, ABBREVIATIONS, AND GLOSSARY OF TERMS

BLM	United States Bureau of Land Management
BMPs	Best Management Practices
BUOW	burrowing owl
CBOC	California Burrowing Owl Consortium
CDFW	California Department of Fish and Wildlife
City	City of Lake Elsinore
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	United States Army Corps of Engineers
CRPR	California Rare Plant Rank
CWA	federal Clean Water Act
ESA	federal Endangered Species Act
FGC	Fish and Game Code
GIS	Geographic Information System
LMP	Lake Management Plan
MBTA	Migratory Bird Treaty Act
MSL	mean sea level
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
NHD	National Hydrography Dataset
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SKR HCP	Stephen's Kangaroo Rat Habitat Conservation Plan
U.S.	United States
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VCS	VCS Environmental

WDR	Water Discharge Requirement
WEAP	Worker Environmental Awareness Program
WQC	Section 401 Water Quality Certification

1.0 Introduction

On behalf of the City of Lake Elsinore (City), VCS Environmental (VCS) prepared this Biological Technical Report, which incorporates the findings from field surveys conducted by VCS biologists on December 14, 2016. VCS prepared this report for the Mission Trail Apartments Project (Project) which includes the 5.37-acre site where the Project will be built (Project site), the 4.14-acre Borrow site from which soil will be taken for use as fill at the Project site, and a Temporary Haul Road between the Project site and Borrow site (collectively, the Survey Area).

1.1 Purpose and Approach

This report provides a summary of the conditions present during the 2016 survey, an assessment of the potential presence of sensitive biological resources, and an analysis of the potential impacts to those resources with implementation of the Project. This report presents the current biological resources present within the Survey Area including habitat communities, jurisdictional waters, and the potential occurrence of listed and special status plant and wildlife species. The potential biological impacts in view of federal, state, and local laws and regulations are also identified in this report. While general biological resources are discussed, the focus of this assessment is on those resources considered to be sensitive. The report also recommends, as appropriate, Best Management Practices (BMPs), avoidance, minimization, and mitigation measures to reduce or avoid potential impacts. This report was prepared based upon results of a literature review and field surveys.

1.2 Terms

The following terms will be used throughout this document and are defined as follows:

- Project site: location where the apartment community will be constructed (5.37 acres).
- Borrow site: location where soil will be excavated for use at the Project site (4.14 acres).
- Temporary Haul Road: the portion of the haul route between the Project site and Borrow site that occurs within an undeveloped area and will be temporarily used as a haul road. The remainder of the haul route is on paved roads or an existing dirt road.
- Survey Area: includes the Project site, Borrow site, and Temporary Haul Road.
- Project Vicinity: intended to be a general term to describe the broader area surrounding the Survey Area (generally 2 miles).

1.3 Project Site Location

The Project site is located west of Mission Trail, approximately 500 feet south of Hidden Trail/Elberta Road in the City of Lake Elsinore, Riverside County, California. The Project site is regionally accessible from Interstate 15 at Diamond Drive/Railroad Canyon Road to the north and from Interstate 15 at Bundy Canyon Road to the south (Figure 1, Regional Location Map; Figure 2, Vicinity Map).

1.4 Borrow Site Location

The proposed grading for implementation of the Project will require approximately 30,000 cubic yards of fill dirt which will be excavated from a site (Borrow site) owned by the City of Lake Elsinore. The 4.14-acre Borrow site is located on Malaga Road adjacent to the Lake Elsinore Floodway, approximately 0.6 mile west of the entrance to Diamond Stadium. Excavations will lower the site approximately 6 feet.

1.5 Temporary Haul Road Location

The haul route between the Borrow site and the Project site will occur via Malaga Road, Mission Trail, and a Temporary Haul Road (see Figure 2 for entire haul route location). The Temporary Haul Road begins at the western end of the existing dirt Malaga Road, loops around an existing borrow site, and ends at the proposed Borrow site.

2.0 Project Description

The Project consists of an 81-unit affordable family community on a 5.37-acre property located along Mission Trail in the City of Lake Elsinore (Figure 3, Site Plan).

The Project will consist of the following primary components:

- A maximum of 81 Family Units at a density of 15.1 dwelling units to the acre.
 - 9 Two Bedroom Units
 - 72 Three Bedroom Units
- 190 parking spaces for the Project to be provided on-site (2.34 spaces/unit)
- Office space for professional on-site management
- Approximately 2,500 square foot community meeting room, laundry room and social service center
- Active and passive open space for families

The Project will contain four residential buildings, with a circular entry plaza, leasing office/community center, seating area/BBQ pavilion. Active open space for children is provided directly adjacent to the community center with passive open space throughout the site. Access to the property will occur through a loop system providing convenient access for both residents and emergency services.

The property is unique in that it is located within the flood plain and has an existing drainage channel running through the center of the site. The existing drainage channel will be undergrounded and extended through the site, and will be improved in conformance with City of Lake Elsinore standards.

The Survey Area is located within the Back Basin of Lake Elsinore and within the boundaries of the Western Riverside-County Multiple Species Habitat Conservation Plan (MSHCP).

MSHCP History

In 2003, when the draft MSHCP mapping was first released to the public, the original cell criterion for the Back Basin was not acceptable to the City of Lake Elsinore because it would have created severe economic impacts to the City based on its effect on the longstanding Lake Elsinore East Lake Specific Plan. To rectify this situation, a series of meetings were held between the City of Lake Elsinore, Jim Bartel of the U.S. Fish and Wildlife Service (USFWS), Ron Rempel of the California Department of Fish and Game (now called the California Department of Fish and Wildlife) (CDFW) and staff and consultants from Riverside County and representatives of Laing-CP Lake Elsinore, who was developing the Summerly project at the time.

As a result of the City's discussions with the agencies, it was determined that conservation in the Back Basin was not tied to protection of specific habitat or wildlife movement corridors, but

rather to the need to conserve 770-acres in the Back Basin in order to meet the numeric requirements for the MSHCP (Back Basin 770 Agreement). Currently, this strategy is being finalized and negotiations with the agencies are underway for fulfilling Criteria Cell requirements within the Back Basin for the MSHCP, including the Survey Area. The Project will comply with the MSHCP through obtaining a consistency determination and any other additional approvals required by the MSHCP, including processes such as the City's implementation of the HANS (Habitat Evaluation and Acquisition Negotiation Strategy) process known as the LEAP (Lake Elsinore Acquisition Process) process, if appropriate.

2.1 Existing Conditions

The Project site is mostly undeveloped land surrounded by the Summerly development to the northwest, Missions Trail to the east and undeveloped land to the south. The Project site includes an earthen drainage feature with a headwall and rip-rap located at Mission Trail extending west into the site. The Project site supports four vegetation communities/land cover types. These vegetation communities/land cover types include Ruderal, Disturbed/Developed, Willow Scrub, and Ornamental Trees (see Figure 4). Site photographs are attached as Appendix A.

The Borrow site is undeveloped land surrounded by the Lake Elsinore levee to the north, undeveloped land to the west, and an existing borrow site to the east and south (currently mostly bare soil with some vegetation beginning to grow). The Borrow site supports four vegetation communities/land cover types including Tamarisk Scrub, Ruderal, Mulefat Scrub, and Disturbed/Developed (Figure 4). Site photographs are attached as Appendix A.

The Temporary Haul Road is undeveloped land surrounded by the Lake Elsinore levee and undeveloped land to the north, and undeveloped land to the west and south; the temporary road loops around an existing borrow site. The Temporary Haul Road supports four vegetation communities/land cover types including Tamarisk Scrub, Ruderal, Mulefat Scrub, Willow Scrub, and Disturbed/Developed (Figure 4). Site photographs are attached as Appendix A.

The topography throughout the Project site is generally flat, gently sloping to the southwest. Elevations on the Project site ranges from approximately 1255 feet to 1270 feet. The topography on the Borrow site and Temporary Haul Road is similarly flat with little change in elevation (ranging from approximately 1254 feet to 1256 feet at the Borrow site and 1250 feet to 1255 feet) on the Temporary Haul Road).

The Survey Area is located within Subunit 3 (Elsinore) of Elsinore Area Plan of the Western Riverside County MSHCP. The Survey Area is located within MSHCP Criteria Cells, proposed extension of the existing Core 3, and in the vicinity of proposed Linkage 8. The Project site, Borrow site, and Temporary Haul Road are located within the MSHCP survey area for the western burrowing owl (*Athene cunicularia hypugaea*) pursuant to Section 6.3.2 of the MSHCP. The Borrow site and Temporary Haul Road are also located within the MSHCP survey area for Narrow Endemic plant species pursuant to Section 6.1.3 of the MSHCP and Criteria Area plant

species pursuant to Section 6.3.2 of the MSHCP. Additionally, the Survey Area includes Riparian/Riverine Areas pursuant to Section 6.1.2 Riparian/Riverine Areas and Vernal Pools of the MSHCP. As described in Section 2.0 above, negotiations with the agencies are underway for fulfilling Criteria requirements within the Back Basin, including the Survey Area.

No special status plant species were observed within the Survey Area during the December 14, 2016 survey, however the VCS survey was not conducted during an appropriate time of year to detect most sensitive plant species; therefore, focused surveys for special status plant species will be performed in spring 2017 for more conclusive results. There are two special status species of plants with relatively high potential to occur within the Survey Area based on recent past observations within the immediate vicinity of the Survey Area including:

- little mousetail (*Myosurus minimus* ssp. *apus*), an MSHCP Criteria Area Species, and
- smooth tarplant (*Centromadia pungens* ssp. *laevis*), an MSHCP Criteria Area Species.

There are several additional special status species of plants with moderate potential to occur within the Survey Area. The Survey Area does not include MSHCP sensitive soils.

No special status animal species were observed within the Survey Area during the December 14, 2016 survey. At least six special status animal species have a relatively high potential to occur within the Survey Area based on recent past observations in the vicinity of the Survey Area including:

- burrowing owl (*Athene cunicularia*), a CDFW Species of Special Concern and MSHCP Covered Species;
- northern harrier (*Circus cyaneus*), a CDFW Species of Special Concern and MSHCP Covered Species;
- California horned lark (*Eremophila alpestris actia*), on the CDFW Watch List and an MSHCP Covered Species;
- American white pelican (*Pelecanus erythrorhynchos*), a CDFW Species of Special Concern for a nesting colony;
- loggerhead shrike (*Lanius ludovicianus*), a CDFW Species of Special Concern and MSHCP Covered Species; and
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), a CDFW Species of Special Concern and MSHCP Covered Species.

There are several additional animal species with at least moderate potential to occur within the Survey Area.

Two of the special status animal species were observed within the immediate vicinity of the Borrow Site and Temporary Haul Road including the loggerhead shrike and the San Diego black-tailed jackrabbit.

The Survey Area is known to contain both Waters of the United States and Waters of the State, including wetland and riparian systems, and resources classified as “MSHCP Riparian/Riverine Areas and Vernal Pools.” In the Back Basin, areas under elevation 1265’ mean sea level (MSL) are generally considered Waters of the State and areas under elevation 1246’ MSL are generally considered Waters of the United States. The jurisdictional areas tied to elevation are in addition to the drainage features that also occur with the Survey Area.

3.0 Regulatory Context

The following is a list of the relevant federal and state laws and regulations that apply to protecting plant communities, plants, wildlife, and water quality from impacts within the Survey Area. The Lake Management Plan [LMP] (Corps File Number 2004-00748-RRS) identifies Corps jurisdiction over all projects occurring below elevation 1246', wetlands, or within "other jurisdictional areas" within the Back Basin.

Agency/Organization	Laws/Regulations	Notes
Federal	Clean Water Act Section 401	The RWQCB waived certification for project activities subject to the to the Lake Management Plan (Corps File Number (2004-00748-RRS). Projects occurring within other waters of the U.S. will require a Section 401 permit from the RWQCB.
	Clean Water Act Section 404	Project activities located below the 1260' and 1246' elevations are subject to the Lake Management Plan. Projects below elevation 1260' have, among other measures, flood capacity requirements from the LMP and projects below elevation 1246' are required to obtain a Section 404 permit from the Corps. Furthermore, projects occurring within other Corps jurisdictional areas (wetlands and/or other waters of the U.S.) will require a Section 404 permit from the Corps.
	Clean Water Act Section 408	Lake Elsinore is a Corps facility and projects within elevation 1260' are subject to the Lake Management Plan and may be required to obtain a Riverside County Flood Control Department permit.
	Migratory Bird Treaty Act (MBTA)	Compliance with pre-construction surveys for nesting birds within 3 days prior to ground disturbance.
	Endangered Species Act (ESA)	No federally listed species were observed within the Survey Area during the 2016 survey.
State	Section 1600 of the Fish and Game Code	Project activities below elevation 1265' or within other Waters of the State are subject to Section 1600 of the Fish and Game Code.
	Porter-Cologne Water Quality Control Act and Water Discharge	Project activities within Waters of the State are subject to RWQCB jurisdiction.

	Requirements (WDR)	
Local Plans	Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)	Consistency determination will be required due to MSHCP overlays, “Riparian/Riverine Areas and Vernal Pools,” and conservation requirements within the Survey Area.
	Stephen’s Kangaroo Rat Habitat Conservation Plan (SKR HCP)	The Survey Area occurs within the SKR HCP, therefore the Project will be required to comply with applicable provisions of the SKR HCP (which includes payment of a mitigation fee).
City of Lake Elsinore	CEQA	Compliance with mitigation measures set forth in Section 8.0.
	Lake Elsinore Municipal Code – Title 19, Chapter 19.04 [Habitat Conservation]	Addresses the implementation of the SKR HCP requiring all applicants for development permits within the boundaries of the plan area to pay an impact and mitigation fee. No development permit for real property located within the boundaries of the plan area shall be issued or approved without payment of the impact and mitigation fee and the submission of the biological survey as required by the code.
	Lake Elsinore Municipal Code – Title 16, Chapter 16.85 [Local Development Mitigation Fee for Funding the Preservation of Nature Ecosystems]	Establishes a local development mitigation fee as part of the City’s implementation of the MSHCP. Fees are collected for any development within the City.
	Lake Elsinore Municipal Code – Title 14, Chapter 14.08	Intent of this chapter is to protect and enhance the water quality of City watercourses, water bodies, groundwater, and wetlands in a manner pursuant to and consistent with the Federal Clean Water Act.
	Lake Elsinore Municipal Code – Title 5, Chapter 5.116 [Palm Tree Preservation Program]	Removal of palm trees which exceed 5 feet in height (measures from the ground at the base of the trunk to the base of the crown) must obtain a palm tree removal permit prior to removal of the tree.

4.0 Survey and Methods

Studies of the biological resources associated with the Survey Area began with a review of relevant available literature, followed by an on-site field survey on December 14, 2016 of the Survey Area. The purpose of the field survey was to assess the existing habitat, assess on-site sensitive plant communities and jurisdictional waters, and to determine whether special status plant and wildlife species occur or could potentially occur within the Survey Area.

4.1 Literature Review

The study began with a review of relevant available literature on the biological resources within the Survey Area and Project Vicinity.

4.1.1 Sensitive Plant Communities

Sensitive plant communities (sensitive habitats) as defined below, are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. Sensitive habitats are often threatened with local extirpation and are therefore considered as valuable biological resources. Plant communities are considered “sensitive” by the California Native Plant Society (CNPS) and CDFW if they meet any of the following criteria listed below.

- The habitat is recognized and considered sensitive by CDFW, USFWS, and/or special interest groups such as CNPS.
- The habitat is under the jurisdiction of the Corps pursuant to Section 404 of the CWA.
- The habitat is under the jurisdiction of the CDFW pursuant to Sections 1600 through 1612 of the California Fish and Game Code.
- The habitat is known or believed to be of high priority for inventory in the California Natural Diversity Database (CNDDDB).
- The habitat is considered regionally rare.
- The habitat has undergone a large-scale reduction due to increased encroachment and development.
- The habitat supports special status plant and/or wildlife species (defined below).
- The habitat functions as an important corridor for wildlife movement.

Sensitive habitats are not afforded legal protection unless they support protected species, except for wetland habitats, which cannot be filled without authorization from the appropriate regulatory agencies. The most current version of CDFW’s List of California Terrestrial Natural Communities indicates which natural communities are sensitive given the current state of the California classification (CDFW 2010).

4.1.2 Critical Habitat

The USFWS's online service for information regarding Threatened and Endangered Species Final Critical Habitat designation within California was reviewed to determine if the Survey Area is within any species' designated Critical Habitat (USFWS 2016a).

4.1.3 Special Status Plants and Wildlife

Species of plants and wildlife species are afforded "special status" by federal agencies, state agencies, and/or non-governmental organizations (e.g., USFWS, CDFW, and United States Forest Service[USFS]) because of their recognized rarity, potential vulnerability to extinction, and local importance. These species typically have a limited geographic range and/or limited habitat and are referred to collectively as "special status" species. Plant and wildlife species were considered "special status" species if they meet any of the following criteria.

- Taxa with official status under ESA, CESA, and/or the NPPA.
- Taxa proposed for listing under ESA and/or CESA.
- Taxa designated a species of special concern by CDFW.
- Taxa designated a state fully protected species by CDFW.
- Taxa identified as sensitive, unique or rare, by the USFWS, CDFW, USFS, and/or the United States Bureau of Land Management (BLM).
- Plants that meet the definition of rare or endangered under CEQA §15380(b) and (d). Species that may meet the definition of rare or endangered include the following:
 - Species considered by CNPS and CDFW to be "rare, threatened or endangered in California" (California Rare Plant Rank [CRPR] 1A, 1B and 2) (CNPS 2016). A majority of the CRPR 3 and CRPR 4 plant species generally do not qualify for protection under CESA and NPPA.
 - Species that may warrant consideration on the basis of local significance or recent biological information.
 - Some species included on the CNDDDB Special Plants, Bryophytes, and Lichens List (CDFW 2017a).
- Considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.
- Taxa designated as MSHCP Planning Species.

Available literature and databases were reviewed regarding sensitive habitats and special status plant and wildlife species. Special status plant and wildlife species that have the potential to occur within the immediate region of the Survey Area were identified. Several agencies, including the USFWS, CDFW, and CNPS publish lists of particular taxa (species and subspecies) and the associated level of protection or concern associated with each. Reviewed and consulted

literature and databases focused on the Survey Area, and included the following sources listed below:

- The CNDDDB, a CDFW species account database that inventories status and locations of rare plants and wildlife in California, was used to identify any sensitive plant communities and special status plants and wildlife that may exist within a two-mile radius of the Survey Area. A CNDDDB search was performed assessing a two-mile radius around the Survey Area (CDFW2016g). CNDDDB records are generally used as a starting point when determining what special status species, if any, may occur in a particular area. However, these records may be old, lack data not yet entered, and do not represent all the special status species that could be in that particular area.
- A map of USFWS critical habitat to determine species with critical habitat mapped in the general vicinity of the Project (USFWS 2016a).
- Online CNPS Inventory of Rare and Endangered Plants of California (CNPS 2016). A search for the USGS 7.5-Minute Topographic Map Lake Elsinore Quadrangle within a range of 1,200 feet to 1,300 feet elevation provided information regarding the distribution and habitats of special status vascular plants in the Project Vicinity.
- Pertinent maps, scientific literature, websites, and regional flora and fauna field guides.

The literature review provided a baseline from which to inventory the biological resources potentially occurring within the Survey Area, as well as the surrounding area (please refer to Figures 5, 6, and 7). Although the inventory list of special status plant and wildlife species was not exhaustive of all species that might be of concern for the property, it provided a wide range of species that are representative of the wildland habitats in the area. Species occurrence and distribution information is often based on documented occurrences where opportunistic surveys have taken place; therefore, a lack of records does not necessarily indicate that a given species is absent from the Survey Area.

4.2 Biological Surveys

4.2.1 General Field Survey

The field survey was performed on December 14, 2016 by VCS biologists Erin Hayes and Wade Caffrey to assess and map vegetation communities and conduct a plant and wildlife survey¹. The purpose of the field survey was to ascertain general site conditions and identify habitat areas that could be suitable for special status plant species.

During the field survey, the biologists assessed the existing habitat within the Survey Area. The biologists paid special attention to those habitat areas that had the potential to provide suitable habitat for special status plant and wildlife species. Aerial photographs and maps were

¹ Follow up field review was conducted on February 2, 2017 to confirm riparian/riverine resources in the updated Temporary Haul Road location.

used to assist in the delineation of plant community boundaries. Following field surveys, the plant communities were digitized and a vegetation map was prepared.

Plant species were identified using plant field and taxonomical guides, such as The Jepson Manual: Vascular Plants of California, second edition (Baldwin et al. 2012). All plant species encountered during the field survey were identified and recorded in field notes (except for some ornamental plant species). An effort was made to determine presence or absence of potentially suitable habitat for those plants that could not be identified at that time.

General wildlife surveys were conducted on foot and with binoculars within the Survey Area. The location of the Survey Area is within the general distributional range of several special status vertebrate species and a few invertebrate species. Many of the sensitive terrestrial wildlife species that could occur within the Survey Area are not subject to specific published survey protocols and / or are covered under the MSHCP. The purpose of the general survey was to note those species observed, ascertain general site conditions, and identify habitat areas that could be suitable for special status wildlife species.

All wildlife species encountered visually or audibly during the field survey were identified and recorded in field notes. Biologists also recorded signs of wildlife species including wildlife tracks, burrows, nests, scat and remains. Binoculars were used to aid in the identification of observed wildlife. Wildlife field guides and photographs were used to assist with identification of wildlife species during the field survey, as necessary. A one day survey cannot be used to conclusively determine presence or absence of a species; therefore, assessments of presence/absence and potential for occurrence were made based on presence of suitable habitat to support the species, diagnostic signs (burrows, scat, tracks, vocalizations, and nests), known records or occurrence within the area, known distribution and elevation range, and habitat utilization from the relevant literature.

4.2.2 Burrowing Owl Habitat Assessment

A burrowing owl (*Athene cunicularia*) [BUOW] habitat assessment was performed during the general biological survey on December 14, 2016 by VCS biologists Erin Hayes and Wade Caffrey to assess whether potentially suitable habitat for BUOW was present within the Survey Area and a 500-foot buffer surrounding the Survey Area. During the survey, the biologists paid special attention to those habitat areas that appeared to provide suitable habitat for BUOW. Soil conditions, topography, vegetative communities, wildlife, and habitat quality were documented.

All encountered burrows or structure entrances were checked for the presence of BUOW, molted feathers, cast pellets, prey remains, eggshell fragments, tracks, or excrement at or near a burrow entrance. Natural or man-made structures and debris piles that could support BUOWs were also surveyed.

The methods used to detect and identify BUOW included observation of key signs identified by the California Burrowing Owl Consortium (CBOC) such as sight, scat, tracks, burrows, nests, and calls. All wildlife species encountered visually or audibly during the field survey were identified and recorded in field notes. Binoculars were used to aid in the identification of observed wildlife. Photographs were taken to document existing conditions within the Infrastructure Improvement Area and the surrounding vicinity.

Prior to the field survey, available literature and databases were reviewed regarding sensitive habitats and wildlife species. VCS reviewed and consulted literature and databases focused on Riverside County, California, including the CNDDDB and USFWS Critical Habitat.

4.3 Jurisdictional Waters

The following sources were reviewed to determine the potential presence or absence of jurisdictional streams/drainages, wetlands, and their location within the watersheds associated with the Survey Area, and other features that might contribute to federal or state jurisdictional authority located within watersheds associated with the Survey Area:

- National Wetlands Inventory (NWI) maps (USFWS 2016). The NWI database indicates potential wetland areas based on changes in vegetation patterns as observed from satellite imagery. This database is used as a preliminary indicator of wetland habitats because the satellite data are not precise;
- USGS National Hydrography Dataset (NHD). Provides the locations of “blue-line” streams as mapped on 7.5-Minute Topographic Map coverage;
- Aerial Imagery (Google Earth©) (Google 2016);
- USGS 7.5-Minute Topographic Maps; and
- Natural Resource Conservation Service (NRCS) Soil Survey.

4.4 Wetland Delineation

An assessment of wetland delineation within the Survey Area was conducted by VCS biologists Wade Caffrey and Erin Hayes on December 14, 2016, to determine the current conditions. Sensitive areas were delineated using a handheld Garmin Global Positioning System device. All areas with depressions or drainages were evaluated for the presence of Waters of the United States (US), including jurisdictional wetlands. Each area was inspected according to the Corps delineation guidelines, and streambeds/wetland boundaries of CDFW and RWQCB. Furthermore, prior to the site visit, the delineators reviewed the Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants report (Brady and Vyverberg 2013). All drainages encountered were also examined for connectivity or lack of connectivity to other hydrologic features. Dominant vegetation within the drainages or adjacent to the drainages were identified and recorded. Other references used to determine jurisdictional areas included vegetation and topographic maps of the Survey Area and a recent aerial photograph.

5.0 Results

5.1 Vegetation Communities

5.1.1 Vegetation Communities

The vegetation communities and habitat conditions were inspected to confirm presence and habitat quality of the vegetation found on-site. Vegetation community/land cover classifications used in this report generally follow previous biological survey and vegetation mapping for the Survey Area and the surrounding East Lake Specific Plan or other projects in the vicinity for consistency and comparison purposes. Where appropriate descriptions of vegetation communities from the Manual of California Vegetation (Sawyer 2008) were also utilized. Any deviations from standard vegetation classifications were made on best professional judgment when areas did not fit into a specific habitat description provided by the Manual.

Plant communities were mapped using field observations and utilizing aerial imagery in Google Earth. Vegetation mapping and acreages for each vegetation community within the Survey Area are listed below in Table 1. Please refer to Figure 4 to view the vegetation within the Survey Area. Representative photographs of the Survey Area are included as Appendix A.

Table 1
Vegetation Communities/Land Cover Observed within the Survey Area

Vegetation Communities	Project Site Acreage	Borrow Site Acreage	Temporary Haul Road Acreage	Total Acreage
Ruderal	4.51	1.71	3.30	9.52
Tamarisk scrub	-	2.07	0.99	3.06
Willow scrub	0.08	-	0.01	0.09
Mulefat scrub	-	0.01	0.12	0.13
Ornamental trees	0.02		-	0.02
Disturbed/Developed	0.82	0.35	0.74	1.91
TOTAL	5.43	4.14	5.16	14.73

5.1.1.1 Ruderal

A total of 9.52 acres of Ruderal habitat was mapped within the Survey Area (4.51 acres in the Project site, 1.71 acres in the Borrow site, and 3.30 acres in the Temporary Haul Road). The Ruderal habitat is characterized by ruderal native and non-native herbaceous species. Non-native species within the ruderal habitat include red-stem filaree (*Erodium cicutarium*), cheeseweed (*Malva parviflora*), Russian thistle (*Salsola tragus*), ripgut brome (*Bromus*

diandrus), and black mustard (*Brassica nigra*). Native species within the ruderal habitat include salt grass (*Distichlis spicata*), salt heliotrope (*Heliotropium curassavicum*), alkali heath (*Frankenia salina*), alkali weed (*Cressa truxilensis*), ranchers fiddleneck (*Amsinckia menziesii*), and alkali mallow (*Malvella leprosa*). The dominant species within the Ruderal habitat varies throughout the Survey Area with some areas comprised of completely non-native species and some areas comprised of completely native species. The herbaceous species are typically alkaline-tolerant.

5.1.1.2 Tamarisk Scrub

A total of 3.06 acres of Tamarisk Scrub habitat was identified within the Survey Area (2.07 acres in the Borrow site and 0.99 acre in the Temporary Haul Road). The dominant species in the Tamarisk Scrub habitat is tamarisk species (*Tamarisk* sp.), typically devoid of any other shrub or tree species. Herbaceous and ground cover species were typically similar in composition to the Ruderal land cover (see Ruderal description). Tamarisk is a non-native and highly invasive species.

5.1.1.3 Willow Scrub

A total of 0.09 acres of Willow Scrub habitat was mapped within the Survey Area (0.08 acre in the Project site and 0.01 acre in the Temporary Haul Road). This habitat onsite is made up of individual native riparian trees including primarily black willow (*Salix gooddingii*) trees, in addition to cottonwood (*Populus fremontii* ssp. *fremontii*) trees, without a complex understory. The herbaceous and ground cover species were identical to the surrounding Ruderal habitat.

5.1.1.4 Mulefat Scrub

A total of 0.13 acres of Mulefat Scrub habitat was mapped within the Survey Area (0.01 acre in the Borrow site and 0.12 acre in the Temporary Haul Road). This habitat onsite is made up of individual native mulefat (*Baccharis salicifolia* ssp. *salicifolia*) shrubs, without a complex understory. The herbaceous and ground cover species were identical to the surrounding Ruderal habitat.

5.1.1.5 Ornamental Trees

A total of 0.02 acre of the Survey Area is classified as ornamental trees. This area is found only in the Project site and includes two eucalyptus (*Eucalyptus* sp.) trees and one additional ornamental tree. The understory is typical of the surrounding Ruderal habitat.

5.1.1.6 Disturbed/Developed

A total of 1.91 acres of the land within the Survey Area is considered disturbed/developed (0.82 acre within the Project site, 0.35 acre within the Borrow site, and 0.74 acre within the Temporary Haul Road). Disturbed/developed habitat includes areas of bare ground (e.g. dirt roads), paved roads, and other built facilities.

5.1.2 Critical Habitat

Under the ESA, the federal government is required to designate "critical habitat" for any species it lists under the ESA. Federal agencies are prohibited from authorizing, funding or carrying out actions that "destroy or adversely modify" critical habitats.

The USFWS's online service for information regarding Threatened and Endangered Species Final Critical Habitat designation within California was reviewed to determine if the Survey Area, including the haul route, occur within any species' designated Critical Habitat. Riverside Fairy Shrimp Critical Habitat is located north and adjacent to the dirt road portion of the haul route and 1000 feet east of the Borrow Site. Coastal California gnatcatcher Critical Habitat is approximately 1.4 miles north of the Project site. No critical habitat exists within the Survey Area.

5.1.3 Special Status Vegetation Communities

Two special-status vegetation communities designated by CDFW were reported in the CNDDDB within 2 miles of the Survey Area including Southern Sycamore Alder Riparian Woodland, Southern Cottonwood Willow Riparian Forest. These habitats were not observed within the Survey Area.

5.2 Plants

5.2.1 Plant Species Observed

The plant species observed within the Survey Area totaled 23 species and are listed in Appendix B of this report.

5.2.2 Sensitive Plant Species Observed

No sensitive plant species were observed during the 2016 survey. Although sensitive plant species were not observed, this does not preclude them from being present in the Survey Area. The 2016 survey was not conducted during an appropriate time to observe many of the sensitive plant species with potential to occur onsite. Focused surveys for special status plant species will be conducted in spring 2017.

5.2.3 Sensitive Plant Species with Potential to Occur

Sensitive plant species include federally or state listed threatened or endangered species, those species listed on the California Native Plant Society's rare, endangered plant inventory, and MSHCP species. Species with the potential to occur on-site were analyzed based on distribution, habitat requirements, and existing site conditions, and are listed in Appendix D. No sensitive plant species were observed within the Survey Area during the VCS survey. Two

special status species of plants are considered to have relatively high potential to occur within the Survey Area within their respective suitable habitats based on recent past observations within areas in the immediately vicinity of the Survey Area including:

- little mousetail, an MSHCP Criteria Area Species; and
- smooth tarplant, an MSHCP Criteria Area Species.

There are several special status species of plants with moderate potential to occur within the Survey Area.

5.3 Wildlife

5.3.1 Wildlife Species Observed or Detected

The wildlife species or signs thereof observed within the Survey Area during the field surveys are listed in Appendix C of this report.

5.3.2 Sensitive Wildlife Species Observed

No sensitive wildlife species were observed during the December 14, 2016 survey.

5.3.3 Sensitive Wildlife Species with Potential to Occur

Sensitive wildlife species include the following classifications: federally or state listed threatened or endangered species, California species of special concern, fully protected and protected species (as designated by CDFW), and MSHCP species. Species with the potential to occur on-site were analyzed based on distribution, habitat requirements, and existing site conditions.

No special status animal species were observed within the Survey Area during the December 14, 2016 survey. At least six special status animal species have a relatively high potential to occur within the Survey Area within their respective suitable habitats based on recent past observations in the vicinity of the Survey Area including:

- burrowing owl (CDFW Species of Special Concern and MSHCP Covered Species);
- northern harrier (CDFW Species of Special Concern when nesting and MSHCP Covered Species);
- California horned lark (on the CDFW Watch List and an MSHCP Covered Species);
- American white pelican (CDFW Species of Special Concern for a nesting colony);
- loggerhead shrike (a CDFW Species of Special Concern and MSHCP Covered Species); and
- San Diego black-tailed jackrabbit (CDFW Species of Special Concern and MSHCP Covered Species)

The San Diego black-tailed jackrabbit and loggerhead shrike were observed within the immediate vicinity of the Borrow site and the Temporary Haul Road.

As noted in Section 5.6.3, the dirt road portion of the haul route includes potential vernal pools/seasonal depressions. The likelihood of occurrence of vernal pool fairy shrimp (*Branchinecta lynchi*), or Riverside fairy shrimp (*Streptocephalus woottoni*) in these pools is reduced due to existing continuous disturbance of the dirt road by regular vehicle use. Additionally, disturbance to potential vernal pools/seasonal depressions is planned to be avoided by the haul route.

Sensitive wildlife species with potential to occur within the Survey Area are listed in Appendix D.

5.3.4 Burrowing Owl

Suitable BUOW habitat is present within the Survey Area and surrounding 500-feet. No BUOWs were observed within the Survey Area during the VCS survey. A focused burrow survey and focused burrow owl surveys (if required) will be performed in 2017.

5.4 Regional Connectivity/Wildlife Movement

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. Corridors effectively act as links between different populations of a species. An increase in a population’s genetic variability is generally associated with an increase in a population’s health.

Corridors mitigate the effects of habitat fragmentation by:

- Allowing wildlife to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity;
- Providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and
- Serving as travel routes for individual wildlife species as they move within their home ranges in search of food, water, mates, and other needs (Fahrig and Merriam 1985, Simberloff and Cox 1987, Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories:

- Dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions);

- Seasonal migration; and
- Movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover).

Regional conservation under the MSHCP includes identifying and conserving linkages between core areas. Core Areas are blocks of habitat which generally support the life history requirements of one or more MSHCP Covered Species and a Linkage is specifically a connection between Core Areas with adequate size, configuration, and vegetation characteristics to generally provide “Live-In” habitat and/or provide for genetic flow for identified MSHCP planning species (linkages typically function for movement of species and “live-in” habitat).

5.4.1 Wildlife Movement within the Survey Area

The Survey Area is located within MSHCP Elsinore Area Plan Subunit 3 and the proposed extension of existing Core 3, and within the vicinity of proposed Linkage 8. The northern portion of the extension provides for movement of species along the lower San Jacinto River to proposed Linkage 8. Additionally, Lake Elsinore is the permanent and seasonal home to a wide variety of birds and functions as a way station on the Pacific flyway for migrating waterfowl traveling from Alaska to South America. It is unlikely the Project site functions in local and regional wildlife movement, based on the relatively small size of the site and fact that it is surrounded on two sides by development (residential development and a paved, well-used road). Based on the size and location of the Borrow site and Temporary Haul Road, it is possible these portions of the Survey Area are located within local and regional wildlife movement areas, including dispersal, seasonal migration, and movements related to home range activities. As described in Section 2.0, negotiations with the agencies are underway to determine a strategy for fulfilling MSHCP Criteria requirements within the Back Basin, including the Survey Area. Although there may be some minimal temporary effect on wildlife movement due to Project activities within the Borrow site and Temporary Haul Road, these are expected to be minor since these areas are relatively small and the much larger surrounding area is expected to continue to function as a wildlife movement area during the duration of Project activities within the Borrow site and Temporary Haul Road.

5.5 Soils Mapping

The United States Department of Agriculture Natural Resources Conservation Service lists 3 soil types (series) for the Survey Area (Figure 8)². The soil types within the Survey Area are predominantly sandy loam.

The MSHCP identifies two general classes of soil known to be associated with listed and sensitive plant species in certain regions of the MSHCP Plan Area, including clay soils and

² A fourth category “Water (W)” is listed on the soils map.

Traver-Domino-Willows association soils [clay soils digitized within the MSHCP Plan Area included the Bosanko, Auld, Altamont, and Porterville series].

Soils considered MSHCP sensitive were not identified within the Survey Area. The haul route crosses through two soil types considered MSHCP sensitive, however in these locations the haul route is located on a compacted and disturbed dirt road regularly accessed by different entities (e.g. water district, maintenance purposes, etc.) The two MSHCP sensitive soil types found within the haul route are as follows:

Traver Loamy Fine Sand, eroded (Tp2) and Traver Loamy Fine Sand, saline-alkali (Tr2):

The Traver series is a member of a coarse-loamy, mixed, thermic family of Natric Haploxeralfs. The soils have light brownish gray, calcareous, fine sandy loam A horizons, light brownish gray, calcareous, fine sandy loam Bt horizons which overlie very pale brown, calcareous fine sandy loam C horizons. The alluvium is from granitic bedrock. The Traver soils are located in the eastern portion of the dirt road section of the haul route.

The Traver-Domino-Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River (including the inlet to Lake Elsinore). Sensitive plants supported by the Traver-Domino-Willows soil association include two federally-listed species: San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*) and spreading navarretia (*Navarretia fossalis*). Other sensitive plant species found in this association include Parish's brittlescale (*Atriplex parishii*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), and vernal barley (*Hordeum intercedens*).

The soil type descriptions for the three soil types mapped within the Survey Area are listed below:

Hanford coarse sandy loam (HcC) 2 to 8% slopes:

The Hanford series consists of very deep, well drained soils that formed in moderately coarse textured alluvium dominantly from granite. Hanford soils are on stream bottoms, floodplains and alluvial fans and have slopes of 0 to 15 percent. The C1 horizon can be generally acid to neutral coarse sandy loam to mildly sandy loam. The C2 horizon and C3 horizons are slightly acid to mildly alkaline, light yellowish-brown, stratified loamy sand and coarse sandy loam.

Ramona sandy loam (RaB2) 2 to 5% slopes, eroded:

The Ramona series is a member of the fine-loamy, mixed, thermic family of Typic Haploxeralfs. Typically, Ramona soils have brown, slightly and medium acid, sandy loam and fine sandy loam A horizons, reddish brown and yellowish red, slightly acid, sandy clay loam B2t horizons, and strong brown, neutral, fine sandy loam C horizons.

Waukena loamy fine sands (Wa):

The Waukena soils have light gray and gray fine sandy loam A horizons, light yellowish brown sandy clay loam Bt and A2 horizons, light yellowish brown, very strongly alkaline Bt horizons and light gray, stratified C horizons. This soil is found in most of the Survey Area.

The soil mapping also noted “Water (W)” as a soil category within the Temporary Haul Road. This area is no longer underwater and this data is likely accurate to the 1990s, based on historic aerials. Based on the presence of sensitive soils in the immediate vicinity it is possible the areas of soil classified as “W” could now include sensitive soils. Therefore the lack of sensitive soil in the area marked “W” should not be considered conclusive.

The Survey Area occurs within the proposed extension of existing Core 3 in the MSHCP. The proposed extension of Core 3 focuses on conserving soils of the Traver series, which are important to the maintenance of several species of Narrow Endemic Plants. A survey for Narrow Endemic Plants and Criteria Area Species Plants will be conducted in spring 2017.

5.6 Jurisdictional Areas

5.6.1 Waters of the United States

The Survey Area was assessed for jurisdictional wetland and non-wetland Waters of the United States. To determine the presence of a wetland, three indicators are required: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. The methodology published in the United States Army Corps of Engineers 1987 Wetland Delineation Manual and the Arid West Supplement sets the standards for meeting each of the three indicators, which normally require that 50 percent or more dominant plant species typical of a wetland, soils exhibiting characteristics of saturation, and hydrological indicators be present. Projects with impacts to Waters of the United States are regulated under Sections 401 and 404 of the Clean Water Act through the Corps and RWQCB.

Jurisdictional non-wetland Waters of the United States are typically determined through the observation of an Ordinary High Water Mark (OHWM), which is defined as the “line on the shore established by the fluctuation of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” Projects with impacts to Waters of the United States are regulated under Sections 401 and 404 of the Clean Water Act also by connectivity with adjacent watersheds.

The Lake Management Plan identifies Corps jurisdiction over all projects occurring below elevation 1246’, wetlands, or within “other jurisdictional areas” (i.e. OHMW) within the Back Basin and are depicted on Figure 9.

The entire Survey Area is above elevation 1246’. 0.14 acre of wetlands were observed. 0.10 acre of “other Corps jurisdictional areas” were observed within the Survey Area, all of which would be considered Waters of the United States. Acreages of Corps jurisdiction are further described in Table 2 below.

Table 2
Waters of the United States within the Survey Area

Feature	Total Acreage
Below Elevation 1246'	0.00
Other WoUS	0.10
Wetlands	0.14
Total WoUS	0.24

5.6.2 Waters of the State

CDFW and RWQCB have jurisdiction over Waters of the State (California Fish and Game Code §§1600 et seq.; California Code of Regulations, Title 14, §720; Porter-Cologne Water Quality Control Act). Section 1602 of the California Fish and Game Code (FGC) applies to natural rivers, streams, and lakes:

“An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake”

CDFW defines a stream as “a body of water that flows perennially or episodically and that is defined by the area in which water currently flows, or has flowed, over a given course during the historic hydrologic course regime, and where the width of its course can reasonably be identified by physical or biological indicators” (Brady and Vyverberg 2013). CDFW regulates wetland areas only to the extent that those wetlands are part of a stream, river, or lake as defined by the CDFW. Furthermore, CDFW has identified that all areas under elevation 1265’ adjacent to Lake Elsinore are subject to their jurisdiction.

To determine the areas where waters flow or have flowed and the width of its course, the delineators conducted a site visit to walk the entire site; reviewed previous biological, cultural, and construction reports on the site; and reviewed historical aerial imagery. Based on the collective results of these investigations, areas that exhibited physical or biological indicators determined to be within the jurisdiction were mapped. The VCS delineators concluded that the site does exhibit the characteristics of a stream, river, or lake, and therefore Waters of the State are present, which are shown on Figure 9.

12.58 acres of the Survey Area occur below elevation 1265’ and would be subject to CDFW jurisdiction. Furthermore, 0.35 acres of Waters of the State rivers, streams, or lakes were observed within the 1265’ elevation and 0.06 acres were observed above of the 1265’ elevation, which are subject to CDFW and RWQCB jurisdiction. Acreages of Waters of the State

are further detailed in Table 3 below, specifically identifying the vegetation communities present within Waters of the State and below elevation 1265’.

Table 3
Waters of the State within the Survey Area

Feature*	Total Acreage
Below Elevation 1265’	12.58
Rivers, Streams, or Lakes	0.13
Riparian	0.22
Above Elevation 1265’	0.06
Rivers, Streams, or Lakes	0.06
Riparian	0.00
Totals	--
Rivers, Streams, or Lakes*	0.19
Riparian*	0.22
Total WoS	12.64

*includes overlap with the Below Elevation 1265’ feature.

5.6.3 Riparian/Riverine Areas and Vernal Pools

Section 6.1.2 of the MSHCP states that "riparian/riverine resources are lands which contain habitat dominated by trees, shrubs, persistent emergent [wetland plant species], or emergent mosses and lichens, which occur close to or which depend upon moisture from a nearby freshwater source; or areas with freshwater after flow during all or a portion of the year" and "Vernal pools are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season." To determine the areas where "Riparian/Riverine Areas and Vernal Pools" are present, the delineators conducted a site visit to walk the entire site; reviewed previous biological, cultural, and construction reports on the site; and reviewed historical aerial imagery. Based on the collective results of these investigations, areas that showed evidence of riparian/riverine resources were determined to be subject to the MSHCP and were mapped.

Riparian/Riverine Areas

Approximately 0.41 acre of riparian/riverine areas and 3.06 acres of Tamarisk Scrub are located within the Survey Area. Additionally, 12.58 acres of the survey area occur below elevation 1265’, which is considered a Water of the State). Please note, VCS also concluded that the presence of Tamarisk Scrub, which is generally associated with groundwater in the Survey Area,

met the definition of riparian/riverine under the MSCHP. However, Tamarisk Scrub has been categorized separately due to its listing as an invasive species. Riparian/Riverine Areas and Vernal Pools are shown on Figure 9.

Table 4
Riparian/Riverine within Survey Area

Feature	Total Acreage
Below Elevation 1265'	--
Riverine	0.13
Riparian	0.22
Tamarisk Scrub	3.06
Above Elevation 1265'	--
Riverine	0.06
Riparian	0.00
Tamarisk Scrub	0.00
Totals	--
Below Elevation 1265'	12.58
Riverine*	0.19
Riparian*	0.22
Tamarisk Scrub*	3.06

*includes overlap with the Below Elevation 1265' feature.

Vernal Pools/Seasonal Depressions

No vernal pools or seasonal depressions were observed within the Survey Area. Therefore, no additional impacts to the baseline condition would result from the Project.

6.0 Project Impacts

This section discusses potential impacts to biological resources that could result from implementation of the proposed Project. Implementation of the proposed Project has the potential to directly and/or indirectly impact Riparian/Riverine and Vernal Pool habitat, sensitive plant species (Narrow Endemic and Criteria Area Plant species), sensitive animal species, and jurisdictional waters of the U.S. and State.

Biological resources may be either directly or indirectly impacted by a project. Direct and indirect impacts may be either permanent or temporary in nature. These impact categories are defined below.

- **Direct impact:** any loss, alteration, disturbance, or destruction of biological resources that would result from project-related activities is a direct impact. Examples include vegetation clearing, encroaching into wetlands, diverting natural surface water flows, and the loss of individual species and/or their habitats. Direct impacts are long term.
- **Indirect impact:** as a result of project-related activities, biological resources may also be affected in a manner that is not direct. Examples of indirect impacts include elevated noise, light, and dust levels, increased human activity, decreased water quality, erosion created by the removal of vegetation, and the introduction of invasive plants and unnatural predators (e.g. domestic cats and dogs). These indirect impacts may be both short term and long term in their extent.
- **Permanent impacts:** all impacts that result in the long-term or irreversible removal of biological resources are considered permanent. Examples include constructing a building or permanent road on an area containing biological resources.
- **Temporary impacts:** any impacts considered to have reversible effects on biological resources can be viewed as temporary. Examples include the generation of fugitive dust during construction, or removing vegetation and either allowing the natural vegetation to recolonize or actively revegetating the impact area.

Under each section, potential impacts are discussed.

6.1 Potential Impacts to Vegetation Communities

Potential impacts to vegetation communities/land cover types due to implementation of the proposed Project includes the entire Survey Area as follows:

Table 5
Potential Impacts to Vegetation Communities within the Survey Area

Vegetation Communities	Project Site Acreage	Borrow Site Acreage	Temporary Haul Road	Total Acreage
Ruderal	4.51	1.71	3.30	9.52
Tamarisk scrub	-	2.07	0.99	3.06
Willow scrub	0.08	-	0.01	0.09
Mulefat scrub	-	0.01	0.12	0.13
Ornamental trees	0.02		-	0.02
Disturbed/Developed	0.82	0.35	0.74	1.91
TOTAL	5.43	4.14	5.16	14.73

Direct impacts to Ruderal, Ornamental Trees, and Disturbed/Developed vegetation/land cover types are considered less than significant because these habitats/land covers are common in the Survey Area and/or surrounding vicinity and do not represent CNDDDB or CDFW sensitive plant communities.

For direct impacts to Willow Scrub and Mulefat Scrub it is expected that as compliance with the MSHCP conservation requirements for the back basin (Back Basin 770 Agreement) are achieved and compliance with all other MSHCP requirements (i.e. Riparian/Riverine and Vernal Pool) are achieved including the mitigation discussed in Section 8.5, the potential for significant direct impacts to these habitats will be reduced to below significance.

Tamarisk Scrub may be considered Riparian/Riverine habitat for MSHCP purposes. It is expected that if compliance with MSHCP requirements for Riparian/Riverine resources are achieved including the mitigation discussed in Section 8.5, the potential for significant direct impacts will be reduced to below significance.

Indirect impacts to plant communities result in secondary consequences. Development/excavation activities within the Survey Area could result in indirect impacts to the vegetation communities surrounding the directly impacted areas. Examples of indirect temporary impacts to plant communities include the effects of fugitive dust created by construction activities and the spread of invasive species. With development, “edges” of vegetation communities may be exposed and more susceptible to invasion by invasive species (introduced by planted landscaping, seed dispersal from cars, people, and/or pets, and/or wind). It is expected that with compliance with the MSHCP (6.1.4 Guidelines Pertaining to the Urban/Wildlands Interface), the potential for indirect impacts will reduce the potential for significant indirect impacts to below significance. Construction-related erosion, runoff, sedimentation, soil compaction, and alteration of drainage patterns that may affect plants by altering site conditions so that the location in which they are growing becomes unfavorable are prohibited by federal and state laws; compliance with the requirements under these state and federal laws will reduce the potential for significant indirect impacts to below significance.

Section 7.2 describes the avoidance measures to further reduce indirect impacts to the vegetation communities.

6.2 Potential Impacts to Special Status Plants

There is potential for direct and indirect impacts to special status plants within the Survey Area. The species with the highest likelihood of occurrence within the Survey Area are little mouse-tail and smooth tarplant; focused surveys pursuant to the MSHCP Narrow Endemic and Criteria Area Species Survey requirements will be conducted in spring 2017. The impacts to sensitive plants are not currently known, however it is expected that compliance with the MSHCP (including required mitigation, if applicable) will reduce potential direct impacts to a below significance. Additionally, potential indirect impacts to special status species within

conservation areas are expected to be reduced to below significance with MSHCP compliance (6.1.4 Guidelines Pertaining to the Urban/Wildlands Interface).

6.3 Potential Impacts to Critical Habitat

The Survey Area does not fall within any Critical Habitat. Riverside Fairy Shrimp Critical Habitat is located north and adjacent to the haul route. To avoid potential indirect impacts to Riverside Fairy Shrimp Critical habitat, avoidance and minimization measures, as outlined in Section 7.2, will be implemented. No direct impacts are anticipated to Riverside Fairy Shrimp Critical Habitat. With implementation of the avoidance and minimization measures indirect impacts to Riverside Fairy Shrimp are expected to be reduced to below significance.

6.4 Potential Impacts to Special Status Wildlife

One special status wildlife species with moderate to high potential to occur in the Survey Area is not covered by the MSHCP, the American white pelican. However, the occurrence is likely to be only incidental as there is no potential nesting grounds or foraging habitat within the Survey Area; therefore, no direct impacts and no significant indirect impacts due to the Project are expected.

The remaining special status wildlife with moderate to high potential to occur in the Survey Area are covered by the MSHCP, therefore any potential direct or indirect impacts are expected to be reduced to below significance with MSHCP compliance.

6.5 Potential Impacts to Wildlife Movement

As described earlier, the Borrow site and Temporary Haul Road occur within an area that may serve a function in local and regional wildlife movement. It is expected that local and regional wildlife movement will be preserved within the Project vicinity as a result of the existing mitigation and preservation areas already identified and already in place in the Back Basin. While there will be removal of vegetation in the Borrow site and Temporary Haul Road, the acreage is small in comparison to the surrounding undeveloped area. Furthermore, use of the Borrow site and Temporary Haul Road will be temporary (only during the borrow activities); therefore, considering the temporary nature of the use and relatively small size of area in which vegetation removal will occur, no long term effects to wildlife movement are anticipated due to the Project. Additionally, considering the existing and future preservation of open space, potential impacts to wildlife movement are expected to be reduced to below significance.

6.6 Potential Impacts to Jurisdictional Waters

Waters of the U.S. under the jurisdiction of the Corps and RWQCB, Waters of the State under the jurisdiction of CDFW and RWQCB, and Riparian/Riverine/Vernal Pools under the jurisdiction

of the MSHCP were found within the Survey Area. Impacts are identified in the tables below. All jurisdictional areas depicted in the Survey Area (Figure 9) will be impacted.

All impacts to Waters of the U.S., Waters of the State and Riparian/Riverine resources within the Project site are considered permanent. Within the Borrow site and Temporary Haul Road impacts are categorized as follows:

- all areas, except for Riparian resources (i.e. Willow Scrub and Mulefat Scrub habitat), below elevation 1265' are considered temporary impacts (for Waters of the State), since the area will remain as natural ground following construction activities; and
- removal of Riparian resources/wetland Waters of the U.S. (i.e. Willow Scrub and Mulefat Scrub habitat) within the Temporary Haul Road are considered temporary impacts, however, these impacts may be considered permanent if the Project decides to mitigate for the impacts consistent with the permanent impacts to these resources. The impacts to Riparian resources/wetland Waters of the U.S. within the Borrow site are considered a permanent impact.

Table 6
Impacts to Waters of the United States within the Survey Area

Feature	Permanent Impacts	Temporary Impacts
Below Elevation 1246'	0.00	0.00
Other WoUS	0.10	0.00
Potential Wetlands	0.01	0.13

Table 7
Impacts to Waters of the State within the Survey Area

Feature	Permanent Impacts	Temporary Impacts
Below Elevation 1265'	--	--
Rivers, Streams, or Lakes	0.13	0.00
Riparian	0.09	0.13
Above Elevation 1265'	--	--
Rivers, Streams, or Lakes	0.06	0.00
Riparian	0.00	0.00
Totals	--	--
Below Elevation 1265'	3.30	9.28
Rivers, Streams, or Lakes*	0.19	0.00
Riparian*	0.09	0.13

*includes overlap with the Below Elevation 1265' feature.

Table 8
Impacts to Riparian/Riverine within the Survey Area

Feature	Permanent Impacts	Temporary Impacts
Below Elevation 1265'	--	--
Riverine	0.13	0.00
Riparian	0.09	0.13
Tamarisk Scrub	0.00	3.06
Above Elevation 1265'	--	--
Riverine	0.06	0.00
Riparian	0.00	0.00
Tamarisk Scrub	0.00	0.00
Totals	--	--
Below Elevation 1265'	3.30	9.28
Riverine*	0.19	0.00
Riparian*	0.09	0.13
Tamarisk Scrub*	0.00	3.06

*includes overlap with the Below Elevation 1265' feature.

7.0 BMPs, Avoidance, and Protection Measure Recommendations

The following sections include BMPs, avoidance, and protection mitigation measures that would be incorporated into future development within the Survey Area to reduce project impacts to biological resources. These mitigation measures are standard practices that have been shown to reduce impacts to plant communities, special status plant and wildlife species, and jurisdictional waters. The applicant should implement these measures to avoid and minimize impacts to the greatest extent feasible.

7.1 General BMPs Incorporated into the Project

General BMPs will be implemented to the extent practical. Key aspects of the BMPs are to confine activities to select areas, use properly maintained equipment, train employees and contractors on proper implementation and monitoring of BMPs, avoid use of chemicals near sensitive areas, develop procedures for minimizing the likelihood of spills and to control sediment, ensure worker safety, and minimize impacts to vegetation, and wildlife.

7.2 General Vegetation and Wildlife Avoidance and Protection Measures

The Survey Area contains habitats that can support many common wildlife species, as outlined within Section 5.3. The applicant for the Project will implement the following general avoidance, and protection measures to protect vegetation and wildlife, to the extent practical.

- Prior to project implementation, a biologist will conduct a Worker Environmental Awareness Program (WEAP) which will describe the biological constraints of the particular project. Key personnel who will work within the Survey Area will attend the WEAP prior to the commencement of construction activity. The WEAP will be administered to key personnel regarding the sensitive biological resources, restrictions, protection measures, and individual responsibilities associated with the construction.
- Work area limits will be defined and respected including the Project site, Borrow site, and limits of the Temporary Haul Road. All construction/laydown areas will have their boundaries clearly flagged or marked before project implementation and all disturbances will be confined to the flagged areas. All project personnel will be instructed that their activities must be confined to locations within the flagged areas. Disturbance beyond the actual construction zone is prohibited without site-specific surveys. While vernal pools or seasonal depressions were not observed within the Survey Area, prior to the start of work, flagging or fencing of the haul route will be performed to prevent accidental work within Riverside fairy shrimp Critical Habitat which is located adjacent to the existing dirt road (Figure 7).
- Clearing and grubbing will be performed under the guidance of a biological monitor.

- Timing of vegetation removal will occur as described in detail in Section 8.4.
- Cleared or trimmed vegetation and woody debris will be disposed of in a legal manner at an approved disposal site.
- If any wildlife is encountered during the course of project activities, said wildlife will be allowed to freely leave the area unharmed.
- Wildlife will not be disturbed, captured, harassed, or handled. Animal nests, burrows and dens will not be disturbed without prior survey from a qualified biologist.
- Active nests (nests with chicks or eggs) cannot be removed or disturbed. Nests may be removed or disturbed by a qualified biologist, if not active.
- To avoid impacts to wildlife, the applicant will comply with all litter and pollution laws and will institute a litter control program during the course of the construction activities. All contractors, subcontractors, and employees shall also obey these laws. Trash removal will reduce the attractiveness of the area to opportunistic predators such as coyotes, opossums, and common ravens.
- Employees, contractors, and site visitors will be prohibited from collecting plants and wildlife unless under the direction of a qualified biologist for purposes of project implementation, relocation, or mitigation.

In addition to the general measures mentioned above, the Project will be required to comply with the following standard construction BMPs found in Appendix C of the MSHCP.

- Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.
- The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via preexisting access routes to the greatest extent possible.
- The upstream and downstream limits of the 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.
- The Project 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.
- 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, and CDFW, RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.

- The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to preexisting contours and revegetated with appropriate native species.
- Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.

8.0 Mitigation Recommendations

8.1 Vegetation Communities

Mitigation for impacts to vegetation communities caused by the Project will be achieved through compliance with MSHCP requirements. Mitigation for impacts to sensitive vegetation communities associated with jurisdictional waters, riparian, riverine, or vernal pool resources will be satisfied through compensatory and/or preservation requirements as described in Sections 8.4 and 8.5 below. Mitigation for impacts to Mulefat Scrub and Willow Scrub will be accomplished through compensatory and/or preservation measures identified for riparian resources outlined in Section 8.5, specifically a minimum ratio of 2:1 preservation within the Back Basin, Lake Elsinore or other agency-approved mitigation bank or in-lieu fee program within the MSHCP.

8.2 Plant Species

Mitigation for impacts to special status plant species caused by implementation of the Project will be achieved through compliance with MSHCP requirements. As noted previously, focused sensitive plant surveys will be conducted in spring 2017. If impacts will occur to Narrow Endemic or Criteria Area plant species identified during the focused surveys, mitigation is proposed to occur in compliance with MSHCP requirements, specifically 90% preservation (translocation may be performed) of the impacted species population either onsite or offsite within a preservation area of the Back Basin. The 90% preservation will be appropriate for the species (i.e. seed collection, soil translocation, etc.).

8.3 Wildlife Species

Most of the special status wildlife species with potential to occur within the Survey Area are covered under the MSHCP. Therefore, mitigation for potential impacts to special status wildlife species caused by development within the Survey Area will be achieved through compliance with MSHCP requirements.

Since the Survey Area is located within the MSHCP burrowing owl survey area and includes suitable burrowing owl habitat, a focused burrow survey and focused burrowing owl surveys (if determined necessary based on the focused burrow survey) will be performed in 2017. If burrowing owl are identified in the Survey Area, mitigation/preservation will occur as required by the MSHCP. Specifically, if the portion of the Project (i.e. Project site, Borrow site, or Temporary Haul Road) is within the MSHCP Criteria Area, then at least 90 percent of the area with long-term conservation value will be included in the MSHCP Conservation Area. Otherwise:

- If the site contains, or is part of an area supporting less than 35 acres of suitable habitat or the survey reveals that the site and the surrounding area supports fewer than 3 pairs

of burrowing owls, then the on-site burrowing owls will be passively or actively relocated following accepted protocols.

- If the site (including adjacent areas) supports three or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat and is non-contiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and burrowing owl pairs will be conserved onsite.

If burrowing owl are not identified in the Survey Area during focused surveys and suitable burrows are present, then a 30-day pre-construction survey will be required prior to Project ground disturbance.

Direct impacts to Riverside Fairy Shrimp Critical Habitat will be avoided and indirect impacts will be minimized with the following measures:

- Speed for project vehicles on the existing access road (haul route) will be limited to reduce dust;
- Critical habitat will be fenced off to prevent unintentional direct impact; and
- Dust control measures (i.e. cover loads, use of water truck at the borrow site and along the road during haul activities) will be implemented.

Additionally, to avoid potential impacts to Riverside fairy shrimp Critical Habitat and vernal pool fairy shrimp, the limits of the haul route will be flagged or fenced.

The following measures shall be performed prior to clearing and grubbing within the Survey Area to avoid impacts to burrowing owls, other nesting birds, and potential vernal pools:

- The removal of potential nesting bird habitat will be conducted outside of the nesting season (February 1 to August 31) to the extent feasible. If grading or site disturbance is to occur between February 1 and August 31, a nesting bird survey shall be conducted by a qualified biologist within no more than 72 hours of scheduled vegetation removal, to determine the presence of nests or nesting birds. If active nests are identified, the biologist will establish appropriate buffers around the vegetation (typically 500 feet for raptors and sensitive species, 200 feet for non-raptors/non-sensitive species). All work within these buffers will be halted until the nesting effort is finished (i.e. the juveniles are surviving independent from the nest). The on-site biologist will review and verify compliance with these nesting boundaries and will verify the nesting effort has finished. Work can resume within the buffer area when no other active nests are found. Alternatively, a qualified biologist may determine that construction can be permitted within the buffer areas and would develop a monitoring plan to prevent any impacts while the nest continues to be active (eggs, chicks, etc.). Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to the City for mitigation monitoring compliance record keeping. If vegetation clearing is not completed within 72 hours of a negative survey during nesting season, the nesting survey must be repeated to confirm the absence of nesting birds.

- A pre-construction presence/absence survey for burrowing owl within the Survey Area where suitable habitat is present shall be conducted by a qualified biologist within 30 days prior to the commencement of ground disturbing activities. If active burrowing owl burrows are detected during the breeding season, all work within an appropriate buffer (typically a minimum 300 feet) of any active burrow will be halted until that nesting effort is finished. The on-site biologist will review and verify compliance with these boundaries and will verify the nesting effort has finished. Work can resume in the buffer when no other active burrowing owl burrows nests are found within the buffer area.

If active burrowing owl burrows are detected outside the breeding season or during the breeding season and its determined nesting activities have not begun, then passive and/or active relocation may be approved following consultation with the City of Lake Elsinore. The installation of one-way doors may be installed as part of a passive relocation program. Burrowing owl burrows shall be excavated with hand tools by a qualified biologist when determined to be unoccupied, and back filled to ensure that animals do not re-enter the holes/dens. Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to the City for mitigation monitoring compliance record keeping.

- Due to the ongoing off-road activity in the Back Basin, a preconstruction survey during the appropriate time of year will be conducted to identify the optimal haul route for access to the Borrow site in case features are created by off-road activity that could support vernal pool species. The haul route shall avoid potential vernal pools/seasonal depressions and, if the survey is conducted by a biologist with vernal pool experience, the biologist shall allow for impacts to features that are not vernal pools, but currently mapped as potential vernal pools/seasonal depressions.

8.4 Jurisdictional Waters

Permanent Impacts

Impacts to CDFW jurisdiction below elevation 1265' are recommended to be compensated for by the preservation of waters below elevation 1265' in the confines of the Back Basin or Lake Elsinore at a minimum 0.25:1 ratio, based on habitat type.

Impacts to non-wetland waters of the U.S. and streambed waters of the State are recommended to be compensated for at a minimum ratio of 2:1 preservation in the Back Basin, Lake Elsinore or other agency-approved mitigation bank or in-lieu fee program within the MSHCP. Impacts to riparian waters are recommended to be compensated for at a minimum ratio of 2:1 preservation in the Back Basin, Lake Elsinore or other agency-approved mitigation bank or in-lieu fee program within the MSHCP. Mitigation for non-elevation related impacts to jurisdictional features may be combined with the elevation mitigation areas, due to the significant overlap in these areas in the acreage calculations in the previous sections. The following tables identify the anticipated mitigation necessary for impacts within the Project:

**Table 9
Compensatory Mitigation for Waters Impacts within the Survey Area**

Feature	Impacts	Ratio Multiplier	Mitigation
Below 1265'	3.30	0.25	0.825
Non-wetland WOUS	0.10	2	0.20
Potential wetland WOUS	0.01	2	0.02
Riverine Resources / Rivers, Streams, or Lakes WOS	0.19	2	0.38
Riparian Resources / WOS	0.09	2	0.18

Temporary Impacts, Excluding Riparian and Potential Wetland Resources

Impacts to all areas within the Temporary Haul Road and Borrow site, except for Riparian resources (i.e. Willow Scrub and Mulefat Scrub habitat), that are below elevation 1265' are considered temporary impacts (for Waters of the State), since the area will remain as natural ground following construction activities. Following these temporary impacts, a seed mix consisting of native species consistent with the surrounding native habitats will be broadcast within the temporarily impacted areas. Due to the existing poor condition of these areas (disturbed and/or dominated by invasive species), the temporary impacts and subsequent broadcasting of native seed are anticipated to result in the potential functional improvement of these areas. No conservation easement or performance standards are proposed.

Temporary Impacts to Riparian and Potential Wetland Resources

Temporary impacts to riparian and potential wetland resources may be mitigated either through the mitigation ratios identified under the permanent impacts section above or through implementing the following restoration: 1) native replanting of the mulefat and/or willow species, consistent with the impacted resource, and 2) quarterly monitoring by a qualified biologist to verify establishment of the planted species for 2 years and until the site reaches a percent cover similar to pre-Project conditions. Non-native species shall not exceed 5% cover. No conservation easement or long-term management is proposed for these areas.

8.5 Agency Approvals

Prior to the issuance of a grading permit, the proposed project shall obtain the necessary authorizations from the regulatory agencies for proposed impacts to jurisdictional waters: United States Army Corps of Engineers, Regional Water Quality Control Board, and the California Department of Fish and Wildlife. Authorizations anticipated for this project include, but are not limited to, a Section 404 NWP, a Section 401 WQC, a Section 1600 SAA. The Project

will also be required to comply with the MSHCP through obtaining a consistency determination and any other additional approvals required by the MSHCP, including processes such as the City's implementation of the HANS (Habitat Evaluation and Acquisition Negotiation Strategy) process, the LEAP (Lake Elsinore Acquisition Process) process, and/or a Determination of Biologically Equivalent or Superior Preservation, if appropriate.

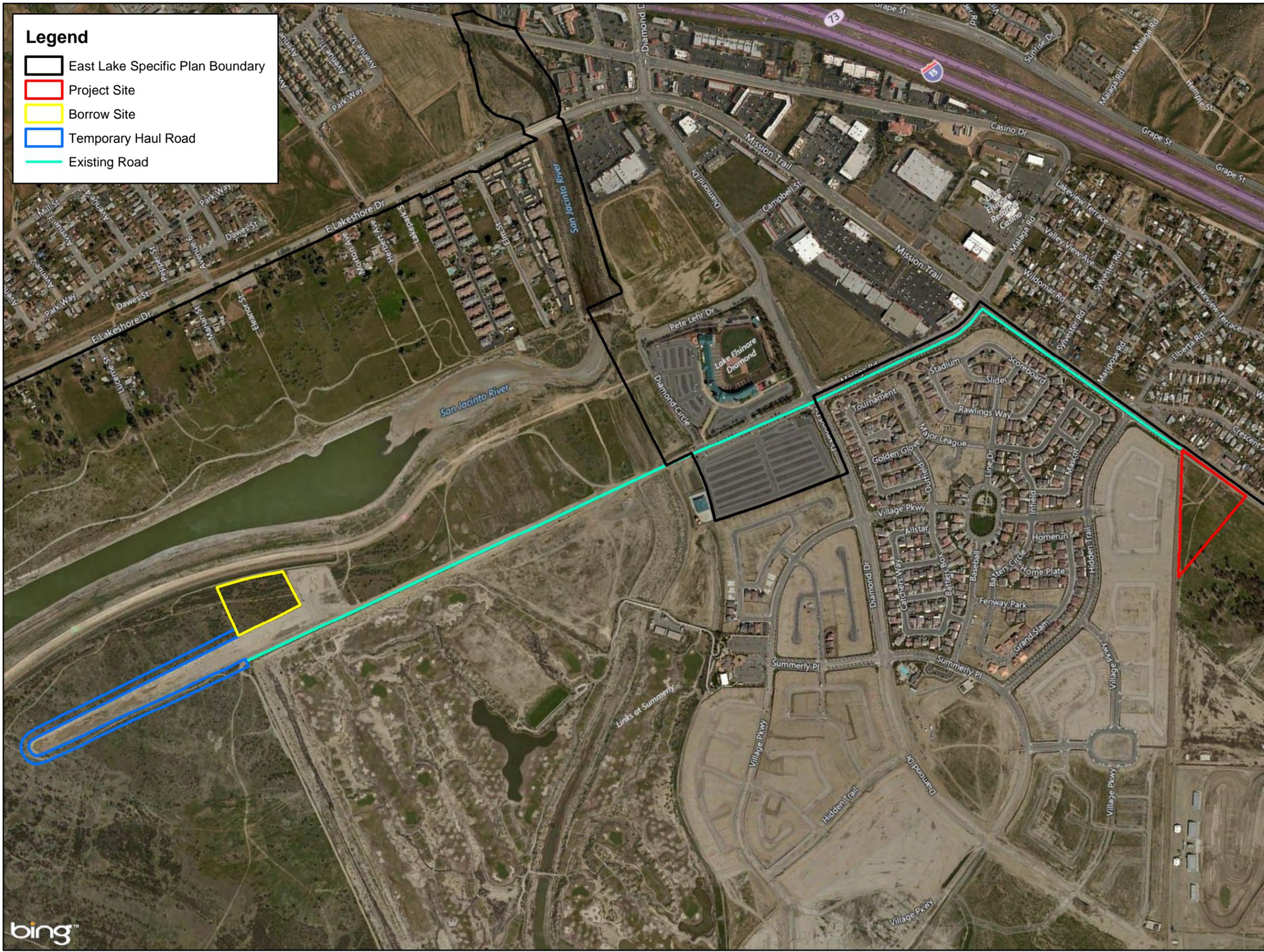
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Legend

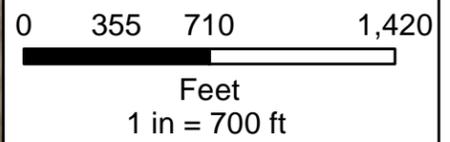
- East Lake Specific Plan Boundary
- Project Site
- Borrow Site
- Temporary Haul Road
- Existing Road



**LAKE ELSINORE
CCR, LLC.**

**MISSION TRAIL
APARTMENTS**

VICINITY MAP OF
PROJECT SITE,
BORROW SITE
AND ACCESS



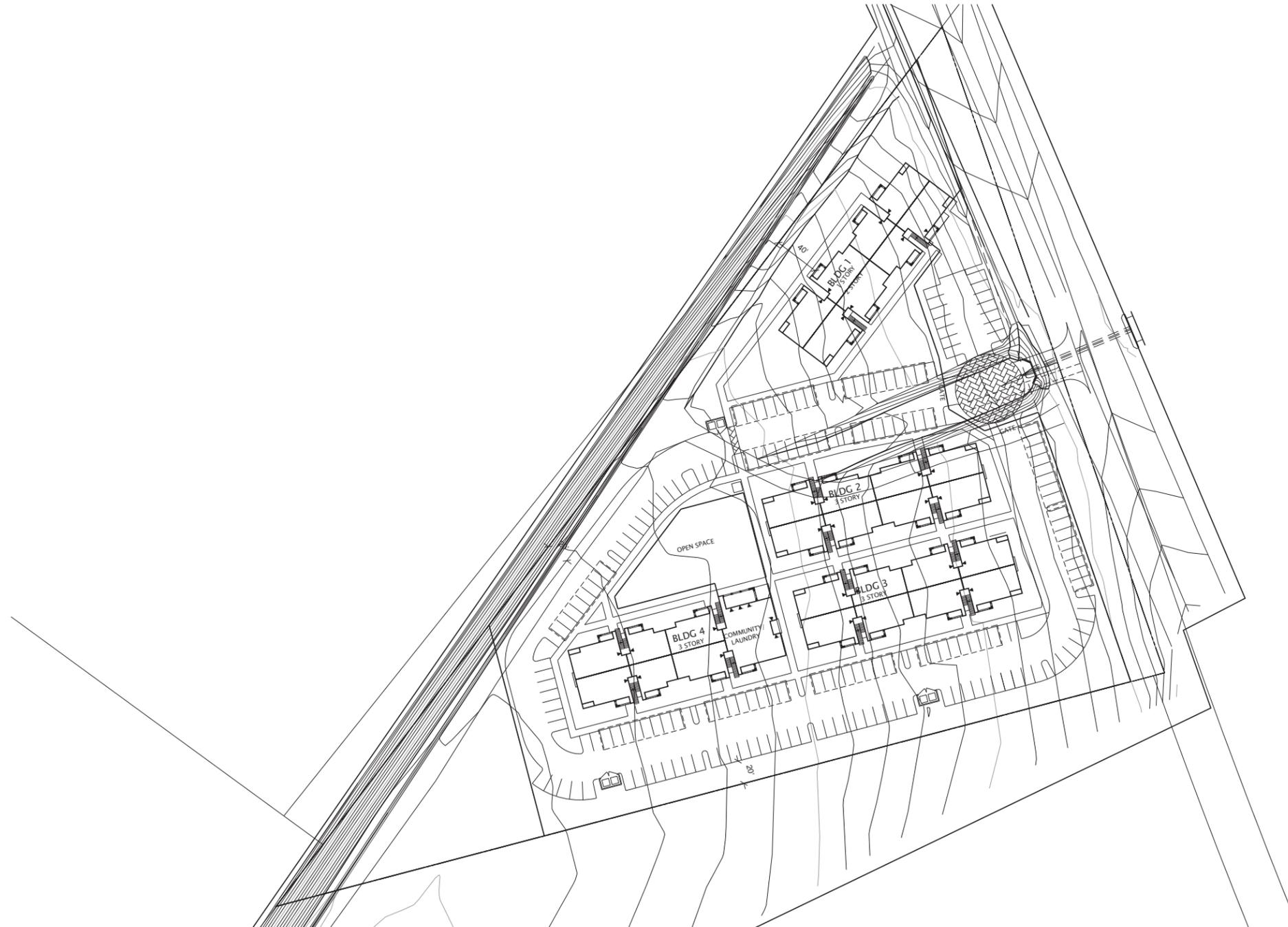
Map Date: January 2017
Data Source: BING, City of Lake Elsinore



Figure 2

PROJECT SUMMARY	PARKING:		UNIT COUNT:		AREA CALCULATIONS:	
	CARPORT PARKING:	88 SPACES (1.08:1 RATIO)	2 BEDROOM	9 UNITS	TOTAL SITE AREA:	
	UNCOVERED PARKING:	103 SPACES	3 BEDROOM	72 UNITS	235,401.3 SQFT (5.4 ACRES)	
	TOTAL PARKING	191 PARKING SPACES (2.36:1 PARKING RATIO)	TOTAL:	81 UNITS 15.1 DU/AC		

-  2 BEDROOM
-  3 BEDROOM
-  LEASE/COMMUNITY/
LAUNDRY



MISSION TRAIL APARTMENTS
ARCHITECTURAL SITE PLAN
LAKE ELSINORE, CALIFORNIA

1" = 40'

12.20.16

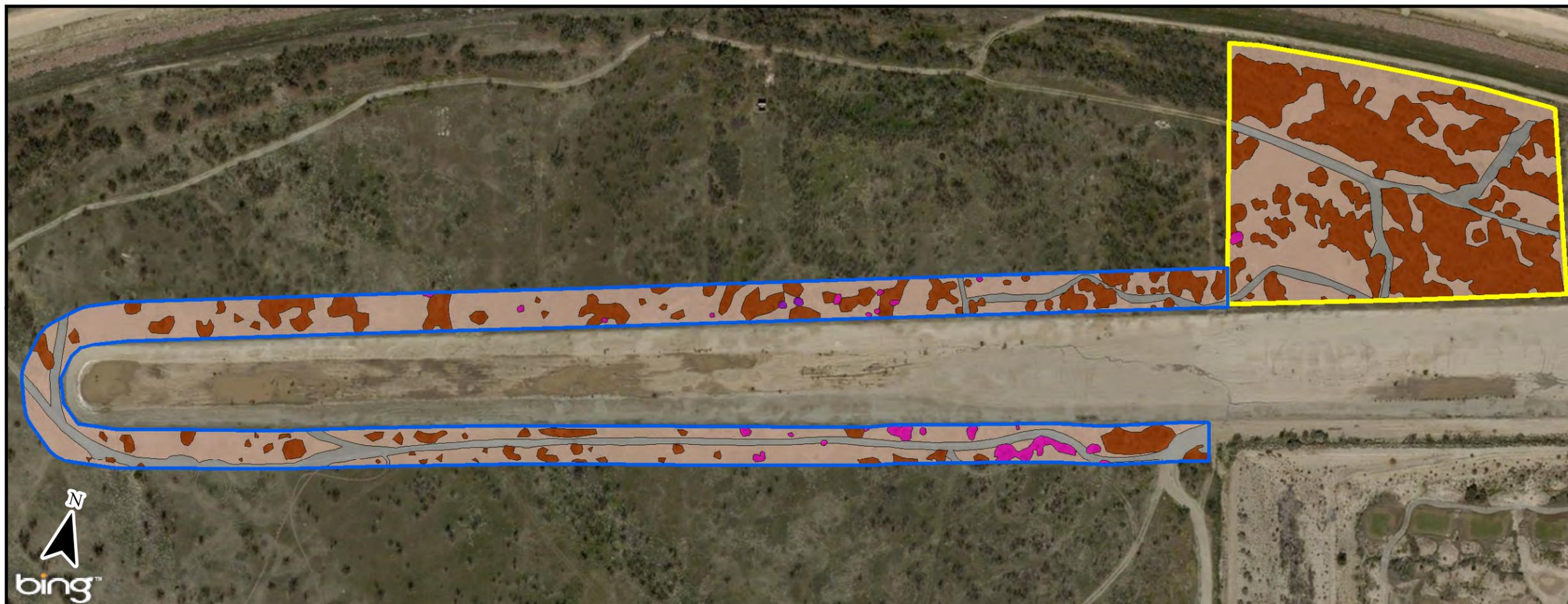


FIGURE 3

**LAKE ELSINORE
 CCR, LLC**

**MISSION TRAIL
 APARTMENTS**

**VEGETATION
 MAP**

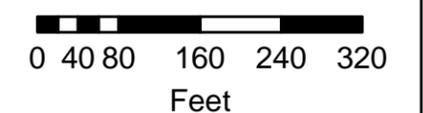


Legend

- Project Site Boundary
- Borrow Site Boundary
- Temporary Haul Road Boundary

Vegetation/Land Cover Type

- Disturbed/Developed
- Mulefat Scrub
- Tamarisk Scrub
- Ornamental Trees
- Ruderal
- Willow Scrub



1 inch = 180 feet

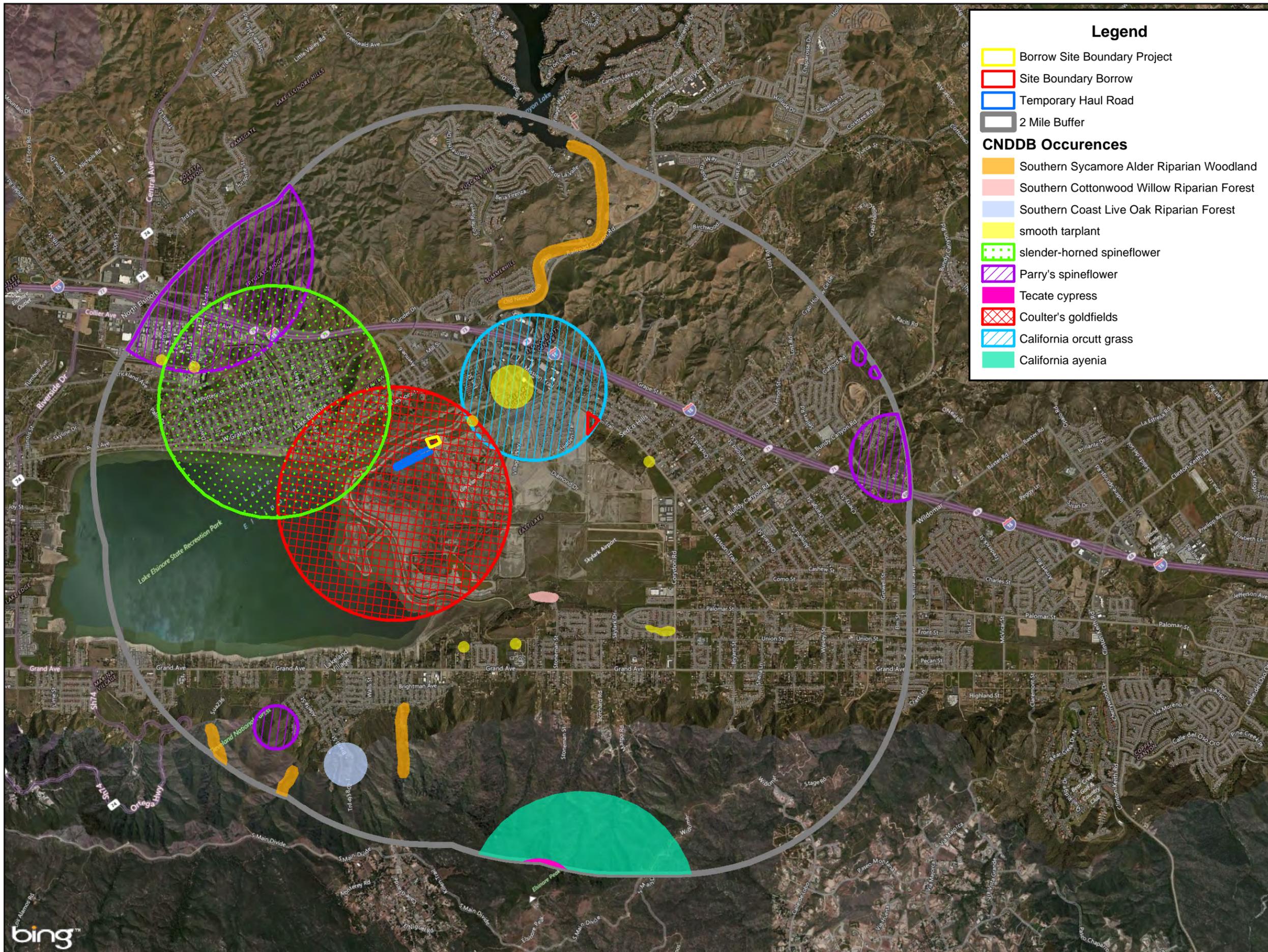
Map Date: February 2017
 Source: BING, City of Lake Elsinore

Figure 4

LAKE ELSINORE CCR, LLC

MISSION TRAIL APARTMENTS

CNDDDB OCCURRENCES - PLANT SPECIES

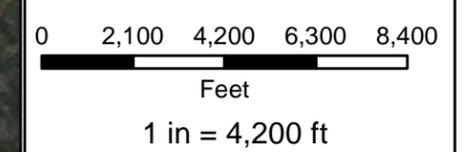


Legend

- Borrow Site Boundary Project
- Site Boundary Borrow
- Temporary Haul Road
- 2 Mile Buffer

CNDDDB Occurences

- Southern Sycamore Alder Riparian Woodland
- Southern Cottonwood Willow Riparian Forest
- Southern Coast Live Oak Riparian Forest
- smooth tarplant
- slender-horned spineflower
- Parry's spineflower
- Tecate cypress
- Coulter's goldfields
- California orcutt grass
- California ayenia



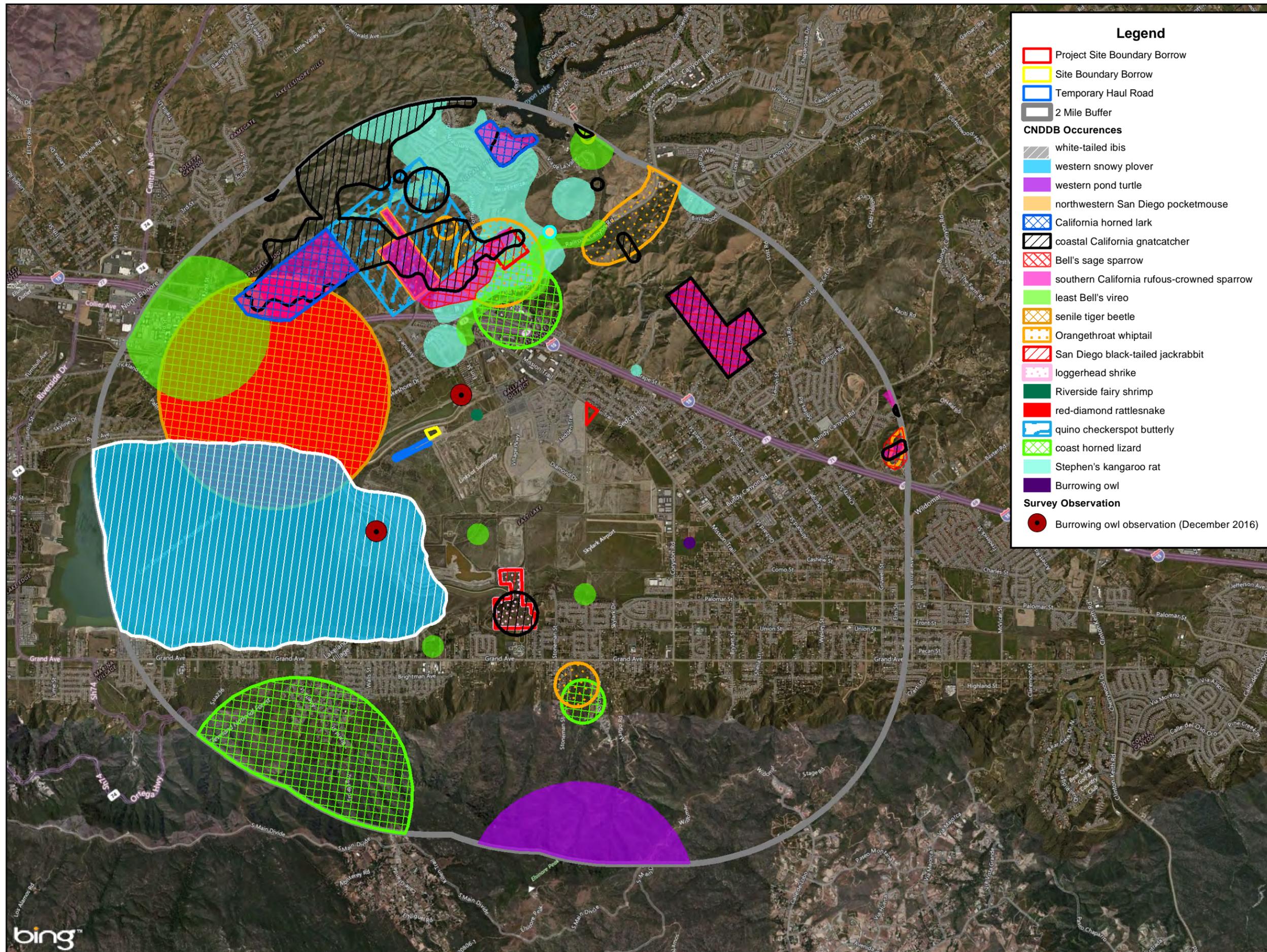
Map Date: January 2017
Source: USFWS, Bing

Figure 5

LAKE ELSINORE CCR, LLC

MISSION TRAIL APARTMENTS

CNDDDB OCCURRENCES - ANIMAL SPECIES



Legend

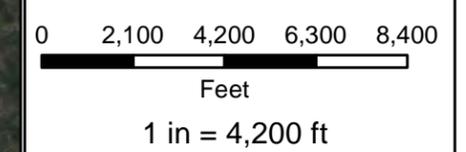
- Project Site Boundary Borrow
- Site Boundary Borrow
- Temporary Haul Road
- 2 Mile Buffer

CNDDDB Occurrences

- white-tailed ibis
- western snowy plover
- western pond turtle
- northwestern San Diego pocketmouse
- California horned lark
- coastal California gnatcatcher
- Bell's sage sparrow
- southern California rufous-crowned sparrow
- least Bell's vireo
- senile tiger beetle
- Orangethroat whiptail
- San Diego black-tailed jackrabbit
- loggerhead shrike
- Riverside fairy shrimp
- red-diamond rattlesnake
- quino checkerspot butterfly
- coast horned lizard
- Stephen's kangaroo rat
- Burrowing owl

Survey Observation

- Burrowing owl observation (December 2016)



Map Date: January 2017
Source: CNDDDB, Bing

Figure 6

LAKE ELSINORE CCR, LLC

MISSION TRAIL APARTMENTS

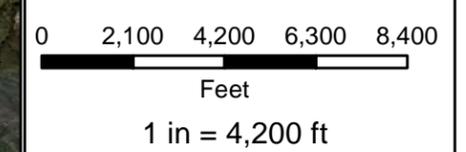
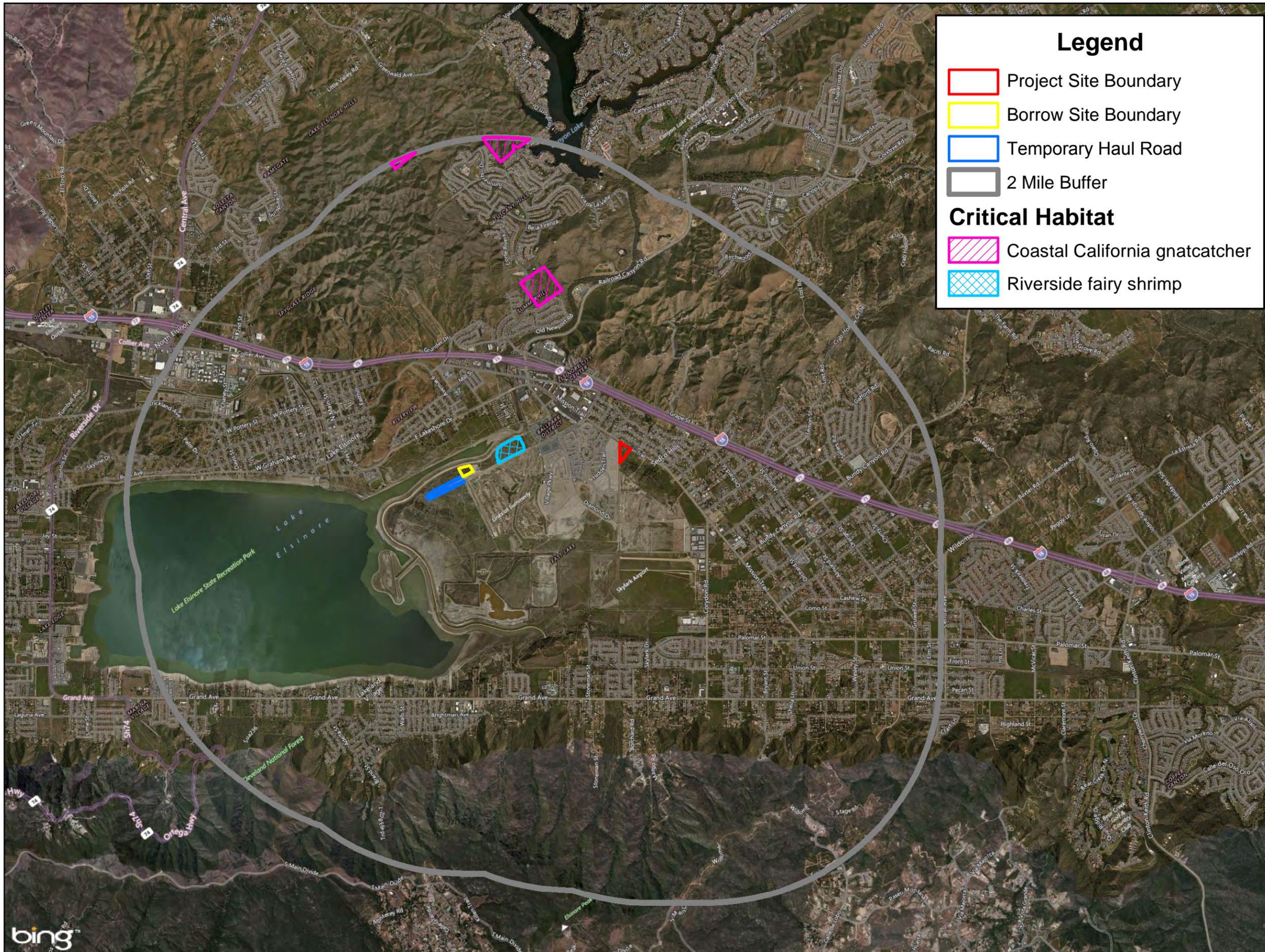
CRITICAL HABITAT

Legend

-  Project Site Boundary
-  Borrow Site Boundary
-  Temporary Haul Road
-  2 Mile Buffer

Critical Habitat

-  Coastal California gnatcatcher
-  Riverside fairy shrimp



Map Date: January 2017
Source: USFWS, Bing

Figure 7

**LAKE ELSINORE
 CCR, LLC**

**MISSION TRAIL
 APARTMENTS**

SOILS MAP

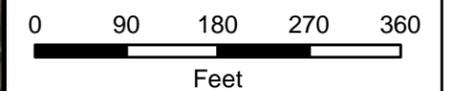


Legend

- Project Site Boundary
- Borrow Site Boundary
- Temporary Haul Road Boundary

Soil Type

- HcC
- RaB2
- Wa
- W



1 in = 180 ft

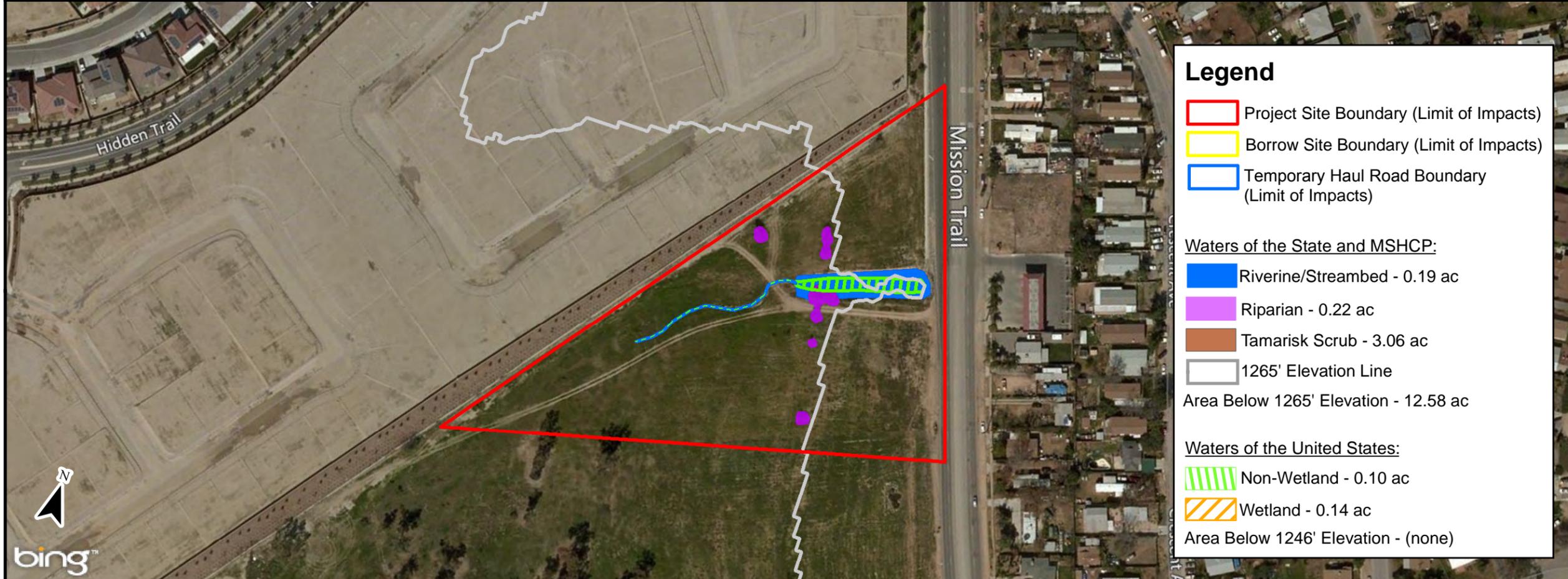
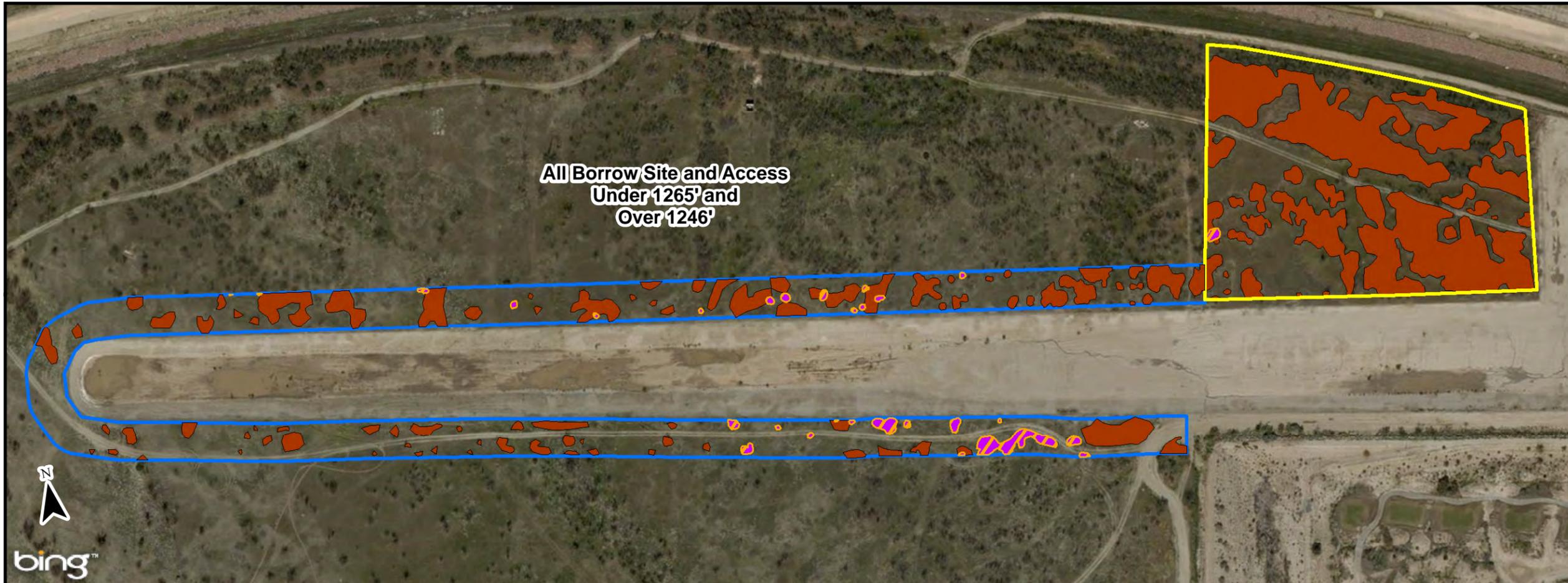
Map Date: January 2017
 Source: USFWS, Bing

Figure 8

CITY OF LAKE ELSINORE

MISSION TRAIL APARTMENTS

Waters of the State,
United States,
and MSHCP



Legend

- Project Site Boundary (Limit of Impacts)
- Borrow Site Boundary (Limit of Impacts)
- Temporary Haul Road Boundary (Limit of Impacts)

Waters of the State and MSHCP:

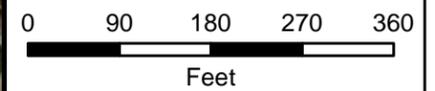
- Riverine/Streambed - 0.19 ac
- Riparian - 0.22 ac
- Tamarisk Scrub - 3.06 ac
- 1265' Elevation Line

Area Below 1265' Elevation - 12.58 ac

Waters of the United States:

- Non-Wetland - 0.10 ac
- Wetland - 0.14 ac

Area Below 1246' Elevation - (none)



1 in = 180 ft

Map Date: February 2017
Source: BING, Wilson Mikami,
City of Lake Elsinore

Figure 9

APPENDIX A

Photopages



Photo 1. Project Site: onsite ruderal habitat (center of photo); eucalyptus woodland to the left and development to the right (located on either side of the Project site)



Photo 2. Project Site: existing onsite drainage channel.



Photo 3. Project Site: typical view of ruderal habitat onsite (viewing northeast).



Photo 4. Borrow site: ruderal habitat in foreground, tamarisk scrub in background.



Photo 5. Borrow site: ruderal habitat in foreground, tamarisk scrub in background.



Photo 6. Temporary Haul Road: view of disturbed habitat, ruderal habitat and mix of mulefat and tamarisk in the southern portion of the Temporary Haul Road. [photo date: 2/2/2017]



Photo 7. Temporary Haul Road: view of disturbed habitat, ruderal habitat and tamarisk on the northern portion of the Temporary Haul Road (located at the western end). [photo date: 2/2/2017]

APPENDIX B

Plant Species Observed within the Survey Area

Appendix B
Plant Species Observed within the Survey Area

Scientific Name	Common Name
<i>Asteraceae (Compositae)</i>	Sunflower Family
<i>Baccharis pilularis</i>	coyote brush
<i>Baccharis salicifolia</i>	mule fat
<i>Helianthus annuus</i>	common sunflower
<i>Boraginaceae</i>	Borage Family
<i>Amsinckia menziesii</i>	common fiddleneck
<i>Heliotropium curassavicum</i>	salt heliotrope
<i>Brassicaceae (Cruciferae)</i>	Mustard Family
<i>Brassica nigra</i> *	black mustard
<i>Sisymbrium irio</i> *	London rocket
<i>Lepidium nitidum</i>	shining peppergrass
<i>Chenopodiaceae</i>	Goosefoot Family
<i>Bassia hyssopifolia</i> *	five-hook bassia
<i>Salsola tragus</i> *	Russian thistle (tumbleweed)
<i>Convolvulaceae</i>	Morning Glory Family
<i>Cressa truxillensis</i>	alkali weed
<i>Frankeniaceae</i>	Frankenia Family
<i>Frankenia salina</i>	alkali heath
<i>Geraniaceae</i>	Geranium Family
<i>Erodium cicutarium</i> *	redstem filaree
<i>Malvaceae</i>	Mallow Family
<i>Malva parviflora</i> *	cheeseweed
<i>Malvella leprosa</i>	alkali mallow
<i>Myrtaceae</i>	Myrtle Family
<i>Eucalyptus sp.</i> *	eucalyptus, gum tree
<i>Pinaceae</i>	Pine Family
<i>Pinus sp.</i> *	pine
<i>Poaceae (Gramineae)</i>	Grass Family
<i>Bromus diandrus</i> *	ripgut grass

Scientific Name	Common Name
<i>Distichlis spicata</i>	salt grass
Salicaceae	Willow Family
<i>Populus fremontii</i> spp. <i>fremontii</i>	Fremont cottonwood
<i>Salix gooddingii</i>	black willow
Solanaceae	Potato Family
<i>Datura wrightii</i>	jimsonweed
Tamaricaceae	Tamarix Family
<i>Tamarix</i> sp.*	tamarisk

APPENDIX C

Wildlife Species Observed/Detected Within the Survey Area

Appendix C
Wildlife Species Observed/Detected within the Survey Area

Scientific Name	Common Name
Birds	
<i>Calypte anna</i>	Anna's hummingbird
<i>Carpodacus mexicanus</i>	house finch
<i>Corvus brachyrhynchos</i>	American crow
<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Zenaida macroura</i>	mourning dove
Mammals	
<i>Otospermophilus beecheyi</i>	California ground squirrel
<i>Sylvilagus audubonii</i>	Audubon's cottontail

APPENDIX D

Special Status Species Potential Occurrence Determination

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APPENDIX D

Special Status Plant Species Potential Occurrence Determination

This table summarizes conclusions from analysis and field surveys regarding the potential occurrence of special status plant species within the Survey Area. During the field surveys, the potential for special status plant species to occur within the Survey Area was assessed based on the following criteria:

- **Present**: observed on the site during the field surveys, or recorded on-site by other qualified biologists.
- **High potential to occur**: observed in similar habitat in the region by a qualified biologist, or habitat on the site is a type often utilized by the species and the site is within the known distribution and elevation range of the species.
- **Moderate potential to occur**: reported sightings in surrounding region, or the site is within the known distribution and elevation range of the species and habitat on the site is a type occasionally used by the species.
- **Low potential to occur**: the site is within the known distribution and elevation range of the species but habitat on the site is rarely used by the species, or there are no known recorded occurrences of the species within or adjacent to the site.
- **Absent**: a focused study failed to detect the species or no suitable habitat is present.
- **Unknown**: the species' distributional/elevation range and habitat are poorly known.

Even with field surveys, biologists assess the *probability* of occurrence rather than make a definitive conclusion about species' presence or absence. Failure to detect the presence of the species is not definitive, and may be due to variable effects associated with fire, rainfall patterns, and/or season.

Special Status Plants: Potential to Occur within the Survey Area

<i>Scientific Name</i>	<i>Common Name</i>	<i>Status</i>	<i>General Habitat Description</i>	<i>Potential for Occurrence within the Survey Area</i>
PLANTS				
<i>Allium munzii</i>	Munz's onion	FE, ST, CRPR: 1B.1 MSHCP: Elsinore Subunit PS / NEPSSA 2 [Group 3]	It is endemic to western Riverside County where it grows in the coastal sage scrub, grassland or juniper woodland communities of the local hills and mountains. Elevation: 400 – 900 meters Blooming period: March to May	Low potential to occur; survey area generally lacks suitable habitat.
<i>Ambrosia pumila</i>	San Diego ambrosia	FE, CRPR: 1B.1 MSHCP: Elsinore Subunit PS / NEPSSA 2 [Group 3]	Range extends from Riverside County through San Diego County into Baja California. Found along drainages and areas adjacent to riparian areas. Nearest location is San Luis Rey. Blooming period: June to September	Moderate potential to occur; suitable habitat present. Focused survey will be performed in 2017 pursuant to MSHCP NEPSSA requirements.
<i>Atriplex coronata var. notatior</i>	San Jacinto Valley crownscale	FE, CRPR: 1B.1 MSCHP: CASSA 2 [Group 3]	Suitable habitat for the San Jacinto Valley crownscale includes floodplains (seasonal wetlands) dominated by alkali scrub, alkali playas, vernal pools, and alkali grasslands. It is endemic to western Riverside County and is restricted to the San Jacinto, Perris, Menifee and Elsinore Valleys. Elevation: 400 - 500 meters Blooming period: April to August	Moderate potential to occur; suitable habitat present. Focused survey will be performed in 2017 pursuant to MSHCP CASSA requirements.
<i>Atriplex parishii</i>	Parish's brittlescale	CRPR: 1B.1, FSS MSHCP: CASSA 2 [Group 3]	Annual herb native to California and Baja California. Habitat includes alkaline soils, chenopod scrub, playas, and vernal pools. Threatened by development, agricultural conversion, and grazing. Elevation: 25 - 1900 meters Blooming Period: June to October	Moderate potential to occur; suitable habitat present. Focused survey will be performed in 2017 pursuant to MSHCP CASSA requirements.
<i>Atriplex serenana var. davidsonii</i>	Davidson's saltscale	CRPR: 1B.2 MSHCP: CASSA 2 [Group 3]	Annual herb native to California and Baja California. Habitat includes alkaline soils, coastal bluff scrub, and coastal scrub. Elevation: 10 - 200 meters Blooming Period: April to October	Moderate potential to occur; suitable habitat present. Focused survey will be performed in 2017 pursuant to MSHCP CASSA requirements.
<i>Ayenia compacta</i>	California ayenia	CRPR: 2B.3	Perennial herb native to California, Arizona, and Baja California, in the Sonoran Desert and its Colorado Desert, and in the sky islands of the Mojave Desert. Habitat includes	Very low potential to occur; no suitable habitat present.

Appendix D – Special Status Species Potential Occurrence
Mission Trail Apartments Project

Scientific Name	Common Name	Status	General Habitat Description	Potential for Occurrence within the Survey Area
			Mojavean desert scrub and Sonoran desert scrub. Blooming period: March to April	
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT, SE, CRPR: 1B.1, MSCHP: CASSA 2 [Group 3]	Found in chaparral (openings), cismontane woodland, and coastal scrub, playas, valley and foothill grassland, vernal pools. Requires very heavy clay soils. Blooming period: May to June	Very low potential due to absence of clay soils. Focused survey will be performed in 2017 pursuant to MSHCP CASSA requirements.
<i>California macrophyla</i>	round-leaved filaree	CRPR: 1B.2, BLMS, MSCHP: CASSA 2 [Group 3]	This species is restricted to open cismontane woodland and valley and foothill grassland on clay soils. Elevation: 15 - 1200 meters Blooming period: March to May	Very low potential due to absence of clay soils. Focused survey will be performed in 2017 pursuant to MSHCP CASSA requirements.
<i>Calochortus plummerae</i>	Plummer's mariposa lily	CRPR: 4.2 MSHCP: [Group 2]	Perennial bulbiferous herb endemic to California. Habitat includes granitic, rocky soils, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland. Threatened by development, fire suppression, foot traffic, mining, powerline construction, and recreational activities. Possibly threatened by vegetation clearing, collecting, road maintenance, and non-native plants. Less common at higher elevations. Elevation: 100 - 1700 meters Blooming Period: May to July	Low potential; survey area generally lacks suitable habitat.
<i>Carex buxbaumii</i>	Buxbaum's sedge	CRPR: 4.2	Perennial rhizomatous herb native to California and throughout U.S. Habitat includes bogs and fens, meadows and seeps (mesic), and marshes and swamps. Threatened by foot traffic. Elevation: 3 - 3300 meters Blooming Period: March to August	Very low potential; no suitable habitat present within the survey area.
<i>Centromadia pungens ssp. laevis</i>	smooth tarplant	CRPR: 1B.1 MSHCP: Elsinore Subunit PS / CASSA 2 [Group3]	Suitable habitat for the smooth tarplant includes alkali scrub, alkali playas, and grasslands with alkaline affinities. Blooming period: April to September	High potential to occur; suitable habitat present and multiple occurrences observed previously within immediate vicinity. Additionally, mitigation for smooth tarplant occurred within areas adjacent to and

*Appendix D – Special Status Species Potential Occurrence
Mission Trail Apartments Project*

Scientific Name	Common Name	Status	General Habitat Description	Potential for Occurrence within the Survey Area
				north of the dirt road portion of the haul route.
<i>Chorizanthe leptotheca</i>	peninsular spineflower	CRPR: 4.2 MSHCP: [Group 2]	Annual herb native to California and Baja California. Habitat includes alluvial fan and granitic soils, chaparral, coastal scrub, and lower montane coniferous forest. Much habitat already lost to development; also threatened by non-native grasses. Elevation: 300 - 1900 meters Blooming Period: May to August	Very low potential to occur; no suitable habitat present.
<i>Chorizanthe parryi</i> <i>var. parryi</i>	Parry's spineflower	CRPR: 1B.1, BLMS, FSS MSHCP: [Group 2]	Parry's spineflower occurs within the alluvial chaparral and scrub of the San Gabriel, San Bernardino and San Jacinto Mountains. Elevation: 100 - 1,300 meters Blooming period: April to June	Very low potential to occur; no suitable habitat present in survey area.
<i>Chorizanthe polygonoides</i> <i>var. longispina</i>	long-spined spineflower	CRPR: 1B.2 MSHCP: [Group 2]	Long-spined spineflower is associated primarily with heavy, often rocky, clay soils in southern needlegrass grassland, and openings in coastal sage scrub, and chaparral. Blooming period: April to July	Very low potential to occur due to absence of clay soils within the survey area.
<i>Convolvulus simulans</i>	small-flowered morning-glory	CRPR: 4.2 MSHCP: [Group 2]	Annual herb native to California and Baja California. Habitat includes clay and serpentinite seeps, chaparral (openings), coastal scrub, and valley and foothill grassland. Rare in southern California. Threatened by development and vehicles. Elevation: 30 - 740 meters Blooming Period: March to July	Very low potential to occur due to absence of clay soils within the survey area
<i>Deinandra paniculata</i>	San Diego tarplant	CRPR: 4.2	Occurs as a dominant or co-dominant plant in the herbaceous layer of grasslands, forblands, openings of coastal sage scrub and oak woodland. Blooming period: April to November	Moderate potential; suitable habitat present.
<i>Dodecahema leptoceras</i>	slender-horned spineflower	FE, SE, CRPR: 1B.1 MSHCP: [Group 3]	Slender-horned spineflower is endemic to southwestern cismontane California, ranging from central Los Angeles County east to San Bernardino County, and south to southwestern Riverside County in the foothills of the Transverse and Peninsular Ranges. Slender-horned spineflower is found in sandy soil in association with mature	Low potential to occur; survey area generally lacks suitable habitat.

*Appendix D – Special Status Species Potential Occurrence
Mission Trail Apartments Project*

Scientific Name	Common Name	Status	General Habitat Description	Potential for Occurrence within the Survey Area
			alluvial scrub. Elevation: 200 - 700 meters Blooming period: April to June	
<i>Dudleya multicaulis</i>	many-stemmed dudleya	CRPR: 1B.2, BLMS, FSS. MSHCP: NEPSSA 2 [Group 3]	Many-stemmed dudleya is often 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. Blooming period: April to July	Very low potential to occur due to absence of clay soils within the survey area.
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	CRPR: 4.2 MSHCP: Group 2	Palmer's grapplinghook is associated with clay and cobbly clay soils in chaparral, coastal sage scrub, valley and foothill grasslands, and scrub oak woodland. Elevation: Below 500 meters Blooming period: March to May	Very low potential to occur due to absence of clay soils within the survey area
<i>Hesperocypris forbesii</i>	Tecate cypress	CRPR: 1B.1, BLMS, FSS	Tecate cypress is a component of the southern interior cypress forest. This community is a dense, fire-maintained, low forest that forms even-aged stands surrounded by a matrix of chaparral. Elevation: 450 – 1500 meters	Very low potential to occur in the survey area due to lack of suitable habitat.
<i>Hordeum intercedens</i>	vernal barley	CRPR: 3.2 MSHCP: [Group 2]	Annual herb native to California and Baja California. Habitat includes coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), and vernal pools. Threatened by development, habitat loss, road construction, and non-native plants. Elevation: 5 - 1000 meters Blooming Period: March to June	Moderate potential to occur; suitable habitat present.
<i>Juglans californica</i>	South California black walnut	CRPR: 4.2 MSHCP: [Group2]	Perennial deciduous tree endemic to California. Habitat includes alluvial substrates, chaparral, cismontane woodland, coastal scrub, and riparian woodland. Threatened by urbanization, grazing, non-native plants, and possibly by lack of natural reproduction. Elevation: 50 - 900 meters Blooming Period: March to August	Very low potential to occur; likely would have been observed during 2016 surveys.
<i>Lasthenia glabrata ssp. coulteri</i>	Coulter's goldfields	CRPR: 1B.1, BLMS MSHCP: CASSA 2 [Group 2]	Coulter's goldfields is associated with low-lying alkali habitats along the coast and in inland valleys. Most of the populations are associated with coastal salt marsh. In Riverside County,	Low to moderate potential to occur; generally suitable habitat present, however associated

Appendix D – Special Status Species Potential Occurrence
Mission Trail Apartments Project

Scientific Name	Common Name	Status	General Habitat Description	Potential for Occurrence within the Survey Area
			Coulter's goldfields occur primarily in highly alkaline, silty-clay soils in association with Traver, Domino and Willows soils. Most Riverside County populations are associated with the Willows soil series. Coulter's goldfields occur primarily in the alkali vernal plains community. Blooming period: February to June	soils are not present within the survey area. Focused survey will be performed in 2017 pursuant to MSHCP CASSA requirements.
<i>Myosurus minimus ssp. apus</i>	little mousetail	CRPR: 3.1 MSHCP: CASSA 2 [Group 3]	Little mousetail occurs in association with vernal pools and within the alkali vernal pools and alkali annual grassland components of alkali vernal plains. Blooming period: April to May	Moderate to high potential to occur due to recent observation in the vicinity of the survey area. Focused survey will be performed in 2017 pursuant to MSHCP CASSA requirements.
<i>Navarretia fossalis</i>	spreading navarretia	FT, CRPR: 1B.1 MSHCP: NEPSSA 2 [Group 3]	Annual herb native to California and Baja California. Habitat includes chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, and vernal pools. Threatened by urbanization, agriculture, road construction, grazing, flood control, non-native plants, illegal dumping, foot traffic, and vehicles. Elevation: 30 - 655 meters Blooming Period: April - June	Low potential to occur. Potential vernal pools are located within the dirt road portion of the haul route; however the dirt road is regularly used and therefore likelihood of presence is limited. Focused survey will be performed in 2017 pursuant to MSHCP NEPSSA requirements.
<i>Orcuttia californica</i>	California Orcutt grass	FE, SE, CRPR: 1B.1 MSHCP: NEPSSA 2 [Group 3]	All known California Orcutt grass localities are associated with vernal pools. Blooming period: April to August.	Low potential to occur. Potential vernal pools are located within the dirt road portion of the haul route; however the dirt road is regularly used and therefore likelihood of presence is limited. Focused survey will be performed in 2017 pursuant to MSHCP NEPSSA requirements.
<i>Romneya coulteri</i>	Coulter's matilija poppy	CRPR: 4.2 MSHCP: [Group 1]	This poppy is native to southern California and Baja California, where it grows in dry canyons in chaparral and coastal sage scrub plant communities, sometimes in areas recently burned.	Low potential to occur due to lack of suitable habitat within the survey area.

Appendix D – Special Status Species Potential Occurrence
Mission Trail Apartments Project

Scientific Name	Common Name	Status	General Habitat Description	Potential for Occurrence within the Survey Area
			It is a popular ornamental plant, kept for its large, showy flowers. Blooming period: March to July	
<i>Sibaropsis hammittii</i>	Hammitt's clay-cress	CRPR: 1B.2, FSS MSHCP: NEPSSA 2 [Group 3]	Hammitt's clay-cress occurs in clay lenses within openings in chaparral and valley and foothill grassland habitats. Elevation: 700 to 1,100 meters Blooming period: March to April	Very low potential to occur due to absence of clay soils within the survey area. Focused survey will be performed in 2017 pursuant to MSHCP NEPSSA requirements.
<i>Tortula californica</i>	California screw-moss	CRPR: 1B.2, BLMS	Moss endemic to California. Habitat includes sandy soils, chenopod scrub, and valley and foothill grassland. Elevation: 10 - 1460 meters	Moderate potential to occur; suitable habitat present.
<i>Trichocoronis wrightii</i> <i>var. wrightii</i>	Wright's trichocoronis	CRPR: 2B.1 MSHCP: NEPSSA 2 [Group 3]	Annual herb native to California, Baja California, and Texas. Habitat includes alkaline soils, meadows and seeps, marshes and swamps, riparian forest, and vernal pools. Habitat lost to agriculture and urbanization. Elevation: 5 - 435 meters Blooming Period: May to September	Moderate potential to occur; suitable habitat present. Focused survey will be performed in 2017 pursuant to MSHCP NEPSSA requirements.
ANIMALS				
Invertebrates / Crustaceans				
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT MSHCP: [Group 3]	This species is usually associated with vernal pools (79%) but can also be found in association with other ephemeral habitats including alkali pools, seasonal drainages, stock ponds, vernal swales and rock outcrops.	Very low potential to occur within the survey area due to lack of suitable habitat. Potential vernal pools are located within the dirt road portion of the haul route; however, the dirt road is regularly used and therefore likelihood of presence in the haul route is limited. Additionally, disturbance to potential vernal pools are planned to be avoided in the haul route.
<i>Streptocephalus</i>	Riverside fairy	FE	<i>S. wootoni</i> is restricted to deep (greater than 12" in depth)	Very low potential to occur

Appendix D – Special Status Species Potential Occurrence
Mission Trail Apartments Project

Scientific Name	Common Name	Status	General Habitat Description	Potential for Occurrence within the Survey Area
<i>woottoni</i>	shrimp	MSHCP: Elsinore Subunit PS [Group 3]	seasonal vernal pools, vernal pool like ephemeral ponds, and stock ponds and other human modified depressions.	within the survey area due to lack of suitable habitat. Potential vernal pools are located within the dirt road portion of the haul route; however, the dirt road is regularly used and therefore likelihood of presence in the haul route is limited. Most potential seasonal pools/depressions observed were not of suitable depth. Additionally, disturbance to potential vernal pools are planned to be avoided in the haul route.
Invertebrates / Insects				
<i>Euphydryas editha quino</i>	quino checkerspot butterfly	FE MSHCP: Elsinore Subunit PS [Group 3]	Each phase has distinct habitat requirements. Habitat associations seem to be tied to both host plant species and topography. Larvae feed immediately upon <i>Plantago erecta</i> , <i>Plantago patagonia</i> , <i>Antirrhinum coulterianum</i> , <i>Cordylanthus rigidus</i> and possibly other <i>Plantago</i> species and <i>Collinsia concolor</i> , and <i>Castilleja exserta</i> . After diapause, the larvae feed again on <i>Plantago erecta</i> before metamorphosing. After metamorphose, the adults nectar mostly on small annuals. The Quino checkerspot butterfly is found in association with topographically diverse open woody canopy landscapes that contain low to moderate levels of non-native vegetation compared to disturbed habitat. Vegetation types that support the Quino checkerspot are coastal sage scrub, open chaparral, juniper woodland, forblands, and native grassland. Soil and climatic conditions, as well as ecological and physical factors, affect the suitability of habitat within the species' range.	Very low potential to occur due to lack of suitable habitat.

Appendix D – Special Status Species Potential Occurrence
Mission Trail Apartments Project

Scientific Name	Common Name	Status	General Habitat Description	Potential for Occurrence within the Survey Area
Reptiles				
<i>Aspidoscelis hyperythra</i>	orangethroat whiptail	WL, FSS MSHCP: [Group 1]	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes & other sandy areas with patches of brush & rocks. Perennial plants necessary for its major food-termites.	Low to moderate potential to occur; somewhat suitable habitat present, however sandy portions of survey area lack a lot of brush and rocks.
<i>Emys marmorata</i>	western pond turtle	SSC, FSS MSHCP: [Group 3]	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, below 2000 meters in elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Very low potential to occur; no suitable habitat present in survey area.
<i>Crotalus ruber</i>	red-diamond rattlesnake	FSS, SSC MSHCP: [Group2]	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Low potential to occur; suitable habitat limited in survey area.
<i>Phrynosoma blainvillii</i>	coast horned lizard	SSC MSHCP: [Group 1]	The species can be found in various scrublands, grasslands, coniferous and broadleaf forests, and woodlands. It can range from the coast to elevations of 2,000 meters in the Southern California mountains. It is most common in mid-elevations of the coastal mountains and valleys within open habitat that offer good opportunities for sunning.	Moderate potential to occur; suitable habitat present within survey area.
Birds				
<i>Accipiter cooperii</i>	Cooper's hawk	WL MSHCP: [Group 2]	Forest and woodland birds. These lanky hawks are a regular sight in parks, quiet neighborhoods, over fields, at backyard feeders, and even along busy streets if there are trees around.	Low potential to occur; survey area generally lacks suitable habitat.
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	WL MSHCP: [Group 2]	This species is found on moderate to steep, dry, grass-covered hillsides, coastal sage scrub, and chaparral and often occur near the edges of the denser scrub and chaparral associations. Preference is shown for tracts of California sagebrush.	Low potential to occur; survey area generally lack suitable habitat.
<i>Artemisiospiza belli belli</i>	Bell's sage sparrow	WL, BCC MSHCP: Elsinore Subunit PS [Group 2]	The species prefers semi-open habitats with evenly spaced shrubs 1 to 2 meters high. Vertical structure, habitat patchiness, and vegetation density may be more important in habitat selection by the sage sparrow than the specific shrub species, but this sparrow is closely associated with sagebrush	Low potential to occur; survey area generally lacks suitable habitat.

Appendix D – Special Status Species Potential Occurrence
Mission Trail Apartments Project

Scientific Name	Common Name	Status	General Habitat Description	Potential for Occurrence within the Survey Area
			throughout most of its range.	
<i>Athene cunicularia</i>	burrowing owl	SSC, BCC, BLMS MSHCP: [Group 3]	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Moderate to high potential to occur; suitable habitat present and burrowing owl observed in vicinity during 2016 survey and in past surveys.
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT, SSC, BCC	Primarily on coastal beaches from southern Washington to southern Baja California, Mexico. The population breeds above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. Historic population observed in Lake Elsinore in 1970s.	Very low potential to occur due to absence of suitable habitat in survey area.
<i>Circus cyaneus</i>	northern harrier	SCC MSHCP: Elsinore Subunit PS [Group 3]	Wide-open habitats ranging from Arctic tundra to prairie grasslands to fields and marshes. Their nests are concealed on the ground in grasses or wetland vegetation.	High potential (particularly foraging); observed in the vicinity of the survey area in December 2016.
<i>Eremophila alpestris actia</i>	California horned lark	WL MSHCP: [Group 2]	The California horned lark is a common to abundant resident in a variety of open habitats, usually where trees and large shrubs are absent. In the Midwest, the species has been characterized as the most abundant species in row-crop fields. Range-wide, California horned larks breed in level or gently sloping shortgrass prairie, montane meadows, "bald" hills, open coastal plains, fallow grain fields, and alkali flats	High potential to occur; suitable habitat present throughout the survey area and the species was previously observed in the last year in a number of surveys within the immediate vicinity.
<i>Lanius ludovicianus</i>	loggerhead shrike	SSC, BCC MSHCP: Elsinore Subunit PS [Group 2]	The species are known to forage over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	High potential to occur; suitable habitat present and multiple past occurrences documented within the immediate vicinity.
<i>Nycticorax nycticorax</i>	black-crowned night heron	MSHCP: Elsinore Subunit PS [Group 2]	The black-crowned night heron is likely to use shallow bulrush (<i>Scirpus</i> spp.) or cattail (<i>Typha</i> spp.) marshes, most often within a grassland landscape. In addition, they will also nest in	Low potential to occur; survey area lacks suitable habitat.

Appendix D – Special Status Species Potential Occurrence
Mission Trail Apartments Project

Scientific Name	Common Name	Status	General Habitat Description	Potential for Occurrence within the Survey Area
			cottonwoods, willows, or other wetland vegetation.	
<i>Pelecanus erythrorhynchos</i>	American white pelican	SSC	Colonial nester on large interior lakes. Nests on large lakes, providing safe roosting and breeding places in the form of well-sequestered islets.	Moderate to high potential for overhead flight based on observation in the immediate vicinity. Very low potential for nesting.
<i>Plegadis chihi</i>	white-faced ibis	WL MSCHP: Elsinore Subunit [Group 2]	The species occurs in mainly shallow marshes with islands of emergent vegetation. They occasionally occur on spoil banks created by dredging. They occur locally in flooded shoals and mangrove swamps. In the coastal areas of the southern portion of the range, the white-faced ibis nests mostly in wetlands of outer coastal plains, freshwater marshes of common reed, bulltongue, saltmeadow cordgrass and torpedo panic grass.	Very low to moderate potential to occur; no suitable habitat present within the survey area.
<i>Polioptila californica californica</i>	coastal California gnatcatcher	FT, SSC MSHCP: [Group 2]	Obligate, permanent resident of coastal sage scrub below 835 meters in Southern California. Low, coastal sage scrub in arid washes, on mesas & slopes. Not all areas classified as coastal sage scrub are occupied.	Very low potential to occur due to lack of suitable habitat in the survey area.
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE, SE, MSHCP: Elsinore Subunit PS [Group 2]	Summer resident of Southern California in low riparian, in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis or, mesquite.	Low potential to occur due to lack of preferred habitat in survey area and surrounding area.
Mammals				
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	SSC MSHCP: [Group 1]	This species inhabits coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities. It inhabits open, sandy areas of both the Upper and Lower Sonoran life-zones of southwestern California and northern Baja California.	Low potential to occur; survey area generally lacks suitable habitat.
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE, ST MSHCP: [Group 2]	The species is found in open grassland habitats where the sparse vegetation is mainly composed of shrubs, sagebrush, grasses and forbs.	Low to moderate potential to occur; suitable habitat is present in the survey area.
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	SSC MSHCP: [Group 1]	This species is found in western Riverside County in suitable grassland, sage scrub and chaparral (openings) habitat. It is also found in substantial numbers in agricultural and rural residential settings.	High potential to occur; suitable habitat within survey area and species was observed in immediate vicinity during 2016 surveys.

Legend

Federal Endangered Species Act (ESA) Listing Codes: federal listing is pursuant to the Federal Endangered Species Act of 1973, as amended (ESA).

FE = federally listed as endangered: any species, subspecies, or variety of plant or animal that is in danger of extinction throughout all or a significant portion of their range.

FT = federally listed as threatened: any species, subspecies, or variety of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.

California Endangered Species Act (CESA) Listing Codes: state listing is pursuant to § 1904 (Native Plant Protection Act of 1977) and §2074.2 and §2075.5 (California Endangered Species Act of 1984) of the Fish and Game Code, relating to listing of Endangered, Threatened and Rare species of plants and animals.

SE = state listed as endangered: any species, subspecies, or variety of plant or animal that are in serious danger of becoming extinct throughout all, or a significant portion, of their range.

ST = state listed as threatened: any species, subspecies, or variety of plant or animal that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future.

California Department of Fish and Wildlife (CDFW):

SSC = species of special concern: status applies to animals which 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist. The CDFW has designated certain vertebrate species as “species of special concern” because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

FP = fully protected: animal species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

WL = watch list: these birds have been designated as “Taxa to Watch” in the *California Bird Species of Special Concern report* (Shuford and Gardali 2008). The report defines “Taxa to Watch” as those that are not on the current special concern list that (1) formerly were on the 1978 (Remsen 1978) or 1992 (CDFG 1992) special concern lists and are not currently listed as state threatened and endangered; (2) have been removed (delisted) from either the state or federal threatened and endangered lists (and remain on neither), or (3) are currently designated as “fully protected” in California.

United States Fish and Wildlife Service (USFWS):

BCC = USFWS bird of conservation concern: listed in the USFWS’S 2008 *Birds of Conservation Concern* report. The report identifies species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the ESA. While all of the bird species included in the report are priorities for conservation action, the list makes no finding with regard to whether they warrant consideration for ESA listing.

United States Forest Service (USFS):

FSS = Forest Service sensitive: those plant and animal species identified by a Regional Forester that are not listed or proposed for listing under the ESA and for which population viability is a concern, as evidenced by: (a) significant current or predicted downward trends in population numbers or density or (b) significant current or predicted downward trends in habitat capability that would reduce a species’ existing distribution.”

United States Bureau of Land Management (BLM):

BLMS = BLM sensitive: those plant and animal species on BLM administered lands and that are (1) under status review by the USFWS/NMFS; or (2) whose numbers are declining so rapidly that federal listing may become necessary, or (3) with typically small and widely dispersed populations; or (4) those inhabiting ecological refugia or other specialized or unique habitats. BLM policy is to provide the same level of protection as USFWS candidate species.

California Rare Plant Ranks (Formerly known as CNPS Lists): the CNPS is a statewide, non-profit organization that maintains, with CDFG, an Inventory of Rare and Endangered Plants of California. In the spring of 2011, CNPS and CDFG officially changed the name “CNPS List” or “CNPS Ranks” to “California Rare Plant Rank” (or CRPR). This was done to reduce confusion over the fact that CNPS and CDFG jointly manage the Rare Plant Status Review Groups and the rank assignments are the product of a collaborative effort and not solely a CNPS assignment.

CRPR: 1B - California Rare Plant Rank 1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere. All of the plants constituting California Rare Plant Rank 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

CRPR: 2 - California Rare Plant Rank 2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere. All of the plants constituting California Rare Plant Rank 2 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

CRPR: 4 - California Rare Plant Rank 4 (formerly List 4): Plants of Limited Distribution - A Watch List. Very few of the plants constituting California Rare Plant Rank 4 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and few, if any, are eligible for state listing. Nevertheless, many of them are significant locally, and CNPS and CDFG strongly recommend that California Rare Plant Rank 4 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.

California Native Plant Society (CNPS) Threat Ranks: The CNPS Threat Rank is an extension added onto the California Rare Plant Rank (CRPR) and designates the level of endangerment by a 1 to 3 ranking with 1 being the most endangered and 3 being the least endangered. A Threat Rank is present for all California Rare Plant Rank 1B's, 2's, 4's, and the majority of California Rare Plant Rank 3's. California Rare Plant Rank 4 plants are seldom assigned a Threat Rank of 0.1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a California Rare Plant Rank. In addition, all California Rare Plant Rank 1A (presumed extinct in California), and some California Rare Plant Rank 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension.

0.1 = seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

0.2 = fairly endangered in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

Western Riverside Multiple Species Habitat Conservation Plan (MSHCP): Planning species covered by the MSHCP. Additional surveys for Narrow Endemic Plant Species and Criteria Area Species to determine presence/absence may be required.

PS = planning species

NEPSSA # = Narrow Endemic Plant Species Survey Area (with survey area number noted).

CASSA # = Criteria Area Species Survey Area (with survey area number noted).

Group 1 = Species that have wide distribution throughout the Plan Area within suitable habitat. Take coverage is warranted based upon regional or landscape level considerations, such as healthy population levels, widespread distribution throughout the MSHCP Plan Area, and life history characteristics that respond to habitat-scale conservation and management actions.

Group 2 = Species that are relatively well-distributed throughout the MSCHP Plan Area. Take coverage is warranted based on regional or landscape level considerations with the addition of site-specific conservation and management requirements that are clearly identified in the MSHCP for species that are generally well-distributed, but that have Core Areas that require Conservation.

Group 3 = Species that have narrow habitat requirements and limited distribution within the Plan Area. Take coverage is warranted based upon site specific considerations and the identification of specific conservation and management conditions for species within a narrowly defined Habitat or limited geographic area within the MSHCP Plan Area.

Sources:

- Calflora website - search for plants (Calflora 2016).
- CNPS Inventory of Rare and Endangered Plants (CNPS 2016).
- The Jepson Manual: *Vascular Plants of California*, second edition (Baldwin *et al.* 2012).
- RareFind, CDFW, California Natural Diversity Database (CNDDB) (CDFW 2016).
- State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2016).
- Special Animals List (CDFW 2017)
- Western Riverside County Multiple Species Habitat Conservation Plan (County of Riverside 2003)