Biological Technical Report for the East Lake Specific Plan Amendment No. 11

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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
CDF	California Department of Forestry and Fire Protection
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
ELSP	East Lake Specific Plan
ESA	federal Endangered Species Act
FGC	Fish and Game Code
GIS	Geographic Information System
LBV	least Bell's Vireo
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	Stephens' 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 8 and 14, 2016 and January 6, 2017. VCS prepared this report for the approximately 3,000-acre Eastlake Specific Plan (ELSP) area proposed Amendment No. 11, which includes proposed land-use designation changes from predominantly residential use and open-space to predominantly sports and recreation-oriented use and open-space; also proposed is the construction of backbone roadways and improvements to an existing permeable berm collectively referred to as Infrastructure Improvements described below. The Infrastructure Improvements are located within the ELSP area, are anticipated to commence shortly after certification of the proposed ELSP No. 11, and are therefore analyzed in detail within this report.

1.1 Purpose and Approach

This report provides a summary of the conditions present during the 2016 surveys, an assessment of the potential presence of sensitive biological resources, and an analysis of the potential impacts to those resources both on the plan level for the ELSP area and the project level for the Infrastructure Improvements. This report presents the current biological resources present within the ELSP area, including the Infrastructure Improvements 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 which should be considered in the overall ELSP area, as well as impacts due to implementation of the Infrastructure Improvements 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:

- Survey Area (also Eastlake Specific Plan Area or ELSP Area): The area evaluated during the field survey, consisting of the approximately 3,000-acre East Lake Specific Plan Area which includes the approximately 78 acres of Infrastructure Improvements.

- Infrastructure Improvements: The improvement and development of Cereal Street, Lucerne Street, and Malaga Road as well as installation of an impenetrable berm around a portion of the 356-acre wetlands, which is described in more detail later in the report. The infrastructure improvements consist of a total of approximately 78 acres.

- Infrastructure Improvement Area: The location/area of the approximately 78-acre Infrastructure Improvements.

- Project Vicinity: Intended to be a general term to describe the broader area surrounding the Survey Area (generally 2 miles).

1.3 Survey Area Location

The Survey Area is located in the City of Lake Elsinore within southwestern Riverside County, and is generally bound by Lakeshore Drive to the north, Mission Trail and Corydon Road to the east, and Union Street to the South (Figure 1, Regional Location Map; Figure 2, Vicinity Map). The Survey Area is adjacent to the southeasterly shore of Lake Elsinore and regionally accessible from Interstate 15 at Diamond Drive/Railroad Canyon Road.

2.0 Project Description

2.1 Survey Area History

The existing East Lake Specific Plan (ELSP) serves as the primary guide for development within the approximately 3,000-acre specific plan area. The ELSP prescribes the types and arrangements of land uses, design guidelines, infrastructure, and zoning and development standards for the specific plan area. The existing ELSP primarily allows for residential and open-space uses. Since the ELSP was originally prepared in 1993, the specific plan area has gradually evolved and become home to active sports-related facilities such as skydiving, hang-gliding, motocross and an 18-hole golf course. Although zoned as a specific plan that allows for predominantly residential development, much of the Survey Area remains undeveloped except for the existing Serenity residential neighborhood, Skylark Airport and minimal commercial development in the southeast; Summerly residential neighborhood, Links Golf Course and Lake Elsinore Motocross facility, all centrally located; and sparse residential development in the north. The ELSP Area is divided up into 8 Planning Areas as depicted on Figure 3. 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). Geographic areas in the Back Basin have been identified for conservation toward fulfillment of the 770-acre requirement, as described later in this report. Additionally, future development within the ELSP area 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, when appropriate.

2.2 Project Activities

2.2.1 East Lake Specific Plan Amendment No. 11

The City seeks to encourage the active sports and recreation character of the area by amending the existing ELSP. The East Lake Specific Plan Amendment No. 11 (ELSPA No. 11) would accommodate a wide variety of unique sporting and recreational venues and supporting uses including commercial, restaurant, hotel, and open-space uses while also accommodating residential uses within the specific plan area. The proposed ELSPA No. 11 consists of revising the existing ELSP to:

- Overhaul land uses, development regulations, circulation, drainage, and architectural guidelines for the specific plan area;
- Streamline development by making the specific plan area guidance documents more user-friendly;
- Protect the natural resources of the Back Basin;
- Ensure that the City's existing and future action-sports activities/venues have a permanent location in the City.

The proposed ELSP Amendment would allow for a change from the predominantly residential and open space uses currently allowed in the specific plan area to predominantly sports and recreation oriented uses while also maintaining open-space. The ELSP Area is shown in Figure 2.

2.2.2 Infrastructure Improvements

The Infrastructure Improvements include the improvement and development of Cereal Street, Lucerne Street, and Malaga Road/Sylvester Street as well as improvement of the existing 356-acre wetlands berm as described below in this section. Infrastructure Improvement locations are

shown in Figure 4. The worst-case scenario has been identified for the roads. Upon final engineering, the City shall avoid impacts to the vernal pool critical habitat located within the 33-acre mitigation site for the construction of Malaga Road and the 356-acre wetlands for the construction of Cereal Street to the maximum extent practicable.

Cereal Street:

- Work Description – Phase 1: Preliminary paving and widening of Cereal Street from Lucerne Street to Corydon Road along the existing roadway alignment.
- Work Description – Phase 2: Widen/realign Diamond Drive/ Cereal Street from the intersection of Diamond Drive/Cereal Street in the north to Corydon Road in the south, consistent with General Plan Circulation Element alignment and cross section.
- Design – Cereal Street will be widened 80 feet on both sides of the existing centerline, including, a 100-foot ROW needed for a Four-Lane Major Highway and an additional 30 feet in each direction for temporary impacts.

Lucerne Street:

- Work Description – Pave/widen Lucerne Street from Malaga Road/Sylvester Street to Cereal Street.
- Design – Lucerne Street will be widened 80 feet on both sides of the existing centerline, including, a 100-foot ROW needed for a Four-Lane Major Highway and an additional 30 feet in each direction for temporary impacts.

Malaga Road/Sylvester Street:

- Work Description – Pave/widen Malaga Road/Sylvester Street from Pete Lehr Drive to Lucerne Street.
- Design – Malaga Road/Sylvester Street will be widened 80 feet on both sides of the existing centerline, including, a 100-foot ROW needed for a Four-Lane Major Highway and an additional 30 feet in each direction for temporary impacts.

Existing 356-Acre Wetlands Berm:

- An existing permeable berm will be improved to retain water in the existing 356-acre wetlands located in the southwestern portion of the ELSP area. The berm repair is anticipated to consist of reconstructing and repairing the existing berm along a portion of the northern and western boundary of the 356-acre wetlands and installation of a new berm in several locations as follows: installation will include a low permeability material (clay or soil cement for example) within the berm to prevent surface water from transmitting through the berm. The berm surface will be allowed to be vegetated. There will be localized areas along the berm where rip rap installation will be necessary to prevent erosion of the berm. The Infrastructure Improvement Area includes impacts to all areas within a 125-foot area (roughly 62.50 feet from each side of the centerline).

2.3 Existing Conditions

The East Lake Specific Plan Area (Survey Area) includes a mix of developed and undeveloped areas. Developed areas include active sports-related facilities such as skydiving, hang-gliding, motocross and an 18-hole golf course, in addition to residential development (both rural and medium to high density). Much of the Survey Area remains undeveloped including the 356-acre wetland facility, former lake bed areas, native habitat, and native habitat/open space areas used as mitigation for Back Basin development.

The Infrastructure Improvement Area includes a mix of disturbed and vegetated areas. The proposed Cereal Street, Lucerne Street and Malaga Road/Sylvester Street alignments generally follow existing dirt roads and include the immediately adjacent vegetation. The roads surround the existing Summerly Development (including the Links golf course) and follow the edge of the skydiving airport runway. The existing berm follows the edge of the 356-acre wetland and was built to keep off-road vehicles out of the wetlands. Moderately dense vegetation grows along most of the berm.

The Survey Area supports 16 vegetation communities/land cover types. These vegetation communities/land cover types include Tamarisk Scrub, Mixed Scrub, Mulefat Scrub, Willow Scrub, Southern Cottonwood – Willow Riparian Forest, Riversidian Sage Scrub, Riversidean Sage Scrub-disturbed, Mitigation Areas, Ruderal, Saltgrass Ruderal, Emergent Marsh, Ornamental Woodland, Borrow Site, and Disturbed/Developed (see Figure 5). Site photographs are attached as Appendix A.

The vegetation/land covers within the Infrastructure Improvements Area currently include 9 of the 16 vegetation communities/land cover types observed within the Survey Area: Tamarisk Scrub, Mulefat Scrub, Willow Scrub, Mitigation Areas, Emergent Marsh, Ruderal, Borrow Site, and Disturbed/Developed (Figure 6).

The topography throughout the Survey Area is general very flat, with little change in elevation overall, except for the rocky hillside of Rome Hill in the southwestern portion of the Survey Area. The lake levee provides a high point in elevation adjacent to Lake Elsinore's open water to contain the typical lake water levels. There is similarly some relief to the elevation in the 356-acre wetland, particularly the berm surrounding the wetlands, which functions to contain open water within the habitat. Other topographic variety in the ELSP area include the San Jacinto Channel, the Lake Elsinore inlet channel, and the lowered elevation of the Links golf course. Elevations onsite range from approximately 1240 feet to 1440 feet.

The Survey Area, including the Infrastructure Improvement 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 Areas, proposed extension of the existing Core 3, and proposed Linkage 8. Portions of the Survey Area, including the Infrastructure Improvement Area, are located within MSHCP survey areas for the western burrowing owl (*Athene cunicularia hypugaea*)

pursuant to Section 6.3.2 of the MSHCP, 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, portions of the Survey Area, including the Infrastructure Improvement Area, are considered "Riparian/Riverine Areas and Vernal Pools" pursuant to Section 6.1.2 Riparian/Riverine Areas and Vernal Pools of the MSHCP.

No special status plant species were observed within the Survey Area (including the Infrastructure Improvement Area) during the VCS surveys. Many of the special status plant species with potential to occur onsite would likely not be observed during the time of year when the surveys were conducted. There are two special status species of plants with relatively high potential to occur within the Survey Area (including the Infrastructure Improvement Area) based on recent past observations within the Survey Area or immediately adjacent to 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 a number of special status species of plants with moderate potential to occur within the Survey Area (including the Infrastructure Improvement Area). The ELSP Area (including the Infrastructure Improvement Area) includes MSHCP sensitive soils included within the Traver-Domino-Willows soil association. These soils are known to support sensitive plant species.

Five special status animal species were observed within the Survey Area during the December 8 and 14, 2016 and January 6, 2017 surveys 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;
- 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.

At least three special status animal species have a relatively high potential to occur within the Survey Area based on recent past observations in the Survey Area including:

- California horned lark (*Eremophila alpestris actia*), on the CDFW Watch List and an MSHCP Covered Species;
- black-crowned night heron (*Nycticorax nycticorax*), an MSHCP Planning Species; and

- least Bell's vireo (*Vireo bellii pusillus*), federally endangered, state endangered, and an MSHCP Planning Species.

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

Two of the special status animal species (loggerhead shrike and the San Diego black-tailed jackrabbit) were observed within or in the immediate vicinity of the Infrastructure Improvement Area. At least three special status animal species (California horned lark, black-crowned night heron, and least Bell's vireo) have a relatively high potential to occur within the Infrastructure Improvement Area. There are several animal species with at least moderate potential to occur within the Infrastructure Improvement Area.

The Survey Area, including the Infrastructure Improvement Area, is known to contain both Waters of the United States and Waters of the State, including wetland and riparian systems. In the Back Basin, areas under elevation 1265' mean sea level (MSL) are considered Waters of the State and areas under elevation 1246' MSL are considered Waters of the United States. The jurisdictional areas tied to elevation are in addition to surface drainage features that also occur within the Survey Area. These areas are referred to as "Other Waters" in this report.

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, including the Infrastructure Improvement Area impacts. The Lake Management Plan (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 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. Developer must comply with LMP conditions, as shown in Appendix E. Furthermore, projects occurring within other Corps jurisdictional

		areas (wetlands and/or other waters of the U.S.) within the ELSP will require a Section 404 permit from the Corps.
	Migratory Bird Treaty Act (MBTA)	Requires pre-construction surveys for nesting birds at least 3 days prior to ground disturbance.
	Endangered Species Act (ESA)	No federally listed species were observed within the Survey Area during the 2016 surveys.
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.
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," BUOW, narrow endemic plants, and conservation requirements within the Survey Area.
	Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP)	A portion of the Survey Area occurs within the SKR HCP. Any projects that impact areas within the SKR HCP 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 on-site field surveys on December 8 and 14, 2016, and January 6, 2017 of the entire Survey Area. The purpose of the field surveys 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, including the Infrastructure Improvement 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 (CNDDB).
- 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, the United States Bureau of Land Management (BLM), and/or the California Department of Forestry and Fire Protection (CDF).
- 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 CNDDB 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 CNDDB, 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 CNDDB search was performed assessing a two-mile radius around the Survey Area (CDFW2016g). CNDDB 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 and Wildomar Quadrangles within a range of 1,100 feet to 1,500 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.
- Historic Aerials of pre-existing site condition prior to excavation of the western pit.

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 7, 8, and 9). 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

Field surveys were performed on December 8 and 14, 2016 and January 6, 2017 by VCS biologists Erin Hayes and Wade Caffrey to assess and map vegetation communities and conduct a plant and wildlife survey. 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 surveys, the biologists assessed the existing habitat within the Survey Area and payed special attention to the biology within the Infrastructure Improvement 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 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 three-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 surveys on December 8 and 14, 2016 by VCS biologists Erin Hayes and Wade Caffrey to assess whether potentially suitable habitat for BUOW was present within the Infrastructure Improvement Area and a 500-foot buffer. 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 CNDDB 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 8 and December 14, 2016, and January 6, 2017 to determine the current conditions. Sensitive areas were delineated using a Mobile Mapper 10 Global Positioning System. 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 or portions thereof 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.

Vegetation communities/land cover classifications were mapped using field observations, utilizing aerial imagery in Google Earth, and known geographic boundaries (in the case of the Mitigation Areas). Vegetation mapping and acreages for each vegetation community/land cover within the Survey Area are listed below in Table 1, while the acreages for each vegetation community/land cover within the Infrastructure Improvement Area are listed below in Table 2. Please refer to Figures 5 and 6 to view the vegetation/land cover classifications within the Survey Area and Infrastructure Improvement 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	Acreage
Borrow Site	11.64
Disturbed/Developed	957.87
Emergent Marsh	0.41
Mitigation Areas	725.00
Mixed Scrub	41.49
Mulefat Scrub	0.65
Ornamental Woodland	28.10
Riversidean Sage Scrub (RSS)	12.90
RSS - Disturbed	2.39
Ruderal	778.63
Saltgrass Ruderal	13.13
Southern Cottonwood – Willow Riparian Forest	6.48
Tamarisk Scrub	342.84
Willow Scrub	7.62
TOTAL	**2,929.15**

Table 2
Vegetation Communities/Land Cover Observed within the Infrastructure Improvement Area

Vegetation Communities	Acreage
Borrow Site	1.24
Disturbed/Developed	25.64
Emergent Marsh	<0.01
Mitigation Areas	33.02
Mulefat Scrub	0.34
Ruderal	12.52
Tamarisk Scrub	4.67
Willow Scrub	0.03
TOTAL	**77.45**

5.1.1.1 Ruderal

A total of 778.63 acres of Ruderal habitat was mapped within the Survey Area. 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*), Russian thistle (*Salsola tragus*), Brome grasses (*Bromus* spp.), black mustard (*Brassica nigra*), five-hook bassia (*Bassia hyssopifolia*), and London rocket (*Sisymbrium irio*). Native species within the ruderal habitat include salt grass (*Distichlis spicata*), salt heliotrope (*Heliotropium curassavicum*), alkali heath (*Frankenia salina*), alkali weed (*Cressa truxilensis*), western ragweed (*Ambrosia psilostachya*), ranchers fiddleneck (*Amsinckia menziesii*), silverscale saltbrush (*Atriplex argentea*), and dove weed (*Eremorcarpus setigerus*). 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. Expanses of high density red-stem filaree and alkali weed are common. The herbaceous species are typically alkaline-tolerant.

5.1.1.2 Saltgrass Ruderal

A total of 13.13 acres of Saltgrass Ruderal habitat was mapped in the Survey Area. Saltgrass Ruderal habitat is dominated by dense saltgrass with additional native species including ragweed, alkali heath, and alkali weed. Ruderal non-native species are also present in very low density.

5.1.1.3 Tamarisk Scrub

A total of 342.84 acres of Tamarisk Scrub habitat was mapped within the Survey Area. The dominant species in the Tamarisk scrub habitat is tamarisk species (*Tamarisk* sp.), typically devoid of any other shrub or tree species, but occasionally with very low densities of other shrub and tree species including mulefat (*Baccharis salicifolia*), arrow weed (*Pluchea sericea*), coyote bush (*Baccharis pilularis*), and black willow (*Salix gooddingii*). 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. Density of tamarisk in this habitat type ranges from somewhat low (20%) to high (100%).

5.1.1.4 Mixed Scrub

A total of 40.43 acres of Mixed Scrub habitat was mapped within the Survey Area. The Mixed Scrub habitat was characterized by a nearly even mix of tamarisk and native tree/shrub species including mulefat (*Baccharis salicifolia*), arrow weed (*Pluchea sericea*), coyote bush (*Baccharis pilularis*), and black willow (*Salix gooddingii*). Herbaceous and ground cover species were typically similar in composition to the Ruderal land cover (see Ruderal description). Please note: Vegetation mapping of mixed scrub within the Infrastructure Improvement Area generally does not include mulefat or willow. Within this area, the intermixed mulefat and willow plants are called out as mulefat scrub or willow scrub, as appropriate. Vegetation mapping of mixed scrub within the remainder of the Survey Area may contain occasional mulefat and willow individuals.

5.1.1.5 Mulefat Scrub

A total of 0.65 acres of Mulefat Scrub habitat was mapped within the Survey Area. The dominant species in this habitat type is mulefat; arrow weed and coyote bush are also found intermixed with the mulefat. Herbaceous and ground cover species were typically similar in composition to the Ruderal land cover (see Ruderal description).

5.1.1.6 Willow Scrub

A total of 7.62 acres of Willow Scrub habitat was mapped within the Survey Area. The dominant species in Willow Scrub habitat is black willow. Additionally, native species observed within the willow scrub habitat include mulefat and arrow weed. Non-native, invasive tamarisk was also present within willow scrub but at low density (relative to the Tamarisk Scrub and Mixed Scrub habitats). Herbaceous and ground cover species included native salt grass, alkali heath, alkali weed, ragweed, and salt heliotrope, and non-native black mustard, Russian thistle, and red-stem filaree among others. In a few isolated areas in the northwestern portion of the Survey Area, California bulrush (*Schoenoplectus californicus*) was observed in association with this habitat.

5.1.1.7 Southern Cottonwood – Willow Riparian Forest

A total of 6.48 acres of Southern Cottonwood – Willow Riparian Forest habitat was mapped within the Survey Area. This community is limited to the southwestern boundary of the Survey Area and was previously reported in the CNDDB (see Figure 7). The dominant species in the habitat are mature black willow and Fremont cottonwood (*Populus fremontii* ssp. *fremontii*) trees with the woody understory consisting of shrubby willows (*Salix* sp.), mulefat, arrow weed, and tamarisk. The herbaceous understory consisted of native species including native salt grass, alkali heath, and ragweed. Non-native herbaceous species typical of the surrounding ruderal habitats were also observed. The Southern Cottonwood – Willow Riparian Forest is considered to be a special status/sensitive habitat.

5.1.1.8 Riversidean Sage Scrub

A total of 12.90 acres of Riversidean sage scrub (RSS) habitat was mapped within the Survey Area. The RSS habitat was located almost exclusively in the southwestern portion of the Survey Area (the Rome Hill vicinity). RSS habitat was dominated by native drought tolerant shrubs including California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), brittlebush (*Encelia farinosa*), laurel sumac (*Malosma laurina*), and white sage (*Salvia apiana*).

5.1.1.9 Riversidean Sage Scrub-disturbed

A total of 2.39 acres of Riversidean sage scrub- disturbed habitat was mapped within the Survey Area. This habitat was generally dominated by California buckwheat, with lesser densities of the RSS shrub species described in the Riversidean Sage Scrub community. The disturbed nature of the RSS appears to be due to off-road vehicle activity and illegal dumping of trash.

5.1.1.10 Emergent Marsh

A total of 0.41 acres of the land within the Survey Area is classified as emergent marsh. This habitat is dominated by cattails (*Typha* sp.) and includes other wetland species such as California bulrush, umbrella sedge (*Cyperus eragrostis*) and other small rush (*Juncus* sp.). One isolated area of emergent marsh was observed within the Survey Area.

5.1.1.11 Ornamental Woodland

A total of 28.10 acres of the land within the Survey Area is classified as ornamental woodland. This habitat is dominated by eucalyptus (*Eucalyptus* sp.) trees and generally includes an understory of ruderal herbaceous species. Additional ornamental trees such as Peruvian pepper trees (*Schinus molle*) are included in this habitat as well.

5.1.1.12 Borrow Site

A total of 11.64 acres of the land within the Survey Area is classified as a Borrow Site. Native species such as alkali heath, alkali weed, mulefat, saltgrass, silverscale saltbush, and four-wing saltbush were observed within the Borrow Site area at low densities. Tamarisk is also plentiful along the edges of ponded water observed within the area.

5.1.1.13 Disturbed/Developed

A total of 957.87 acres of the land within the Survey Area is considered disturbed/developed. Disturbed/developed habitat includes areas of bare ground (e.g. dirt roads), residential development, paved roads, and other built facilities. Disturbed/developed areas include ornamental vegetation surrounding buildings or on residential property, but generally lack natural vegetation. Vegetation within the Links golf course includes native landscaping and low density native grass/scrub habitat intermixed within the landscaped grounds.

5.1.1.14 Mitigation Areas

A total of 725.00 acres of land within the Survey Area is classified as mitigation areas, although the exact final acreage has yet to be determined pending preparation of recordation of conservation easements. These mitigation areas comprise a portion of the 770 acres of conservation required in the Back Basin for the MSHCP, as described in Section 2.1. As detailed in Section 8.6, the mitigation areas depicted on Figure 5 include the 130-acre Lake Elsinore Inlet Channel, the 356-acre wetlands, the 10-, 25-, and 71- acre sites on the Summerly project, the 33 acres around the Australian Vernal Pool, a 35-acre portion of the "T-Peninsula", the City's ownership of 48-acres south of the 356-acre wetlands, and an additional 59 acres around the 356-acre wetlands and/or the riparian areas in PA 6.

The vegetation within the mitigation area is varied and includes a number of different habitat. The mitigation areas include riparian/wetland habitats (mixed scrub, willow scrub, mulefat scrub, Southern Cottonwood – Willow Riparian Forest, and emergent marsh); tamarisk scrub; the active

San Jacinto channel upstream of the inlet to Lake Elsinore; open water within the inlet channel; seasonal pools, including the Australia pool; upland alkali scrub habitat (generally found in the mitigation areas within the Summerly development vegetated predominantly by shrubs including four-wing saltbush/*Atriplex canescens*, big saltbush/*Atriplex lentiformis*, California buckwheat, brittlebush, mulefat, and arrow weed); and ruderal areas.

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 and Infrastructure Improvement Area are within any species' designated Critical Habitat. A small amount of Riverside Fairy Shrimp Critical Habitat is located within the 33-acre mitigation area within the Survey Area and within the Infrastructure Improvement Area.

5.1.3 Special Status Vegetation Communities

Three special-status vegetation communities designated by CDFW were reported in the CNDDB within 2 miles of the Survey Area: Southern Sycamore Alder Riparian Woodland, Southern Cottonwood Willow Riparian Forest, and Southern Coast Live Oak Riparian Forest. Southern Cottonwood Willow Riparian Forest was documented within the Survey Area on the CNDDB; the habitat was confirmed present during the field survey.

5.2 Plants

5.2.1 Plant Species Observed

The plant species observed within the Survey Area totaled 63 species during the field surveys. These plants 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 or the Infrastructure Improvement Area. The 2016/2017 survey was not conducted during an appropriate time to observe many of the sensitive plant species with potential to occur onsite. Additionally, there are past observations of sensitive plant species within the ELSP area including smooth tarplant [within the Summerly development area, later mitigated and planted within the

seasonal pool area]. Therefore, further surveys should be performed to accurately assess the presence of sensitive plant species within areas to be developed.

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 surveys. Two special status species of plants are considered to have relatively high potential to occur within the Survey Area (including the Infrastructure Improvement Area) within their respective suitable habitats based on recent past observations within the Survey Area or immediately adjacent to 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 (including the Infrastructure Improvement 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

Sensitive wildlife species observed during the December 8 and 14, 2016 and January 6, 2017 surveys included the following five species:

- burrowing owl (CDFW Species of Special Concern and MSHCP Covered Species; 2 individuals identified in occupied burrows, see Figure 8);
- northern harrier (CDFW Species of Special Concern when nesting and 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, northern harrier, and loggerhead shrike were observed within and/or within the immediate vicinity of the Infrastructure Improvement Area.

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.

Five special status animal species were observed within the Survey Area during the December 8 and 14, 2016 and January 6, 2017 surveys: burrowing owl, northern harrier, American white pelican, loggerhead shrike, and San Diego black-tailed jackrabbit. At least three additional 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 Survey Area including:

- California horned lark, on the CDFW Watch List and an MSHCP Covered Species;
- black-crowned night heron, an MSHCP Planning Species; and
- least Bell's vireo, federally endangered, state endangered, and an MSHCP Covered Species.

All three of these species have potential to occur within the Infrastructure Improvement Area. There are several animal species with at least moderate potential to occur within the Survey Area (including the Infrastructure Improvement Area).

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

5.3.4 Burrowing Owl

Two BUOWs were observed within the Survey Area during the VCS survey (Figure 8). Each BUOW was observed at a burrow with characteristic sign of BUOW occupation/use. The Survey Area, including the Infrastructure Improvement Area, is considered to host suitable habitat for BUOW. The two burrowing owls were not observed within the Infrastructure Improvement Area.

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 includes MSHCP Elsinore Area Plan Subunit 3, the proposed extension of existing Core 3, and 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. The Survey Area includes a portion of the Lake Elsinore inlet and is located adjacent to the lake. The San Jacinto River corridor consists largely of the 25-acre mitigation site which will be conserved under a conservation easement.

It is expected that the Survey Area functions in local wildlife movement, including dispersal and movements related to home range activities. MSHCP Criteria requirements within the Back Basin, including the ELSP Area require the preservation of 770 acres and, as discussed with the resource agencies, the Back Basin is not considered a wildlife management corridor for mammals and as such, conservation within the Back Basin will be based on acreage and not protection of any particular habitat or wildlife movement corridor.

5.5 Soils Mapping

The United States Department of Agriculture Natural Resources Conservation Service lists 43 soil types (series) for the Survey Area (Figures 10a and 10b). The soil types within the Survey Area are predominantly loams ranging from rocky to silty in texture and many saline-alkaline.

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 Traver-Domino-Willows association soils [clay soils digitized within the MSHCP Plan Area included the Bosanko, Auld, Altamont, and Porterville series]. Within the MSHCP Plan Area, clay soils support several listed threatened or endangered species: Munz's onion (*Allium munzii*), thread-leaved brodiaea (*Brodiaea filifolia*) and San Diego button celery (*Eryngium aristulatum* var. *parishii*). Other sensitive plant species occurring on clay soils include, Orcutt'sbrodiaea (*Brodiaea orcuttii*), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), small-flowered morning glory (*Convolvulus simulans*), many-stemmed dudleya (*Dudleya multicaulis*), Palmer's grappling hook (*Harpagonella palmeri*), graceful tarplant (*Holocarpha virgata* ssp. *elongata*), and small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*).

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*).

Please see below for the soil type descriptions for the five soil types mapped within the Survey Area considered MSHCP sensitive:

Domino Silt Loam (Dw) [0.5% Survey Area]:
The Domino series consists of moderately deep, moderately well drained soils over lime-cemented hardpans. Domino soils are in basin areas and have slopes up to 2 percent. The Domino soil mapped is located in the southern portion of the Survey Area. A majority of mapped Domino soil has been developed (residential development).

Traver Loamy Fine Sand, eroded (Tp2) [2.2% Survey Area] and Traver Loamy Fine Sand, saline-alkali (Tr2) [8.3% Survey Area]:
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 southern and north portions of the Survey Area.

Willows Silty Clay, saline-alkali (Wm) [0.0% Survey Area] and Willows Silty Clay, strongly saline-alkali (Wn) [0.2% Survey Area]:
Willows Silty Clay is a silty clay soil typically associated with basin floors with slopes up to 2 percent. The alluvium is typically derived from mixed sources. These poorly draining soils are slightly to strongly saline in nature. The areas mapped within the Survey Area as Willows Silty Clay have been developed (residential development).

Soils considered MSHCP sensitive within the Infrastructure Improvement Area include the Traver Loamy Fine Sand, eroded (Tp2) and Traver Loamy Fine Sand, saline-alkali (Tr2).

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.

Note: The soil mapping data shows over 50% of the Survey Area and over 50% of the Infrastructure Improvement Area classified as water. Based on historical aerials, this is likely accurate to the 1990s. However, most of the area classified as water is no longer open water and now has exposed soil. Based on the presence of sensitive soils in the immediate vicinity it is possible the areas of soil previously classified as water could contain sensitive soils. Therefore, the lack of sensitive soil in the areas marked "Water (W)" should not be considered conclusive.

5.6 Jurisdictional Areas

5.6.1 Waters of the United States

The ELSP 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. Due to the anticipated phased implementation of the Planning Areas following certification of this Specific Plan Amendment and the planning level nature of this Specific Plan Amendment, soils pits were not utilized for determining the presence of wetlands, except within the Infrastructure Improvements limit. Therefore, outside of the Infrastructure Improvements limit, all areas exhibiting hydrophytic vegetation and wetland hydrology were considered potential wetlands. These areas outside of the Infrastructure Improvements limit will be subject to verification through a focused delineation for each development, prior to new development within the Planning Areas.

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 also identifies Corps jurisdiction over all projects occurring below elevation 1246', wetlands, or within "other jurisdictional areas" (OHWM as described above) within the Back Basin and are depicted on Figure 11. The Figure 11 overlay of permanent impacts to vegetation includes areas defined as disturbed/developed. These areas contain buildings and recreational facilities such as the existing motocross and Skylark Airport. These areas will not be subject to mitigation since they are existing uses.

688.88 acres of the ELSP occur below elevation 1246' and would be subject to Corps jurisdiction. Furthermore, 0.09 acres of "other Corps jurisdictional areas" were observed within the 1246' elevation and 2.41 acres were observed outside of the 1246' elevation, all of which would be considered Waters of the United States. Additionally, 27.90 acres of potential wetlands and 345.72 acres within the Mitigation Areas were observed within the 1246' elevation and 28.98 acres of potential wetlands and 379.70 acres within the Mitigation Areas were observed outside of the 1246' elevation, all of which would be considered Waters of the United States. Potential wetlands, as discussed above, were assumed based on the presence of hydrology and vegetation indicators being positive; soil pits were not utilized for the plan level analysis. Acreages of Corps jurisdiction are further described in Table 3 below. Due to the anticipated delay in implementing the Planning Areas following certification of this Specific Plan Amendment, these acreages are approximate and are intended for planning purposes only. A focused delineation for each development will be necessary prior to new development within the Planning Areas.

Table 3
Waters of the United States within the Survey Area

Feature*	Total Acreage
Below Elevation 1246'	--
Other WoUS	0.09
Potential Wetlands	27.90
Mitigation Areas	345.72
Above Elevation 1246'	--
Other WoUS	2.32
Potential Wetlands	28.98

Mitigation Areas	379.70
Totals	--
Below Elevation 1246’	688.88
Other WoUS**	2.41
Potential Wetlands**	53.88
Mitigation Areas	725.00

*includes the Infrastructure Improvement Area
**includes overlap with the Below Elevation 1246’ feature.

The Infrastructure Improvements are anticipated to commence shortly after certification of the Environmental Impact Report and the approval of the Specific Plan Amendment, therefore, a focused delineation was conducted within the improvement limits. Portions of these improvements occur within elevation 1246’ and/or within “other jurisdictional areas”. 17.68 acres of the Infrastructure Improvements occur below elevation 1246’ and would be subject to Corps jurisdiction. Additionally, the Infrastructure Improvements will not impact wetlands observed within the 1246’ elevation but will impact 0.23 acres of wetlands observed outside of the 1246’ elevation. Acreages of Corps jurisdiction are further described in Table 4 below.

Table 4
Waters of the United States within the Infrastructure Improvement Area

Feature	Total Acreage
Below Elevation 1246’	17.68
Other WoUS	0.00
Wetland	0.00
Mitigation Areas	17.86
Above Elevation 1246’	--
Other WoUS	0.00
Wetland	0.23
Mitigation Areas	15.16
Totals	--
Below Elevation 1246’	0.00
Other WoUS*	0.00
Wetland*	0.23
Mitigation Areas	33.02

*includes overlap with the Below Elevation 1246’ feature.

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 and drive 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 12.

2,615.40 acres of the Survey Area occur below elevation 1265' and would be subject to CDFW jurisdiction. Furthermore, 2.59 acres of Waters of the State rivers, streams, or lakes were observed within the 1265' elevation and 1.96 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 5 below, specifically identifying the vegetation communities present within Waters of the State and below elevation 1265'. Due to the anticipated delay in implementing the Planning Areas following certification of this Specific Plan Amendment, these acreages are approximate and are intended for planning purposes only. A focused delineation for each development will be necessary prior to new development within the Planning Areas.

Table 5
Waters of the State within the Survey Area

Feature*	Total Acreage
Below Elevation 1265'	2,615.40
Rivers, Streams, or Lakes	2.59
Riparian/Potential Wetland	51.39
Mitigation Areas	707.74
Above Elevation 1265'	--
Rivers, Streams or Lakes**	1.96
Riparian/Potential Wetland	5.33
Mitigation Areas	17.67
Totals	--
Below Elevation 1265'	2,279.04
Riverine**	4.55
Riparian/Potential Wetland**	56.72
Mitigation Areas	725.00

*includes the Infrastructure Improvement Area
**includes overlap with the Below Elevation 1265' feature.

The Infrastructure Improvements are anticipated to commence shortly after certification of the Environmental Impact Report and approval of the Specific Plan Amendment, therefore, a focused delineation was conducted within the improvement limits. Portions of these improvements occur within elevation 1265' and/or within Waters of the State. 77.44 acres of the improvement limits occur below elevation 1265' and would be subject to CDFW jurisdiction. Acreages of Waters of the State are further detailed in Table 6 below, specifically identifying the vegetation communities present within Waters of the State and below elevation 1265'.

Table 6
Waters of the State within the Infrastructure Improvement Area

Feature	Total Acreage
Below Elevation 1265'	77.44
Riverine	0.00
Riparian/ Wetland	0.23
Mitigation Areas	33.02

Above Elevation 1265'	--
Riverine	0.00
Riparian/ Wetland	0.00
Mitigation Areas	0.00
Totals	--
Below Elevation 1265'	77.44
Riverine*	0.00
Riparian/ Wetland*	0.23
Mitigation Areas	33.02

*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 and drive 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 these resources were determined to be subject to the MSHCP and were mapped.

<u>Riparian/Riverine Areas</u>

Approximately 61.27 acres of riparian/riverine areas and 342.84 acres of Tamarisk Scrub are located within the Survey Area. Please note, VCS 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 13.

Table 7
Riparian/Riverine within Survey Area

Feature*	Total Acreage
Riverine**	4.55
Riparian**	56.72
Mitigation Areas	725.00
Tamarisk Scrub**	342.84

*includes the Infrastructure Improvement Area
**includes overlap with the Below Elevation 1265' feature.

The Infrastructure Improvements are anticipated to commence shortly after certification of the Environmental Impact Report and approval of the Specific Plan Amendment, therefore, a focused delineation was conducted within the improvement limits. 0.23 acres of riparian/riverine areas and 4.67 acres of Tamarisk Scrub occur within the improvement limits. Acreages of riparian/riverine areas are further detailed in Table 8 below, including the vegetation communities present both above and below elevation 1265'.

Table 8
Riparian/Riverine within the Infrastructure Improvement Area

Feature	Total Acreage
Riverine*	0.00
Riparian*	0.23
Mitigation Areas	33.02
Tamarisk Scrub*	4.67

*includes overlap with the Below Elevation 1265' feature.

Vernal Pools

The Survey Area contains potential vernal pools or depressions as defined under MSHCP vernal pool features. A focused delineation for each Planning Area will be necessary prior to project entitlement for the new development. The Infrastructure Improvements are anticipated to commence shortly after certification of the Environmental Impact Report and approval of the Specific Plan Amendment, therefore, the delineation conducted within the improvement limits identified numerous road-ruts that have the potential to support sensitive species. Focused vernal pool surveys will be conducted prior to new development, including the Infrastructure Improvements, and during the appropriate time of year. Please note, while vernal pools are categorized in the Riparian/Riverine Areas and Vernal Pools subsection of this report, they may

also be considered jurisdictional Waters of the State and Waters of the United States. The Back Basin has a history of offroad disturbance and surveys conducted for Summerly and Waterbury showed no vernal pool features in the numerous seasonal depressions. However, each project will need to survey depressional areas to confirm no vernal pools are present.

Table 9
Vernal Pools/Seasonal Depressions within the Survey Area

Feature*	Total Acreage
Vernal Pools/Seasonal Depressions	0.32

*includes the Infrastructure Improvement Area

Table 10
Vernal Pools/Seasonal Depressions within the Infrastructure Improvement Area

Feature	Total Acreage
Vernal Pools/Seasonal Depressions	0.24

6.0 Project Impacts

This section discusses potential impacts to biological resources that could result from development within the Survey Area and implementation of the Infrastructure Improvement Areas. It should be noted that the ELSP Survey Area includes Planning Areas that are either largely developed or are largely designated for open-space preservation/mitigation areas established to satisfy project-specific mitigation requirements and/or to meet MSHCP preservation requirements of the Back Basin 770 Agreement. These portions of developed and/or preserved planning areas include most of Planning Area 1 (Summerly Development and Links Golf Course), portions of Planning Area 2 (Motocross), portions of Planning Area 3 (Airport Facilities), Planning Area 4 (Serenity Development and Park), Planning Area 5 (Preservation Area), Planning Area 7 (San Jacinto River Inlet Channel), and Planning Area 8 (Developed Parcels). Redevelopment of Areas that are disturbed/developed should not require additional resource agency mitigation, nor should they require MSHCP review since they are existing uses. Most of the development potential for the ELSP area would be concentrated in Planning Areas 2, 3, 6 and 8. It should also be noted that in locations where overlap with potentially developable areas and proposed Infrastructure Improvement locations occur, a more conservative impact calculation was assumed. Therefore, actual impact acreages would likely be less than those disclosed and analyzed in this report.

Implementation of new development within the ELSP has the potential to directly and/or indirectly impact "Riparian/Riverine Areas and Vernal Pools/Seasonal Depressions," sensitive plant species (Narrow Endemic and Criteria Area Plant species), sensitive animal species, and jurisdictional waters of the U.S. and State.

Implementation of the Infrastructure Improvements will directly and/or indirectly impact Riparian/Riverine Areas and Vernal Pools/Seasonal Depressions and jurisdictional waters of the U.S. and State. Implementation of the Infrastructure Improvement also has the potential to directly and/or indirectly impact sensitive plant species (Narrow Endemic and Criteria Area Plant species) and sensitive animal species. To address the mitigation for any direct or indirect impacts please refer to Section 8.0.

Potential impacts to existing mitigation/preservation areas due to development of the ELSP Area and the Infrastructure Improvements would be subject to appropriate replacement within the Back Basin.

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 development within the ELSP area (potential development area are identified in orange on Figure 14; concentrated in Planning Areas 2, 3, 6 and 8) include the following:

Table 11
Potential Impacts to Vegetation Communities within the Survey Area*

Vegetation Communities	Total Impacts (Acres)
Borrow Site	11.64
Emergent Marsh	>0.01
Mitigation Areas	33.02
Mixed Scrub	40.43
Mulefat Scrub	0.63
Ornamental Woodland	27.00
Riversidean Sage Scrub	12.90
Riversidean Sage Scrub – disturbed	2.39

Vegetation Communities	Total Impacts (Acres)
Ruderal	775.53
Saltgrass Ruderal	13.13
Southern Cottonwood – Willow Riparian Forest	6.08
Tamarisk Scrub	341.48
Willow Scrub	6.81
TOTAL	**1271.04**

**Areas that were classified as Disturbed or Developed at the time of this survey were excluded from impact calculations.*

The Infrastructure Improvements will result in the following direct impacts to vegetation communities (please refer to Figure 14).

Table 12
Impacts to Vegetation Communities within the Infrastructure Improvement Area*

Vegetation Communities	Permanent Impacts (Acres)	Temporary Impacts (Acres)	Total Impacts (Acres)
Borrow Site	0.57	0.66	1.23
Emergent Marsh	-	<0.01	<0.01
Mitigation Areas	17.01	16.01	33.02
Mulefat Scrub	0.21	0.13	0.34
Ruderal	6.51	6.01	12.52
Tamarisk Scrub	3.11	1.56	4.67
Willow Scrub	0.03	-	0.03
TOTAL	**27.43**	**24.38**	**51.81**

**Areas that were classified as Disturbed or Developed at the time of this survey were excluded from impact calculations.*

Direct impacts to Ruderal, Ornamental Woodland, Ruderal/Dry Bed, Saltgrass Ruderal, 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 CNDDB or CDFW sensitive plant communities.

For direct impacts to Mulefat Scrub, Mixed Scrub (partial), Willow Scrub, Southern Cottonwood – Willow Riparian Forest, RSS, disturbed RSS, and Emergent Marsh it is expected that if 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/Seasonal Wetlands) are achieved, 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 but is clearly an invasive species that requires control in the Back Basin. It is expected that as compliance with MSHCP requirements for Riparian/Riverine resources is achieved, the potential for significant direct impacts will be reduced to below significance.

Any direct impacts to existing mitigation areas due to development of the ELSP Area and the Infrastructure Improvements would be considered less than significant if in kind replacement within the Back Basin occurs.

Indirect impacts to plant communities result in secondary consequences. Development within the Survey Area (including the Infrastructure Improvement 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 and the Infrastructure Improvement Areas. The species with the highest likelihood of occurrence within the Survey Area and the Infrastructure Improvement Area are little mousetail and smooth tarplant; both of these species will require focused surveys pursuant to the MSHCP Narrow Endemic and Criteria Area Species Survey requirements. Impacts to sensitive plants will be analyzed for the Projects as they proceed, however, compliance with the MSHCP (including required mitigation, if applicable) will reduce potential direct impacts to below a level of 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

Direct impacts to Riverside Fairy Shrimp Critical Habitat are identified within the Infrastructure Improvement Area including 0.28 acre permanent impacts and 0.91 acre temporary impacts (total of 1.23 acres). However, in final design, impacts should be avoided to the maximum extent practicable. No indirect impacts due to the Infrastructure Improvements are expected with the implementation of MSHCP urban interface requirements. Direct impacts to the Riverside Fairy Shrimp Critical habitat would be considered less than significant if in kind replacement within the Back Basin occurs, avoidance of Critical Habitat is achieved, or the constituent elements for fairy shrimp are absent.

Riverside Fairy Shrimp Critical Habitat is located in the Survey Area within the 33-acre preserved open space. Therefore, no additional direct impacts are anticipated to Riverside Fairy Shrimp Critical Habitat. Indirect impacts to Riverside Fairy Shrimp Critical Habitat are not expected due to implementation of the remaining development within the East Lake Specific Plan Area.

6.4 Potential Impacts to Special Status Wildlife

Of the federal or state endangered or threatened species with potential to occur within the Survey Area, the western snowy plover is the only species not covered under the MSHCP. Based on the lack of recent observation (within the last 40 years), it is unlikely the species will occur in the Survey Area. However, as noted in Section 8.0, all development (clearing and grubbing) within the within the Survey Area will be required to complete a pre-construction nesting bird survey to prevent impacts to nesting birds. Therefore, the potential impact to the western snowy plover is considered to be less than significant.

Three additional special status wildlife with potential to occur in the Survey Area are not covered by the MSHCP including:

- American white pelican: potential nesting grounds and foraging habitat are not expected to be directly impacted by development within the Survey Area (including Infrastructure Improvement Area) [no direct and no significant indirect impact expected]

- coast patch-nosed snake: potential loss of suitable habitat. With implementation of the MSHCP Conservation requirements, suitable habitat for the coast patch-nosed snake will be preserved within the Back Basin [potential loss of habitat therefore considered less than significant]

- two-striped garter snake: potential loss of suitable habitat. There is a low potential for occurrence onsite and suitable habitat is limited to areas adjacent to open water which will primarily remain undeveloped [limited potential for direct impact and no significant indirect impact expected; potential loss of habitat considered less than significant]

The remaining special status wildlife with potential to occur in the Survey Area and the Infrastructure Improvement 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

The Survey Area may serve a function in local wildlife movement (i.e. dispersal and home range activities), however as discussed with USFWS and CDFW, the Back Basin is not considered a local or regional wildlife corridor for mammals. The Back Basin is considered an important location in bird migration and as such implementation of the Back Basin 770 Agreement is expected to provide habitat especially for bird use. It is also expected that local wildlife movement will be preserved within the ELSP area as a result of the existing mitigation and preservation areas which make up the acreage requirements of the Back Basin 770 Agreement. Considering the existing and future preservation of open space, potential impacts to local 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 for each Planning Area are not currently known; therefore, this document assumes impacts may occur to all of the jurisdictional waters within Planning Areas that are subject to development. Impacts are identified in the tables below and Figures 15, 16, and 17.

Table 13
Potential Impacts to Waters of the United States within the Survey Area

Feature*	Permanent Impacts	Temporary Impacts
Below Elevation 1246’	343.39	7.62
Other WoUS	0.09	0.00
Potential Wetlands	27.90	0.00
Mitigation Areas	10.24	7.62
Above Elevation 1246’	--	--
Other WoUS	2.32	0.00
Potential Wetlands	25.98	0.16
Mitigation Areas	6.76	8.39
Totals	--	--
Below Elevation 1246’	343.39	7.62
Other WoUS**	2.41	0.00

Potential Wetlands**	53.88	0.16
Mitigation Areas	17.01	16.01

*includes the Infrastructure Improvement Area
**includes overlap with the Below Elevation 1246' feature.

Table 14
Potential Impacts to Waters of the State within the Survey Area

Feature*	Permanent Impacts	Temporary Impacts
Below Elevation 1265'	1347.78	30.55
Rivers, Streams, or Lakes	2.59	0.00
Riparian/Potential Wetland	51.22	0.16
Mitigation Areas	17.01	16.01
Above Elevation 1265'	--	--
Riverine	0.49	0.00
Riparian/Potential Wetland	2.66	0.00
Mitigation Areas	0.00	0.00
Totals	--	--
Below Elevation 1265'	1347.78	30.55
Riverine**	3.08	0.00
Riparian/Potential Wetland**	53.88	0.16
Mitigation Areas	17.01	16.01

*includes the Infrastructure Improvement Area
**includes overlap with the Below Elevation 1265' feature.

Table 15
Potential Impacts to Riparian/Riverine within the Survey Area

Feature*	Permanent Impacts	Temporary Impacts
Riverine**	3.08	0.00
Riparian**	53.88	0.16
Mitigation Areas	17.01	16.01
Tamarisk Scrub**	341.31	1.56

*includes overlap with the Below Elevation 1265' feature.
**includes the Infrastructure Improvement Area

Table 16
Potential Impacts to Vernal Pools/Seasonal Depressions within the Survey Area

Feature*	Permanent Impacts	Temporary Impacts
Potential Vernal Pools	0.25	0.07

*includes the Infrastructure Improvement Area

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 Cereal Street, Malaga Street, Lucerne Street, and Berm improvement limits. Impacts are identified in the tables below.

Table 17
Potential Impacts to Waters of the United States within the Infrastructure Improvement Area

Feature*	Permanent Impacts	Temporary Impacts
Below Elevation 1246'	10.24	7.62
Other WoUS	0.00	0.00
Wetland	0.00	0.00
Mitigation Areas	10.24	7.62
Above Elevation 1246'	--	--
Other WoUS	0.00	0.00
Wetland	0.23	0.16
Mitigation Areas	6.76	8.39
Totals	--	--
Below Elevation 1246'	10.24	7.62
Other WoUS*	0.00	0.00
Wetland*	0.23	0.16
Mitigation Areas	17.01	16.01

*includes overlap with the Below Elevation 1246' feature.

Table 18
Potential Impacts to Waters of the State within the Infrastructure Improvement Area

Feature*	Permanent Impacts	Temporary Impacts
Below Elevation 1265’	46.88	30.55
Rivers, Streams, or Lakes	0.00	0.00
Riparian/Potential Wetland	0.23	0.16
Mitigation Areas	17.01	16.01
Above Elevation 1265’	--	--
Riverine	0.00	0.00
Riparian/Potential Wetland	0.00	0.00
Mitigation Areas	0.00	0.00
Totals	--	--
Below Elevation 1265’	46.88	30.55
Riverine*	0.00	0.00
Riparian/ Wetland*	0.23	0.16
Mitigation Areas	17.01	16.01

*includes overlap with the Below Elevation 1265’ feature.

Table 19
Potential Impacts to Riparian/Riverine within the Infrastructure Improvement Area

Feature*	Permanent Impacts	Temporary Impacts
Riverine*	0.00	0.00
Riparian*	0.23	0.16
Mitigation Areas	17.01	16.01
Tamarisk Scrub*	3.11	1.56

*includes overlap with the Below Elevation 1265’ feature.

Table 20
Potential Impacts to Vernal Pools/Seasonal Depressions within the Infrastructure Improvement Area

Feature*	Permanent Impacts	Temporary Impacts
Potential Vernal Pools	0.17	0.07

7.0 BMPs, Avoidance, and Protection Measure Recommendations

The following sections include BMPs, avoidance, and protection measures that would be incorporated into future development within the Survey Area and Infrastructure Improvement Areas to reduce project impacts to biological resources. These 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. For projects that proceed within the ELSP, the applicant for the Project will implement the following avoidance and protection measures to protect vegetation and wildlife.

- 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 project site 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. 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.

- Timing of vegetation removal, 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, each project is 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 projects 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.

- Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.

- 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

Mitigation will match impacts. If the applicant wishes to mitigate at a higher level, for example, riparian vegetation for Saltgrass Ruderal, a lower mitigation ratio may be acceptable, in consultation with CDFW. Mitigation can be planted within existing or future preservation areas, as appropriate and in consultation with CDFW and the City. New preservation areas should be contiguous with existing 770 features and/or major riparian areas. All future mitigation shall include endowments for invasive species removal within project open space.

8.1 Vegetation Communities

Mitigation for impacts to vegetation communities caused by development, including the Infrastructure Improvements, within the ELSP Area will be achieved through compliance with MSHCP requirements. Each development will go through the MSHCP approval. Mitigation for impacts to sensitive vegetation communities associated with jurisdictional waters, riparian, riverine, or vernal pool resources may be satisfied through compensatory and/or preservation requirements as described in Sections 8.4 and 8.5 below.

8.2 Plant Species

Mitigation for impacts to special status plant species caused by development within the ELSP Area will be achieved through compliance with MSHCP requirements. Each development will go through the MSHCP approval process (including required Narrow Endemic and Criteria Area Plant surveys). 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.).

Surveys for Narrow Endemic and Criteria Area Plant species will occur during the appropriate season within the Infrastructure Improvement Area. 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.) Translocation may occur in preserved open spaces areas.

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 ELSP Area will be achieved through compliance with MSHCP requirements. Each development will go through the MSHCP approval process (including burrowing owl surveys and/or other focused species surveys, per MSHCP requirements).

Unless impacts can be avoided, focused surveys should be conducted to determine presence/absence of Riverside fairy shrimp within the Infrastructure Improvement Area. If fairy shrimp are present, the City shall determine whether avoidance can be achieved. If not, mitigation will be provided at a 2:1 ratio in the form of in kind habitat replacement within the Back Basin, and consistent with the MSHCP.

The following measures shall be performed by each respective applicant prior to clearing and grubbing within the Survey Area to avoid impacts to burrowing owl and other nesting birds:

- 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.

- Pre-construction presence/absence surveys 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.

8.4 Jurisdictional Waters

Mitigation for each Project will be completed prior to or concurrently with Project implementations and will be consistent with the 770-acre mitigation agreement currently in place for the Back Basin.

Impacts to Corps jurisdiction below elevation 1246' and CDFW jurisdiction below elevation 1265' are recommended to be compensated for by the preservation of waters below elevation 1246' and/or 1265' in the confines of the Back Basin or Lake Elsinore at a minimum 0.25:1 ratio. 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 1:1 preservation in the Back Basin, Lake Elsinore or other agency-approved mitigation bank or in-lieu fee program within the MSHCP. Impacts to wetland and 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 ELSP and the Infrastructure Improvements limits:

Table 21
Compensatory Mitigation for "Other Waters" Impacts within the Survey Area

Feature*	Impacts	Ratio Multiplier (minimum)	Mitigation Acreage
Non-wetland WOUS	2.41	1	2.41
Potential Wetland WOUS	53.88	2	107.76
Riparian WOS	53.88	2	107.76
Rivers, Streams, or Lakes WOS	3.08	1	3.08
Mitigation Areas	17.01	1	17.01

*includes the Infrastructure Improvement Area

Table 22
Compensatory Mitigation for "Other Waters" Impacts within the Infrastructure Improvement Area

Feature	Impacts	Ratio Multiplier (minimum)	Mitigation Acreage
Non-wetland WOUS	0.00	1	0.00
Potential Wetland WOUS	0.23	2	0.46
Riparian WOS	0.23	2	0.46
Rivers, Streams, or Lakes WOS	0.00	1	0.00
Mitigation Areas	17.01	1	17.01

*see Table 24 below for additional detail regarding habitat types within the 1265' elevation

Table 23
Compensatory Mitigation for Habitat Impacts within the Survey Area and Below Elevations 1265' for CDFW and 1246' for USACE

Vegetation Communities	Impacts	Ratio Multiplier (minimum)	Mitigation Acreage
Borrow Site	11.64	0.5	5.82
Mitigation Areas	33.02	1	33.02

Mixed Scrub	40.43	1	40.43
Mulefat Scrub	0.63	1	0.63
Ornamental Woodland	27.00	0.25	6.75
Riversidean Sage Scrub	12.90	2	25.80
Riversidean Sage Scrub – disturbed	2.39	1	2.39
Ruderal	775.53	0.25	193.88
Saltgrass Ruderal	13.13	0.25	3.28
Southern Cottonwood – Willow Riparian Forest	6.08	2	12.16
Tamarisk Scrub	341.48	0*	0
Willow Scrub	6.81	1	6.81

*See section 8.5

The Infrastructure Improvements will result in the following direct impacts to vegetation communities (please refer to Figure 14).

Table 24
Compensatory Mitigation for Habitat Impacts within the Infrastructure Improvement Area and Below Elevations 1265' for CDFW and 1246' for USACE

Vegetation Communities	Impacts	Ratio Multiplier (minimum)	Mitigation Acreage
Borrow Site	0.57	0.5	0.29
Mitigation Areas	17.01	1	17.01
Mulefat Scrub	0.21	1	0.21
Ruderal	6.51	0.25	1.63
Tamarisk Scrub	3.11	0*	0
Willow Scrub	0.03	1	0.03

*See section 8.5

8.5 Riparian/Riverine Areas and Vernal Pools

Mitigation for each Project will be completed prior to or concurrently with Project implementation (may require grading to occur to establish mitigation area) and will be consistent with the 770-acre mitigation agreement currently in place for the Back Basin.

Removal of tamarisk scrub will be considered a benefit to the Back Basin and no mitigation will be necessary provided the Tamarisk is eradicated in perpetuity. This means that development of a site that is graded, paved, etc. such that Tamarisk cannot survive, does not need mitigation. If

a portion of Tamarisk scrub remains on a project site, the project proponent will be required to establish an endowment to remove/eradicate the Tamarisk in perpetuity. Impacts to riverine and riparian resources will be mitigated in the Back Basin, Lake Elsinore or other agency-approved mitigation bank or in-lieu fee program within the MSHCP. Impacts to riparian resources will 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. The following tables identify the anticipated minimum mitigation necessary for impacts within the ELSP and the Infrastructure Improvement limits:

Table 25
Compensatory Mitigation for Impacts within the Survey Area

Feature*	Impacts	Ratio Multiplier (minimum)	Mitigation Acreage
Mitigation Areas	17.01	1	17.01
Potential Vernal Pools	0.25	2	0.50
Riparian Resources	53.88	2	107.76
Riverine Resources	3.08	2	6.16
Tamarisk Scrub**	341.31	-	-

*includes the Infrastructure Improvement Area

**endowment required to maintain site tamarisk-free

Table 26
Compensatory Mitigation for Waters Impacts within the Infrastructure Improvement Area

Feature	Impacts	Ratio Multiplier (minimum)	Mitigation Acreage
Mitigation Areas	17.01	1	17.01
Riparian Resources	0.23	2	0.46
Riverine Resources	0.00	2	0.00
Tamarisk Scrub*	3.11	-	-
Potential Vernal Pools	0.25	2	0.50

*endowment required to maintain site tamarisk-free

8.6 MSHCP 770

Currently, the following properties are considered part of the MSHCP 770 Plan:

- The 130-acre Lake Elsinore Inlet Channel
- The 356-acre wetlands
- The 10-, 25-, and 71- acre sites on the Summerly project
- The 33 acres around the Australian Vernal Pool

Additional land is proposed to be preserved, including:

- A 35-acre portion of the "T-Peninsula"
- The City's ownership of 48-acres south of the 356-acre wetlands
- An additional 59 acres around the 356-acre wetlands or 45 acres of the riparian forest in PA 6.

The exact final acreage of the above-listed properties has yet to be determined pending preparation of recordation of conservation easements. However, the total acreages conserved will total or exceed 770 acres and will fulfill the MSHCP criteria for the Back Basin. These lands will be preserved as development occurs and will be credited as mitigation for development projects in the Back Basin.

9.0 References

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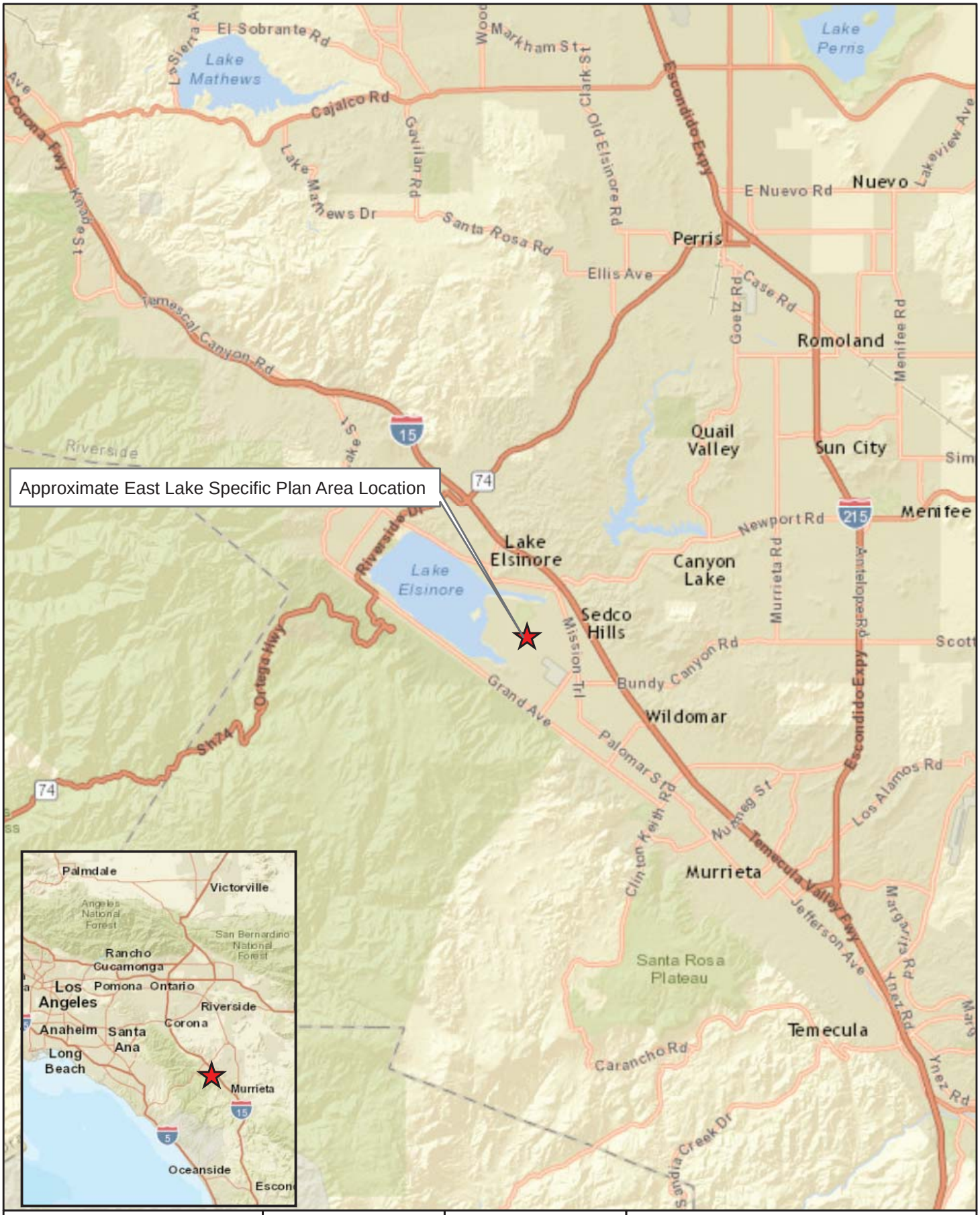
FIGURES



Prepared By:
VCS Environmental

Map Created: February 2017

0 5,000 10,000 15,000 20,000 Feet
1 inch = 20,000 feet

Data Source: Bing Maps

CITY OF LAKE ELSINORE
ELSP AMENDMENT No. 11
Regional Location Map

FIGURE 1

Prepared By:

VCS Environmental

Map Created: February 2017

0 1,250 2,500 3,750 5,000 Feet

1 inch = 5,000 feet

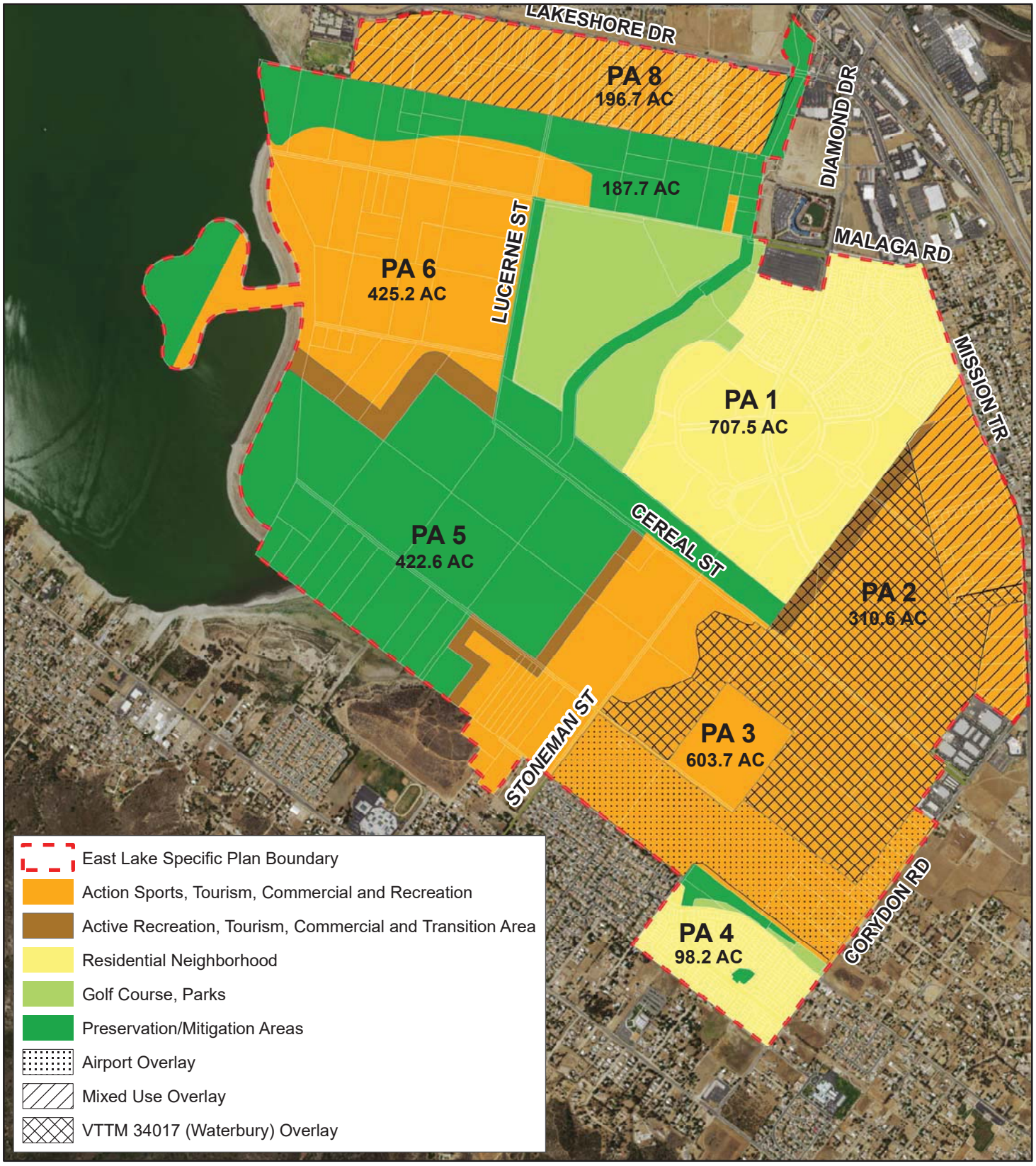
Data Source: Bing Maps

CITY OF LAKE ELSINORE

ELSP AMENDMENT No. 11

Vicinity Map

FIGURE 2



N

Miles

0 0.25 0.5

FIGURE 3
LAND USE PLAN

CITY OF LAKE ELSINORE
DREAM EXTREME

Prepared by:
City of Lake Elsinore GIS
February 15, 2017
Data Sources:
County of Riverside GIS
City of Lake Elsinore GIS
Stateplane NAD 83

LAKE ELSINORE GIS

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CITY OF LAKE ELSINORE

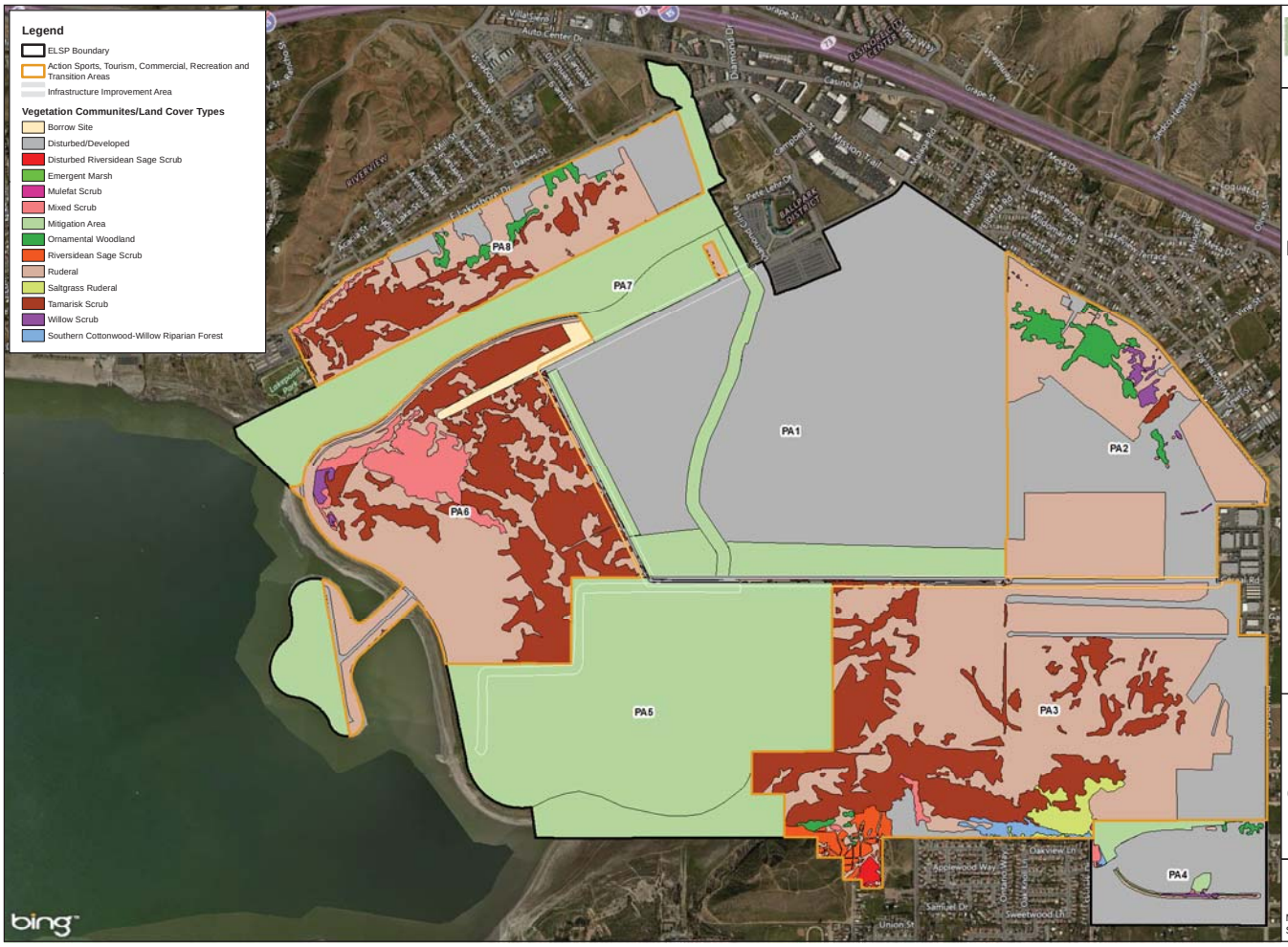
ELSP AMENDMENT No. 11

Infrastructure Improvements Area Map

0 700 1,400 2,100 2,800
Feet
1 in = 1,400 ft

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

Figure 4



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CITY OF LAKE ELSINORE

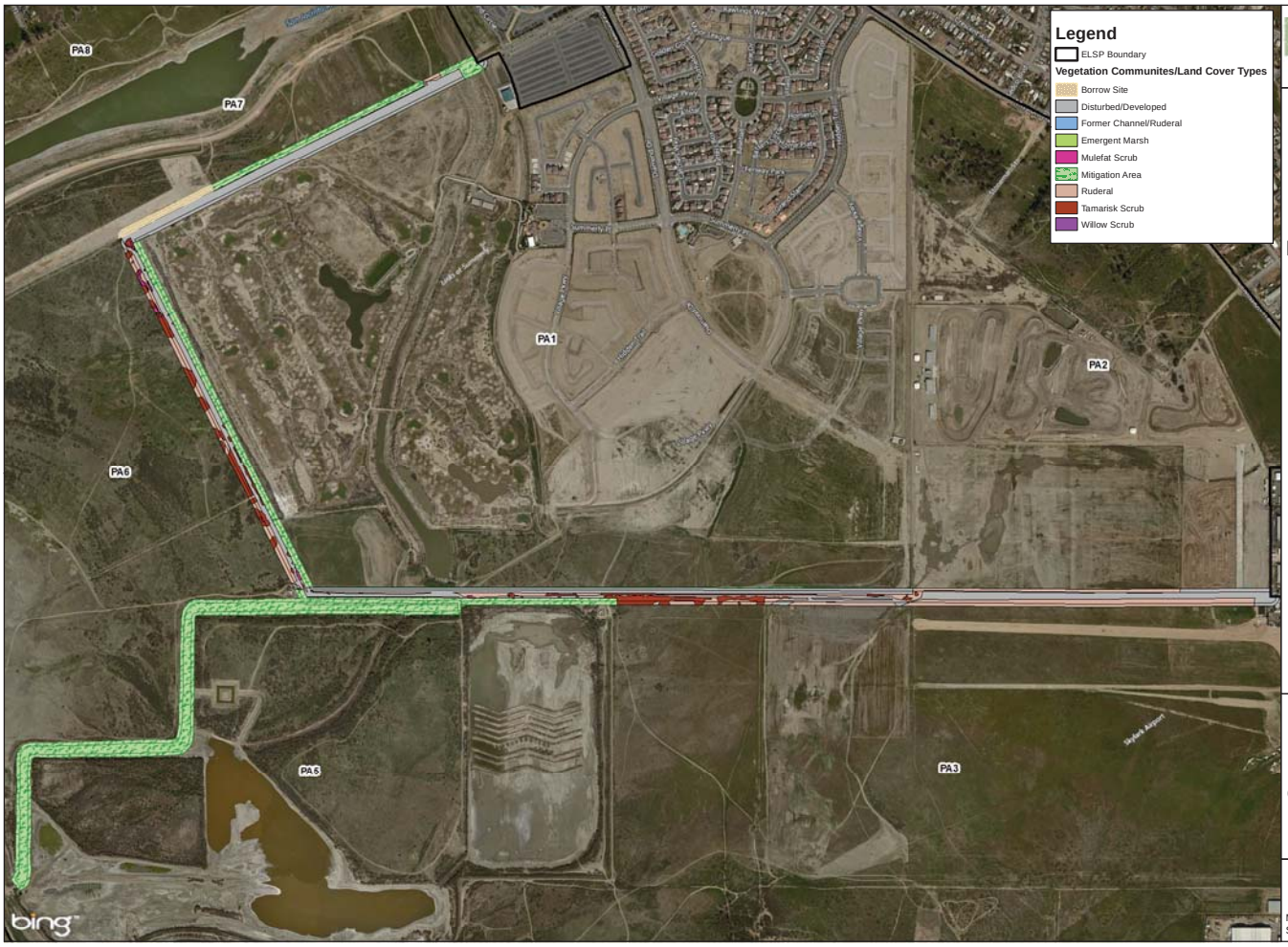
ELSP AMENDMENT No. 11

Existing Vegetation

0 700 1,400 2,100 2,800
Feet
1 in = 1,400 ft

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

Figure 5



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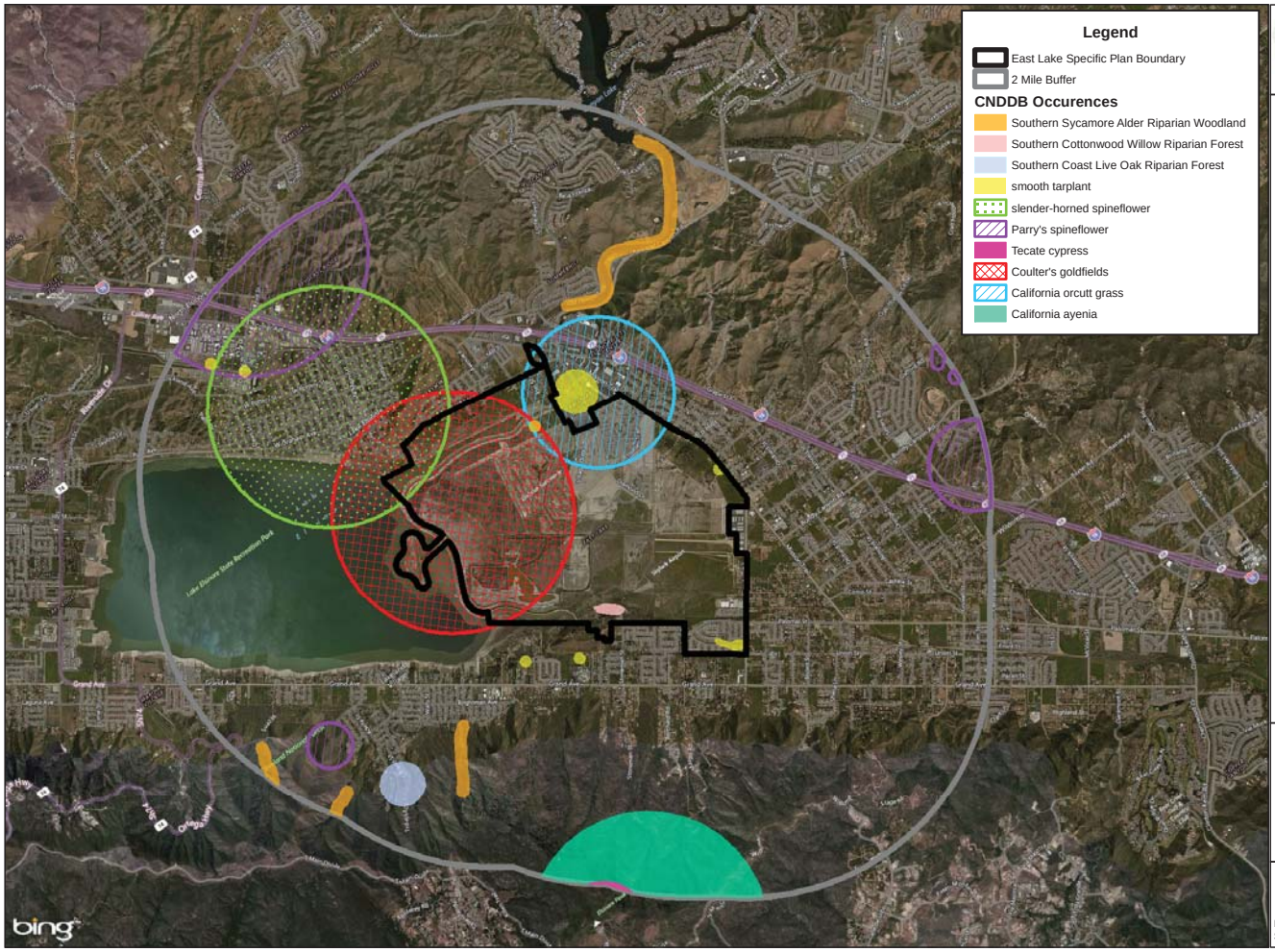
ELSP AMENDMENT No. 11

Vegetation In Infrastructure Improvement Area

0 410 820 1,230 1,640
Feet
1 in = 825 ft

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

Figure 6



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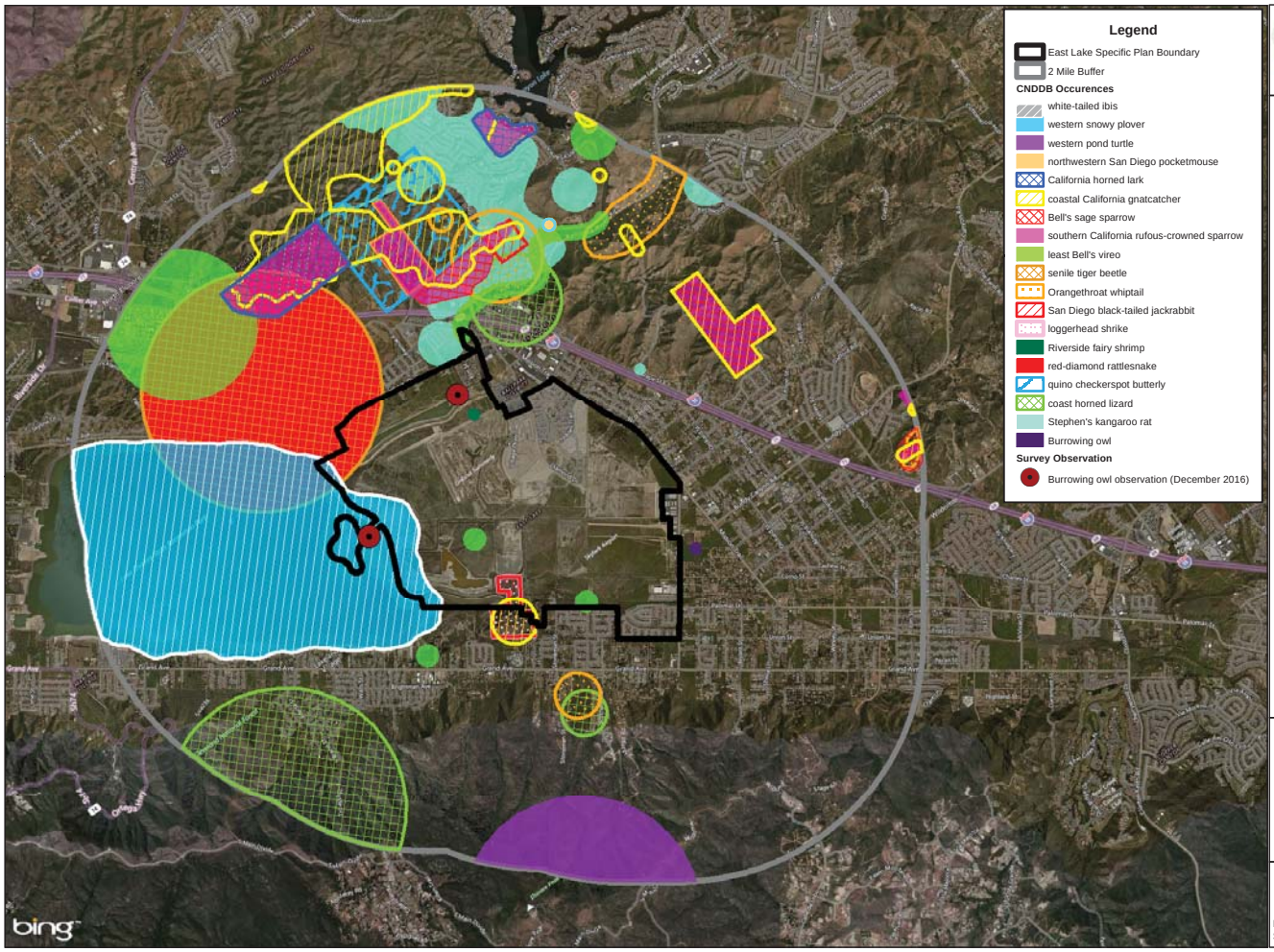
ELSP AMENDMENT No. 11

CNDDB OCCURRENCES - PLANT SPECIES

0 2,000 4,000 6,000 8,000
Feet
1 in = 4,000 ft

Map Date: February 2017
Source: USFWS, Bing

Figure 7



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CITY OF LAKE ELSINORE

ELSP AMENDMENT No. 11

CNDDB OCCURRENCES - ANIMAL SPECIES

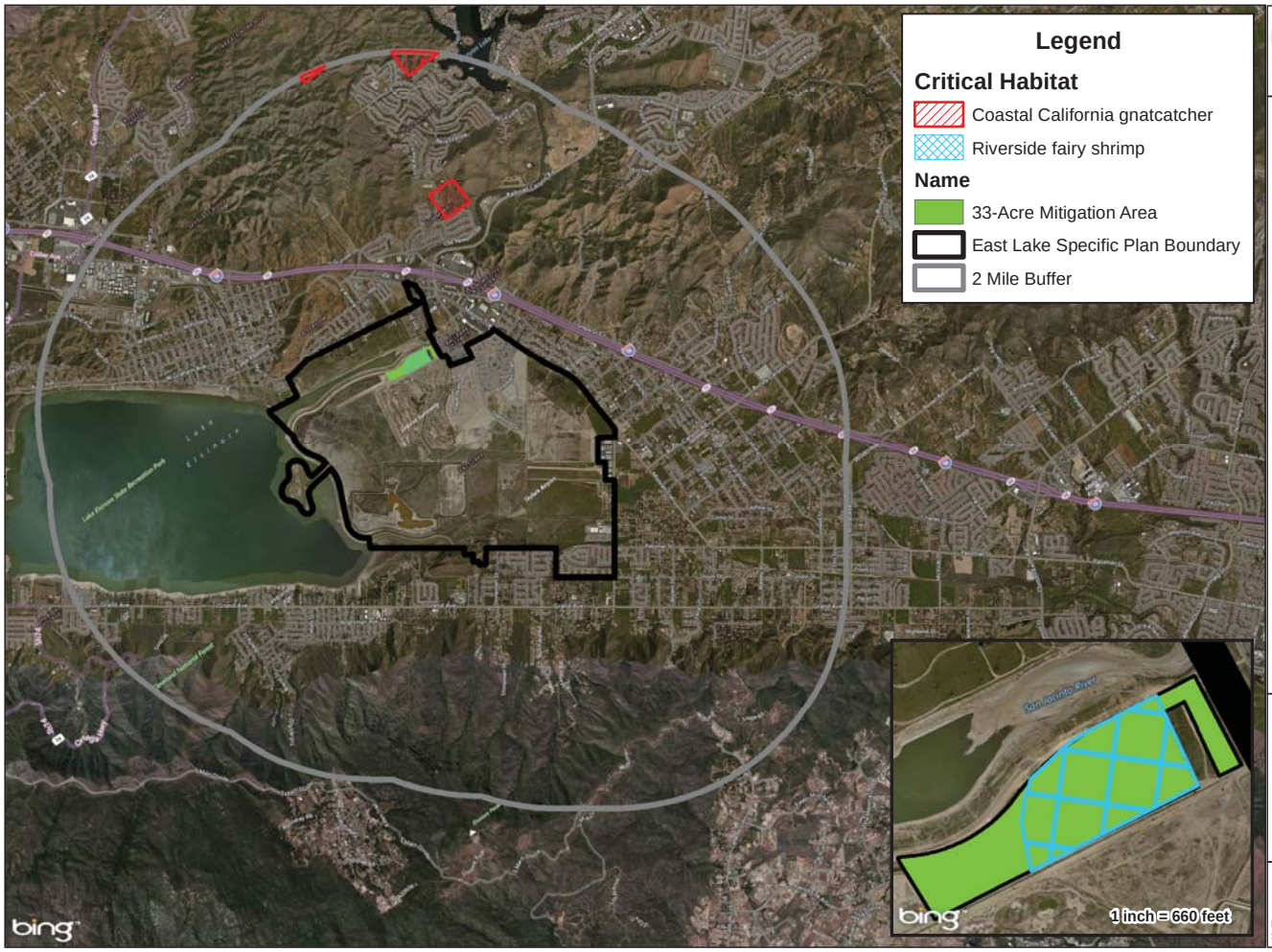
0 2,000 4,000 6,000 8,000

Feet

1 in = 4,000 ft

Map Date: February 2017
Source: CNDDB, Bing

Figure 8



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CITY OF LAKE ELSINORE

ELSP AMENDMENT No. 11

CRITICAL HABITAT

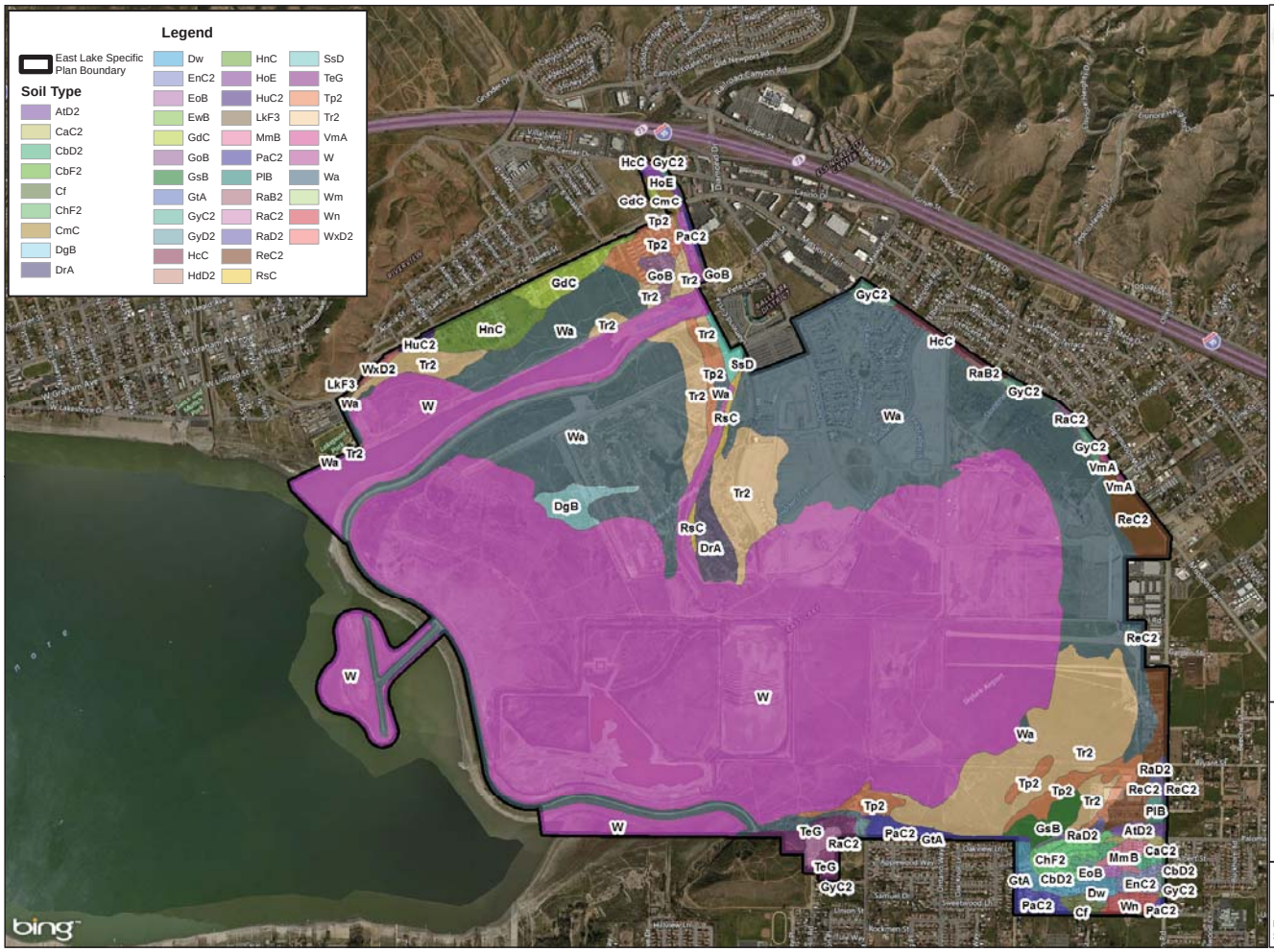
0 2,100 4,200 6,300 8,400

Feet

1 in = 4,200 ft

Map Date: December 2016
Source: USFWS, Bing

Figure 9



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CITY OF LAKE ELSINORE

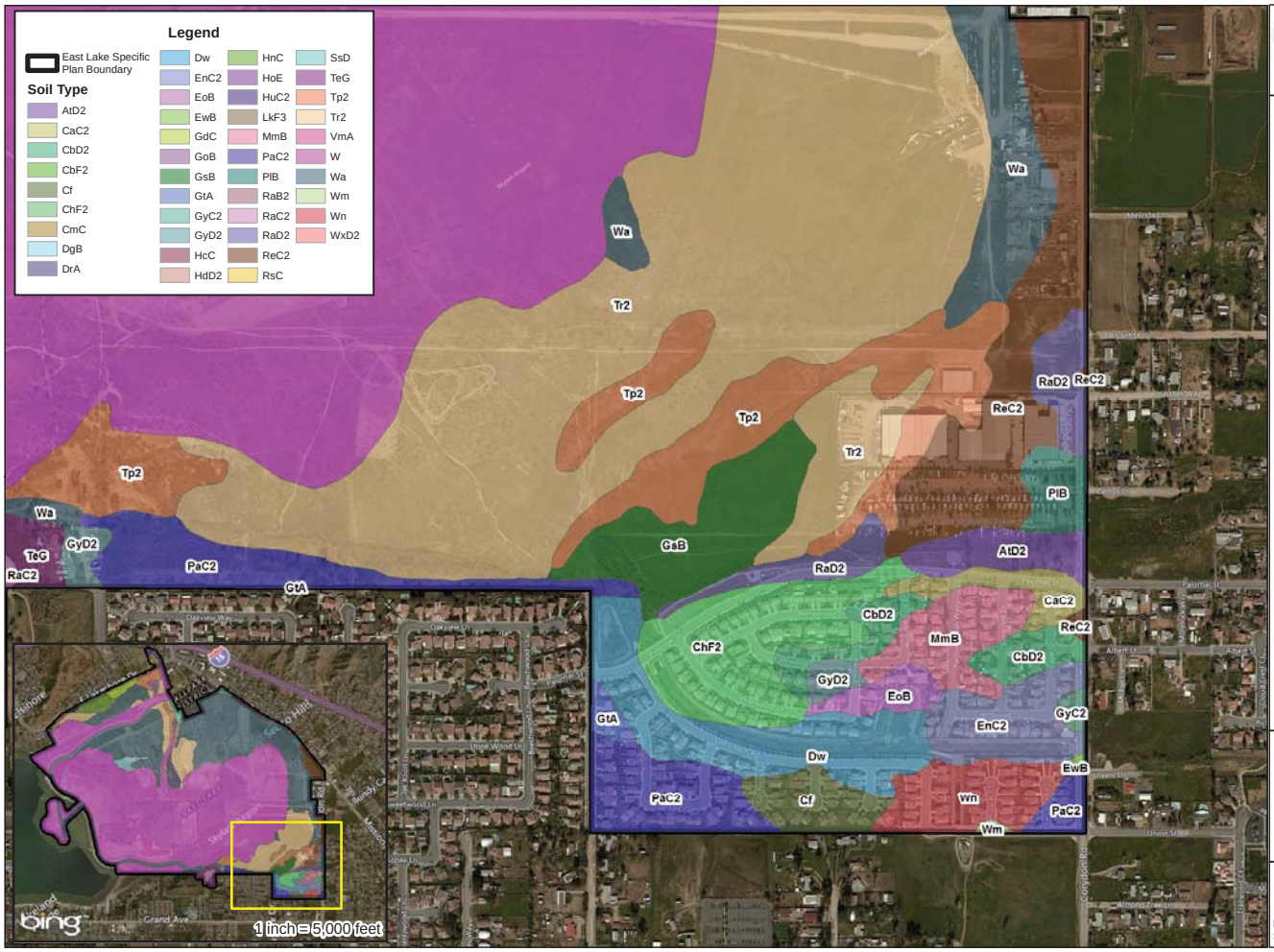
ELSP AMENDMENT No. 11

SOILS MAP

0 820 1,640 2,460 3,280
Feet
1 in = 1,650 ft

Map Date: February 2017
Source: USFWS, Bing

Figure 10a



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CITY OF LAKE ELSINORE

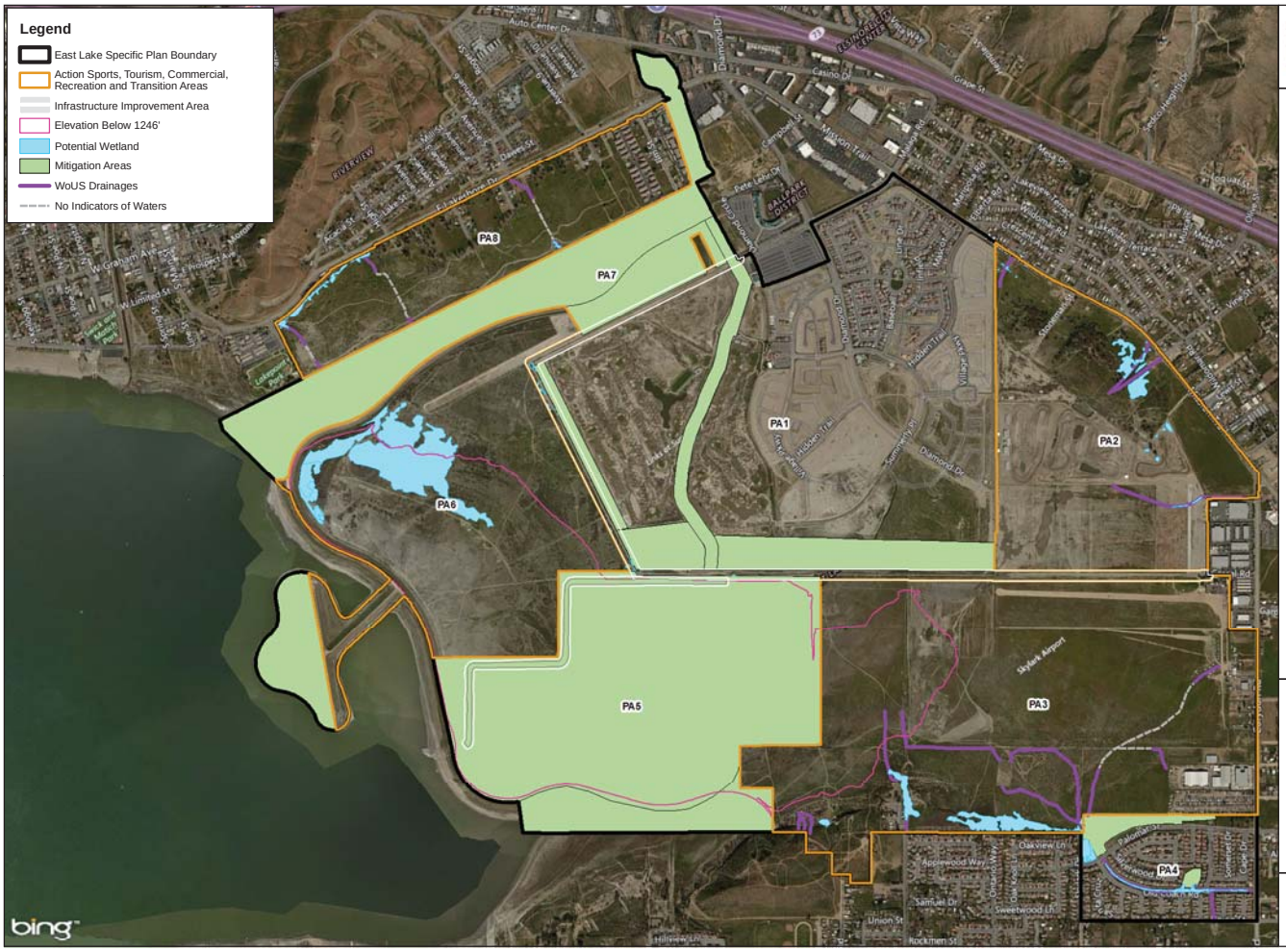
ELSP AMENDMENT No. 11

SOILS MAP -DETAIL

0 240 480 720 960
Feet
1 in = 500 ft

Map Date: February 2017
Source: USFWS, Bing

Figure 10b



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CITY OF LAKE ELSINORE

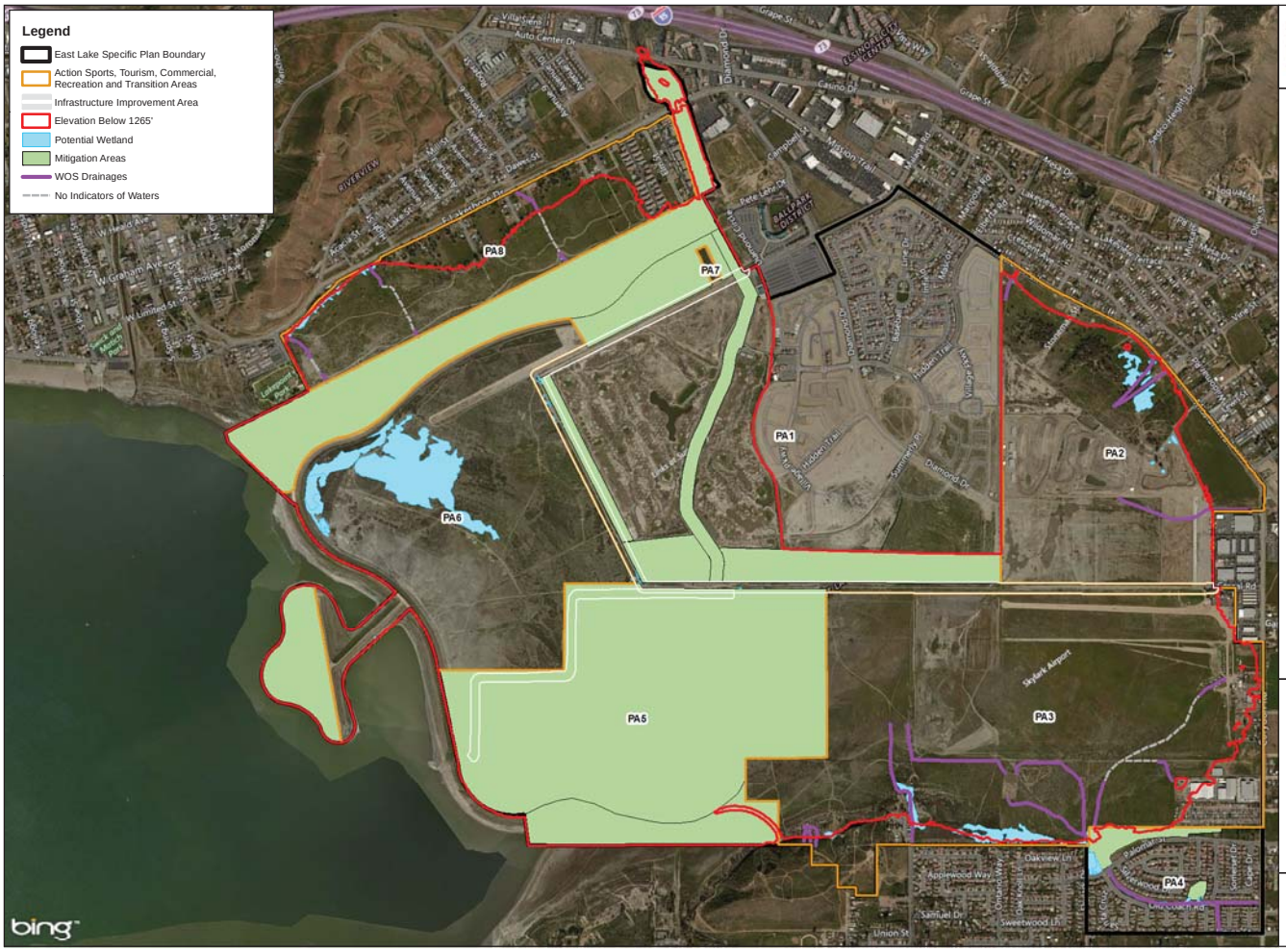
ELSP AMENDMENT No. 11

Existing Waters of the U.S. (WoUS)

0 700 1,400 2,100 2,800
Feet
1 in = 1,400 ft

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

Figure 11



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CITY OF LAKE ELSINORE

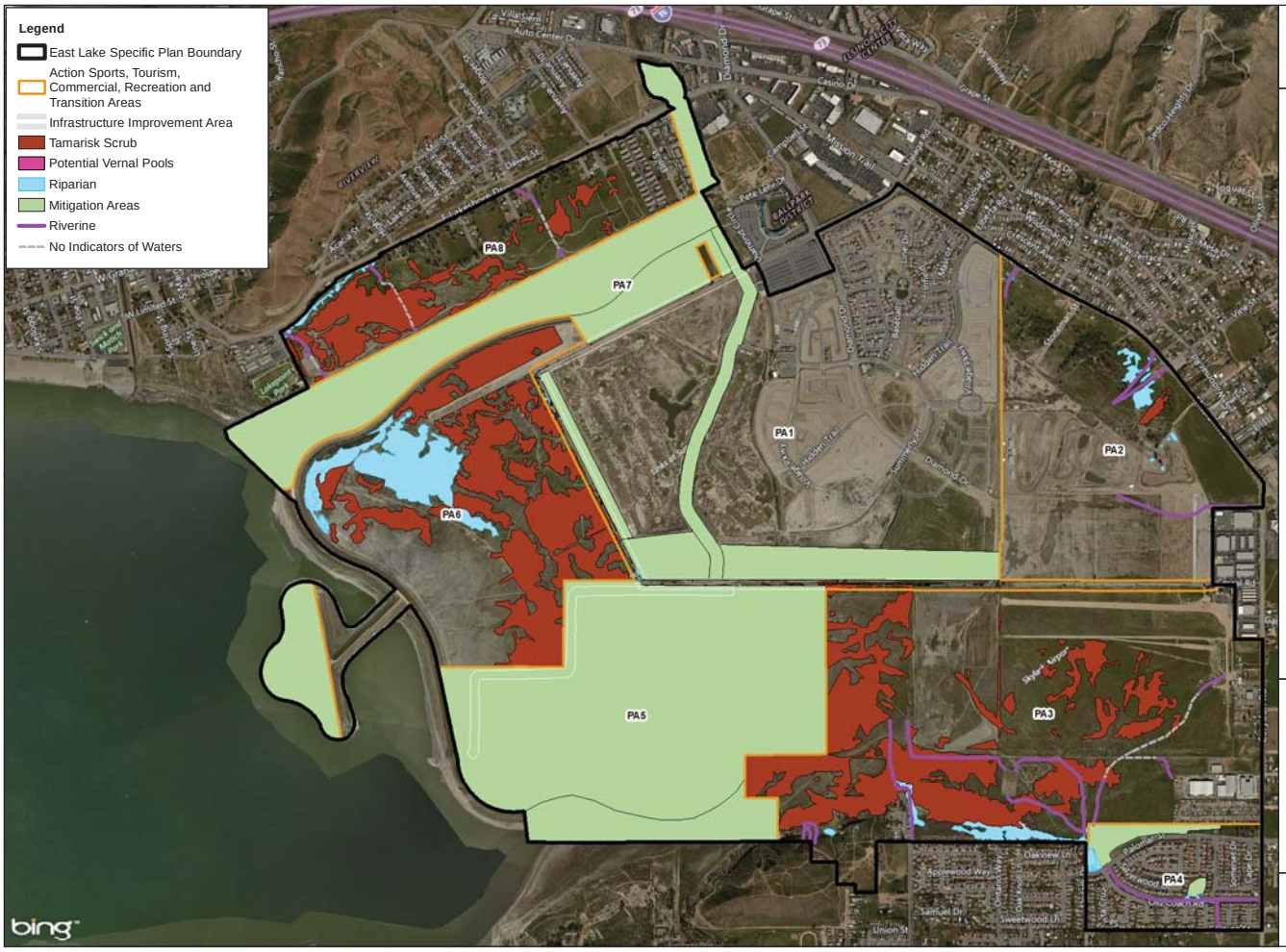
ELSP AMENDMENT No. 11

Existing Waters of the State (WOS)

0 700 1,400 2,100 2,800
Feet
1 in = 1,400 ft

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

Figure 12



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EXPERT SOLUTIONS CEQA-NEPA . Biology . Regulatory

CITY OF LAKE ELSINORE

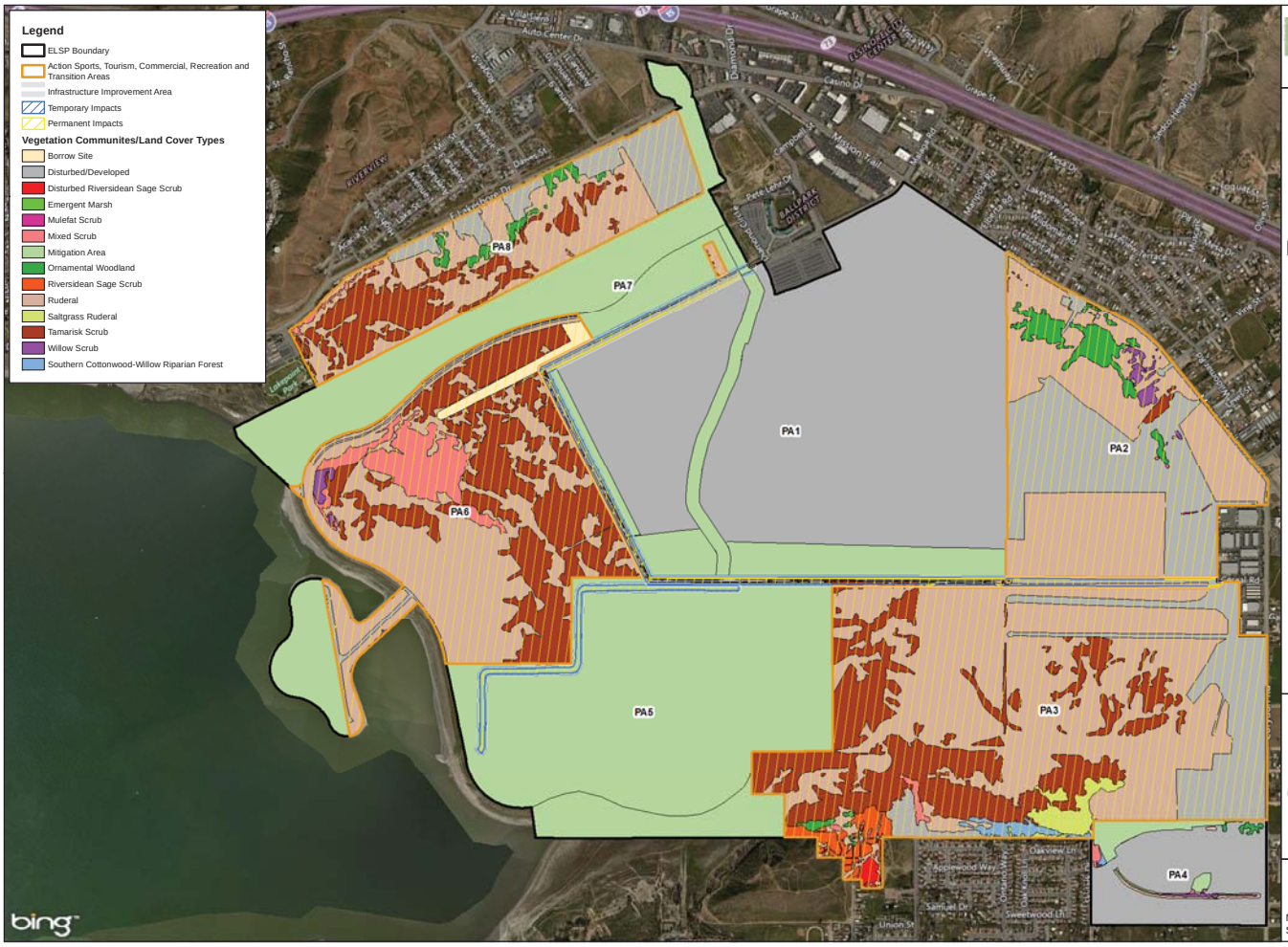
ELSP AMENDMENT No. 11

Existing Riparian & Riverine Areas and Vernal Pools

0 700 1,400 2,100 2,800
Feet
1 in = 1,400 ft

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

Figure 13



VCS Environmental
EXPERT SOLUTIONS CEQA-NEPA . Biology . Regulatory

CITY OF LAKE ELSINORE

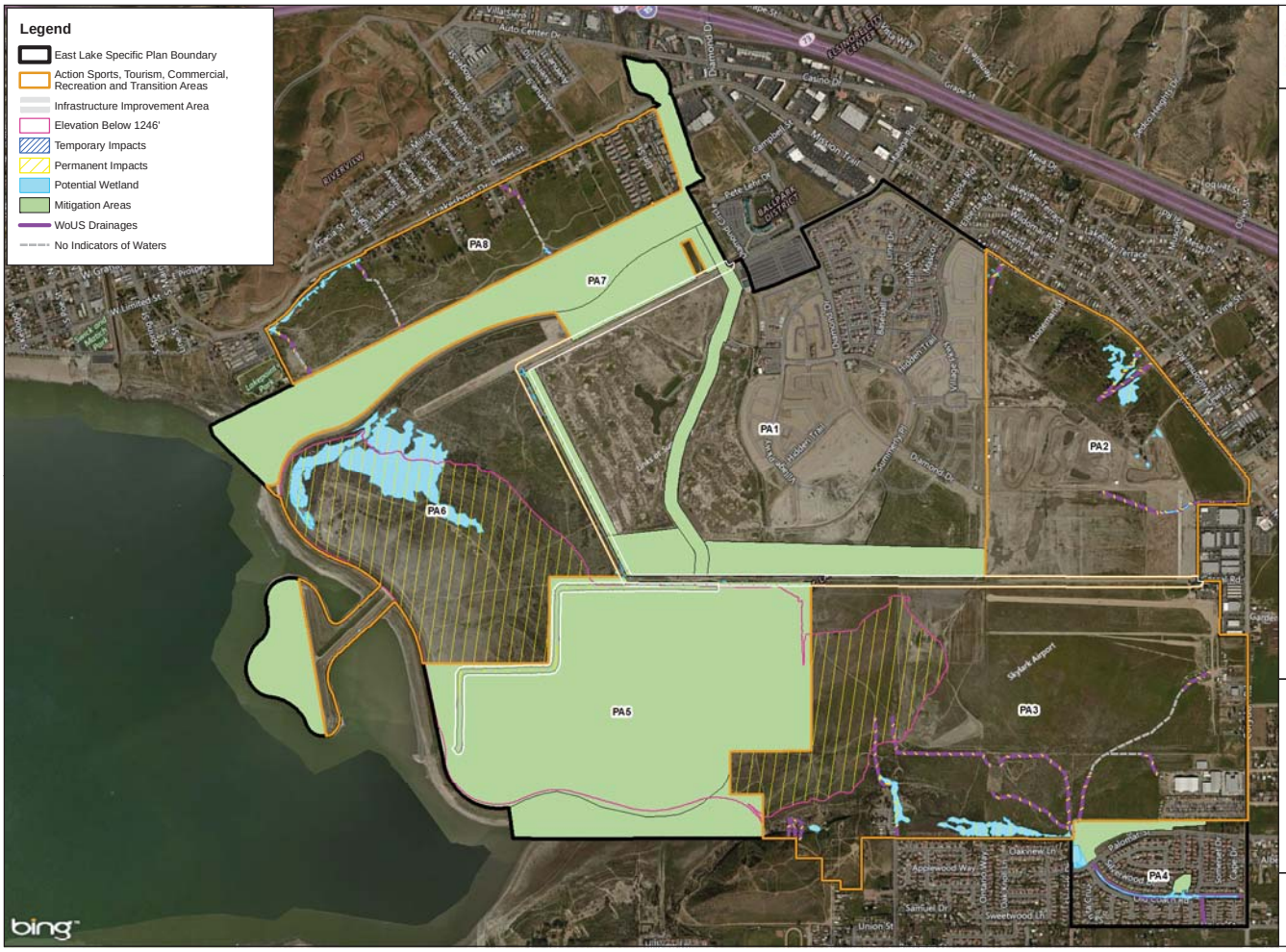
ELSP AMENDMENT No. 11

Potential Impacts to Vegetation

0 700 1,400 2,100 2,800
Feet
1 in = 1,400 ft

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

Figure 14



VCS Environmental
EXPERT SOLUTIONS CEQA-NEPA . Biology . Regulatory

CITY OF LAKE ELSINORE

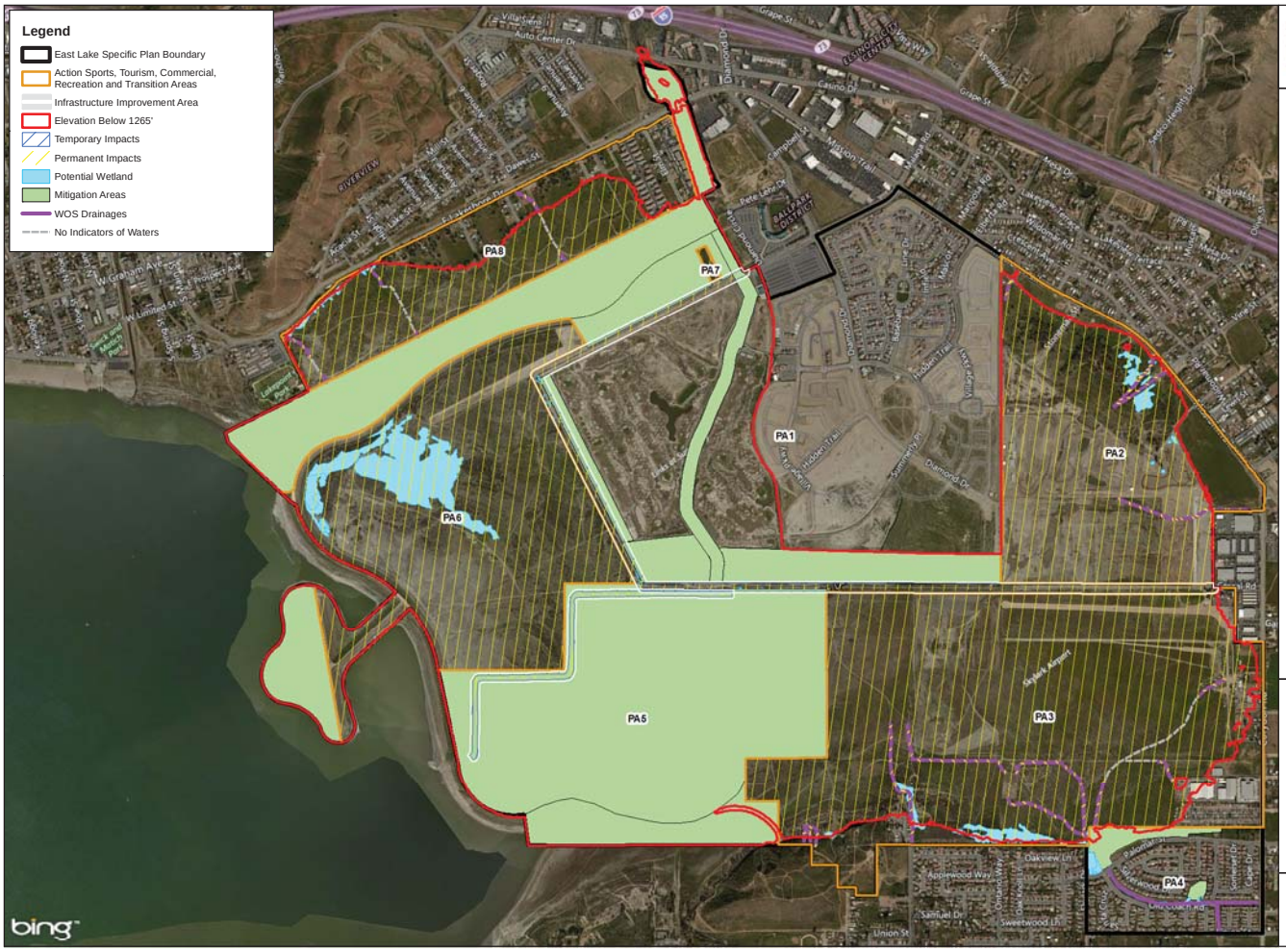
ELSP AMENDMENT No. 11

Potential Impacts to Waters of the U.S. (WoUS)

0 700 1,400 2,100 2,800
Feet
1 in = 1,400 ft

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

Figure 15



VCS Environmental
EXPERT SOLUTIONS CEQA-NEPA . Biology . Regulatory

CITY OF LAKE ELSINORE

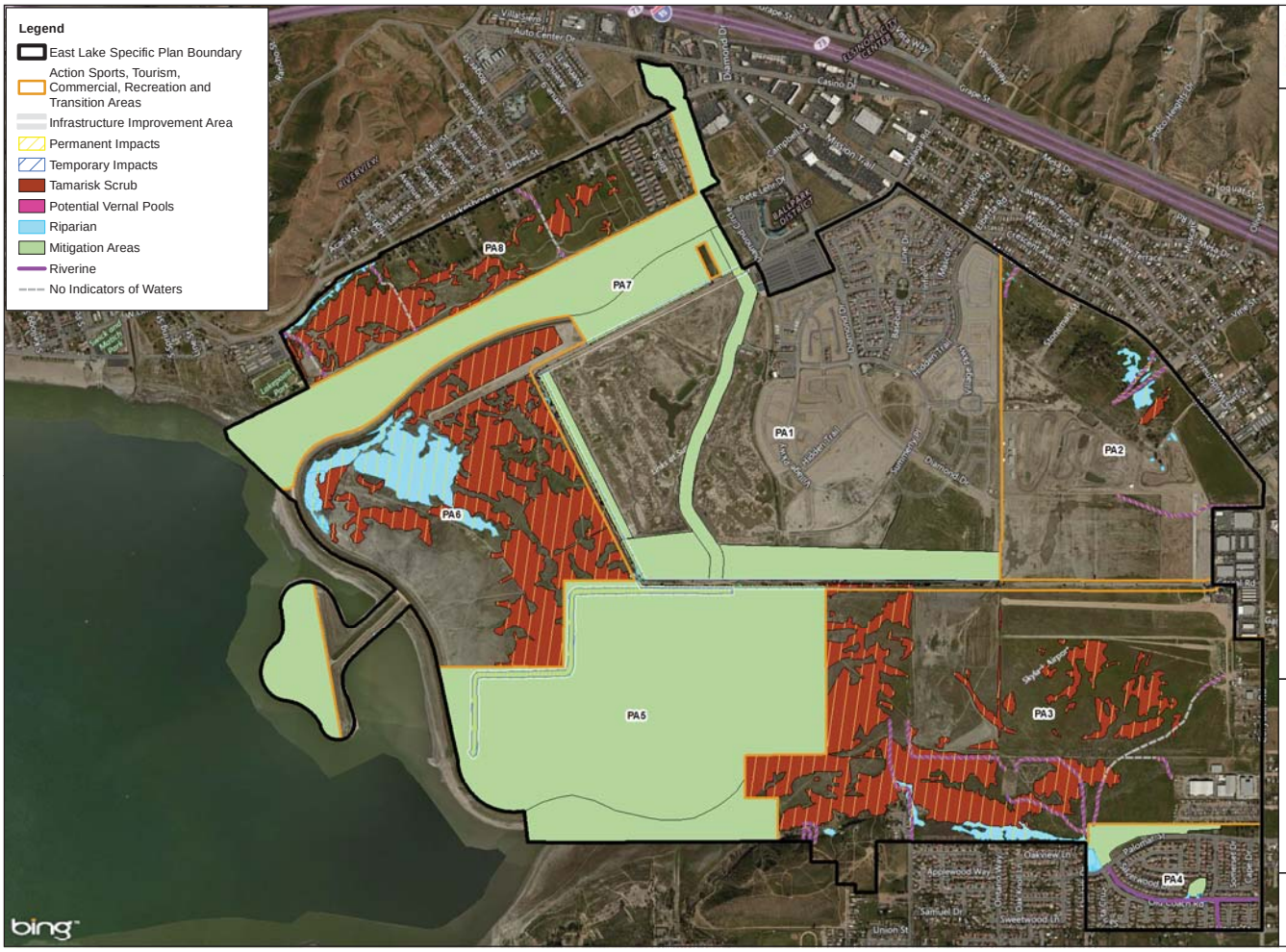
ELSP AMENDMENT No. 11

Potential Impacts to Waters of the State (WOS)

0 700 1,400 2,100 2,800
Feet
1 in = 1,400 ft

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

Figure 16



VCS Environmental
EXPERT SOLUTIONS (CEQA-NEPA...Biology...Regulatory)

CITY OF LAKE ELSINORE

ELSP AMENDMENT No. 11

Potential Impacts to Riparian & Riverine Areas and Vernal Pools

0 700 1,400 2,100 2,800
Feet
1 in = 1,400 ft

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

Figure 17

APPENDIX A

Photopages

Photo 1. Mixed Scrub

Photo 2. Ruderal

Photo 3. Tamarisk Scrub

Photo 4. Borrow Site

Photo 5. View from levee; Ruderal in foreground, Tamarisk Scrub in distance

Photo 6. Ruderal vegetation within the Lake Elsinore inlet channel [Mitigation Area]

Photo 7. Future Malaga Road

Photo 8. Willow Scrub [Mitigation Area]

Photo 9. Riversidean Sage Scrub

Photo 10. View of ELSP Area from Rome Hill area (southwestern boundary of ELSP area). Lake levee to the left, Riversidean Sage Scrub in the foreground, and tamarisk scrub throughout the flat area.

Photo 11. Disturbed Riversidean Sage Scrub

Photo 12. Mulefat Scrub

Photo 13. Southern Cottonwood – Willow Riparian Forest

Photo 14. Willow Scrub, Emergent Marsh, and Saltgrass Ruderal [Mitigation Area in background] in southwest-most channel surrounded by the Serenity Development.

Photo 15. Willow Scrub in the San Jacinto Channel upstream of East Lake Shore Drive [Mitigation Area]

Photo 16. Mixed Scrub in the San Jacinto Channel leading to Lake Elsinore inlet channel [Mitigation Area]

Photo 17. Ornamental Woodland

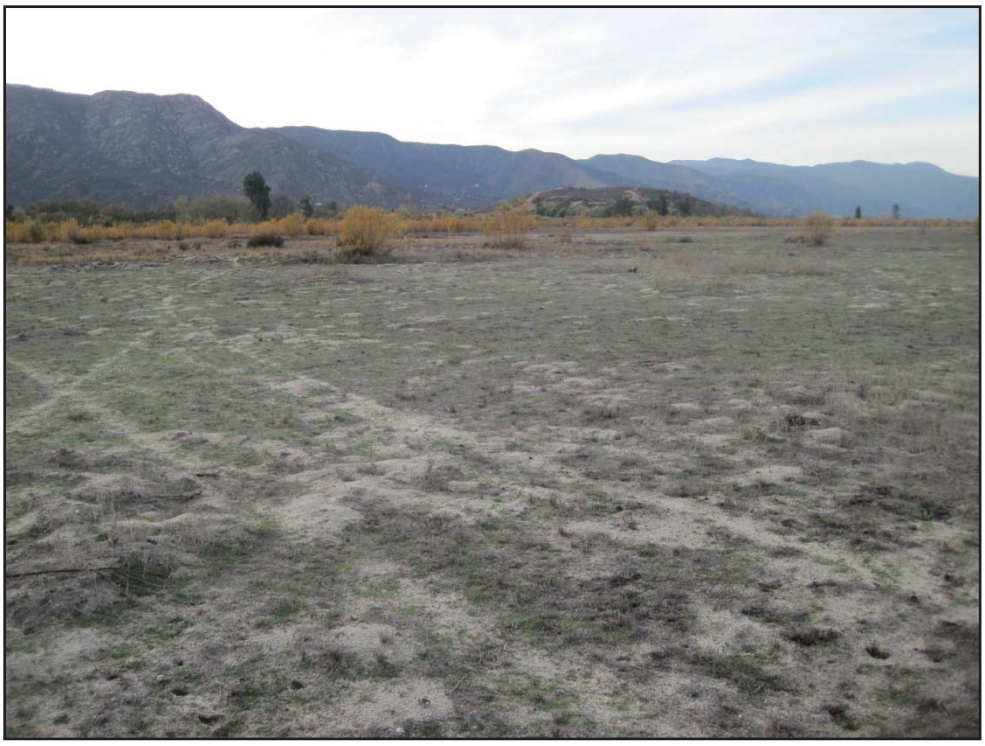


Photo 18. Ruderal (near Skydive Elsinore runway); Rome Hill in background

Photo 19. Open Water of mitigation area with surrounding Mulefat Scrub (Tamarisk Scrub in foreground) [Mitigation Area]

Photo 20. Emergent Marsh [Mitigation Area]

Photo 21. Example of a potential Vernal Pool

Photo 22. Example of wetland within ELSP area (viewing in from edge) [Mitigation Area]

APPENDIX B

Plant Species Observed within the Survey Area

Appendix B
Plant Species Observed within the Survey Area

Scientific Name	**Common Name**
Adoxaceae	**Moschatel Family**
Sambucus nigra ssp. caerulea	Mexican (blue) elderberry
Aizoaceae	**Iceplant Family**
Sesuvium verrucosum	western sea-purslane
Anacardiaceae	**Sumac Family**
Malosma laurina	laurel sumac
*Schinus molle**	pepper tree
Apocynaceae	**Dogbane Family**
*Nerium oleander**	common oleander
Arecaceae (Palmae)	**Palm Family**
*Washingtonia robusta**	Mexican fan palm
Asteraceae (Compositae)	**Sunflower Family**
Ambrosia acanthicarpa	annual bur ragweed
Ambrosia psilostachya	western ragweed
Artemisia californica	California sagebrush
Baccharis pilularis	coyote brush
Baccharis salicifolia	mule fat
Baccharis salicina	Emory baccharis
Baccharis sarothroides	broom baccharis
*Centaurea solstitialis**	yellow star thistle
Encelia farinosa	brittlebush
Erigeron canadensis	horseweed
Helianthus annuus	common sunflower
Matricaria discoidea	pineapple weed
Pluchea sericea	arrow-weed
Boraginaceae	**Borage Family**
Amsinckia menziesii	common fiddleneck
Heliotropium curassavicum	salt heliotrope
Brassicaceae (Cruciferae)	**Mustard Family**
*Brassica nigra**	black mustard
*Sisymbrium irio**	London rocket
Lepidium nitidum	shining peppergrass

Scientific Name	**Common Name**
Cactaceae	**Cactus Family**
Opuntia littoralis	coast prickly pear
Chenopodiaceae	**Goosefoot Family**
Atriplex argentea	silverscale
Atriplex canescens	four-wing saltbush
Atriplex lentiformis	big saltbush
*Bassia hyssopifolia**	five-hook bassia
*Salsola tragus**	Russian thistle (tumbleweed)
Convolvulaceae	**Morning Glory Family**
Cressa truxillensis	alkali weed
Cyperaceae	**Sedge Family**
Cyperus eragrostis	tall cyperus
Schoenoplectus californicus	southern bulrush
Euphorbiaceae	**Spurge Family**
Croton setigerus	dove weed
*Ricinus communis**	castor bean
Fabaceae	**Pea Family**
*Parkinsonia aculeata**	Mexican palo verde
Frankeniaceae	**Frankenia Family**
Frankenia salina	alkali heath
Geraniaceae	**Geranium Family**
*Erodium cicutarium**	redstem filaree
Lamiaceae (Labiatae)	**Mint Family**
*Marrubium vulgare**	common horehound
Salvia apiana	white sage
Lythraceae	**Loosestrife Family**
*Punica granatum**	pomegranate
Malvaceae	**Mallow Family**
*Malva parviflora**	cheeseweed
Malvella leprosa	alkali mallow

Scientific Name	**Common Name**
Myrtaceae	**Myrtle Family**
*Eucalyptus sp.**	eucalyptus, gum tree
Nyctaginaceae	**Four o-clock Family**
*Bougainvillea sp.**	bougainvillea
Oleaceae	**Olive Family**
*Olea europaea**	olive
Pinaceae	**Pine Family**
*Pinus sp.**	pine
Poaceae (Gramineae)	**Grass Family**
*Arundo donax**	giant reed
*Bromus diandrus**	ripgut grass
*Bromus tectorum**	cheat grass
Distichlis spicata	salt grass
*Hordeum murinum**	foxtail barley
Stipa pulchra	purple needle grass
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum	California buckwheat
*Rumex crispus**	curly dock
Salicaceae	**Willow Family**
Populus fremontii spp. fremontii	Fremont cottonwood
Salix gooddingii	black willow
Salix lasiolepis	arroyo willow
Simaroubaceae	**Quassia Family**
*Ailanthus altissima**	tree of heaven
Solanaceae	**Potato Family**
Datura wrightii	jimsonweed
*Nicotiana glauca**	tree tobacco
Tamaricaceae	**Tamarix Family**
*Tamarix sp.**	tamarisk
Typhaceae	**Cattail Family**
Typha sp.	cattail

APPENDIX C

Wildlife Species Observed/Detected Within the Survey Area

Appendix C
Wildlife Species Observed/Detected within the Survey Area

Scientific Name	**Common Name**
Reptiles	
Sceloporus occidentalis	western fence lizard
Birds	
Aeronautes saxatalis	white-throated swift
Anas clypeata	northern shoveler
Anas platyrhynchos	mallard
Aphelocoma californica	western scrub jay
Ardea alba	great egret
Ardea herodias	great blue heron
Athene cunicularia	burrowing owl
Buteo jamaicensis	red-tailed hawk
Callipepla californica	California quail
Calypte anna	Anna's hummingbird
Carpodacus mexicanus	house finch
Cathartes aura	turkey vulture
Catharus guttatus	hermit thrush
Charadrius vociferous	killdeer
Circus cyaneus	northern harrier
Corvus brachyrhynchos	American crow
Falco sparverius	American kestrel
Fulica americana	American coot
Geococcyx californianus	greater roadrunner
Geothlypis trichas	common yellowthroat
Larus delawarensis	ring-billed gull
Myiarchus cinerascens	ash-throated flycatcher
Pelecanus erythrorhynchos	American white pelican
Polioptila caerulea	blue gray gnatcatcher
Psaltriparus minimus	bushtit
Recurvirostra americana	American avocet
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe

Scientific Name	**Common Name**
Setophaga coronata	yellow-rumped warbler
Spinus psaltria	lesser goldfinch
Sturnella neglecta	western meadowlark
Tyrannus verticalis	western kingbird
Zenaida macroura	mourning dove
Zonotrichia leucophrys	white-crowned sparrow
Mammals	
Canis latrans	coyote
Canis lupus familiaris	domestic dog
Equus caballus	domestic horse
Thomomys sp.	pocket gopher
Lepus californicus bennettii	San Diego black-tailed jackrabbit
Otospermophilus beecheyi	California ground squirrel
Sylvilagus audubonii	Audubon's cottontail

APPENDIX D

Special Status Species Potential Occurrence Determination

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 Study Area. During the field surveys, the potential for special status plant species to occur within the Study 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

Scientific Name	*Common Name*	*Status*	*General Habitat Description*	*Potential for Occurrence within the Survey Area*
PLANTS				
Allium munzii	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	Moderate potential to occur; suitable habitat present.
Ambrosia pumila	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. Additional survey may be required in portions of Survey Area that fall within the NEPSSA.
Arctostaphylos rainbowensis	rainbow manzanita	CRPR: 1B.1, BLMS, FSS MSHCP: [Group 2]	It is endemic to California, where it is known only from northern San Diego and southern Riverside Counties in the Peninsular Ranges. it is most common in the chaparral of the lower elevation coastal Santa Ana Mountains, and the only manzanita species throughout most of its range. Blooming period: December to March	Very low potential to occur. No chaparral habitat onsite.
Atriplex coronata var. notatior	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. Additional surveys may be required in portions of Survey Area that fall within the CASSA
Atriplex coulteri	Coulter's saltbush	CRPR: 1B.2	It is native to coastal southern California and northern Baja California, where it is quite rare. It grows in areas of saline and alkaline soils, such as ocean bluffs. Blooming period: March to October	Low potential to occur; suitable saline/alkaline soils; however, not coastal.
Atriplex parishii	Parish's brittlescale	CRPR: 1B.1, FSS MSHCP: CASSA 2	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.	Moderate potential to occur; suitable habitat present. Additional surveys may be required in portions of Survey

Scientific Name	***Common Name***	***Status***	***General Habitat Description***	***Potential for Occurrence within the Survey Area***
			Elevation: 25 - 1900 meters Blooming Period: June to October	Area that fall within the CASSA
Atriplex serenana var. davidsonii	Davidson's saltscale	CRPR: 1B.2 MSHCP: CASSA 2	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. Additional surveys may be required in portions of Survey Area that fall within the CASSA.
Ayenia compacta	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 Mojavean desert scrub and Sonoran desert scrub. Blooming period: March to April	Very low potential to occur; no suitable habitat present.
Brodiaea filifolia	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	Low potential due to limited presence of clay soils. Additional surveys may be required in portions of Survey Area that fall within the CASSA
Brodiaea orcuttii	Orcutt's brodiaea	CRPR: 1B.1, BLMS, FSS MSHCP: [Group 3]	Perennial bulbiferous herb native to California and Baja California. Habitat includes mesic, clay, sometimes serpentinite soil, closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools. Seriously threatened by development, foot traffic, grazing, non-native plants, military activities, vehicles, road construction, road maintenance, and dumping. Elevation: 30 - 1692 meters Blooming Period: May to July	Moderate potential to occur onsite; suitable habitat present.
Brodiaea santarosae	Santa Rosa Basalt brodicaea	CRPR: 1B.2, FSS	Found only on basalt soils in areas currently or recently covered by the Santa Rosa Basalt of southwest Riverside County and a neighboring small part of San Diego County. It is the rarest of the southern California *Brodiaeas*. Blooming period: May to June	Very low potential; due to lack of basalt soils.
California macrophyla	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	Very low potential due to lack of clay soils. Additional surveys may be required in portions of

Scientific Name	***Common Name***	***Status***	***General Habitat Description***	***Potential for Occurrence within the Survey Area***
			Blooming period: March to May	Survey Area that fall within the CASSA.
Calochortus catalinae	Catalina mariposa lily	CRPR: 4.2	The bulb is endemic to Southern California. It is native along the coastline in grasslands and open chaparral and woodlands habitats, especially on the Channel Islands and in the Santa Monica Mountains. Blooming period: March to June	Low potential; suitable habitat but not located on the coastline.
Calochortus plummerae	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	Moderate potential; suitable habitat present.
Carex buxbaumii	Buxbaum's sedge	CPRP: 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	Low to moderate potential; suitable habitat located in isolated areas within the survey area.
Centromadia pungens ssp. laevis	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 the Survey Area and in the immediate vicinity. Additionally, mitigation for smooth tarplant occurred within the seasonal pool area in the past.
Chorizanthe leptotheca	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	Low potential to occur; Riversidean sage scrub present in isolated areas within the

Scientific Name	*Common Name*	*Status*	*General Habitat Description*	*Potential for Occurrence within the Survey Area*
			lost to development; also threatened by non-native grasses. Elevation: 300 - 1900 meters Blooming Period: May to August	survey area.
Chorizanthe parryi var. parryi	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	Low potential to occur; limited area of alluvial scrub present in survey area.
Chorizanthe polygonoides var. longispina	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	Low potential to occur due to limited presence of clay soils within the survey area. Most of the clay soil is now developed.
Clinopodium chandleri	San Miguel savory	CRPR: 1B.2, BLMS, FSS	Perennial shrub native to California and Baja California. Habitat includes rocky, gabbroic or metavolcanic substrates, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Threatened by residential development, foot traffic, agriculture, and recreational activities. Possibly threatened by horticultural collecting. Elevation: 120 - 1075 meters Blooming Period: March to July	Low potential to occur due to limited presence of suitable soils onsite. Most of the clay soil is now developed.
Convolvulus simulans	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	Low potential to occur due to limited presence of clay soils within the survey area. Most of the clay soil is now developed.
Deinandra paniculata	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.

Scientific Name	***Common Name***	***Status***	***General Habitat Description***	***Potential for Occurrence within the Survey Area***
Dodecahema leptoceras	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 alluvial scrub. Elevation: 200 - 700 meters Blooming period: April to June	Low to moderate potential; suitable habitat present. CNDDB occurrence within survey area was last updated in 1979 and noted as extirpated.
Dudleya multicaulis	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	Low potential to occur due to limited presence of clay soils within the survey area. Most of the clay soil is now developed.
Eriastrum densifolium ssp. sanc torum	Santa Ana River woollystar	FE, SE, CRPR: 1B, MSHCP: Group 3	This plant is found only within open washes and early-successional alluvial fan scrub on open slopes above main watercourses on fluvial deposits where flooding and scouring occur at a frequency that allows the persistence of open shrublands. Elevation: Below 500 meters Blooming period: May to September	Low potential to occur due to lack of early successional alluvial fan scrub.
Eryngium aristulatum var. parishii	San Diego button-celery	FE, SE CRPR: 1B.1 MSHCP: Group 3	This species occurs within southwestern California and northwestern Baja California, Mexico. San Diego button-celery occurs only in vernal pools with clay soils. Blooming period: April to June	Low potential to occur due to limited presence of clay soils within the survey area. Most of the clay soil is now developed.
Geothallus tuberosus	Campbell's liverwort	CRPR: 1B.1	It is endemic to California, where it is known only from San Diego and Riverside Counties. This liverwort grows in moist coastal scrub habitat and vernal pools.	Low potential to occur due to lack of moist coastal scrub habitat and limited vernal pools.
Harpagonella palmeri	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	Low potential to occur due to limited presence of clay soils within the survey area. Most of the clay soil is now developed.
Hesperocyparis forbesii	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,	Very low potential to occur onsite due to lack of suitable

Scientific Name	*Common Name*	*Status*	*General Habitat Description*	*Potential for Occurrence within the Survey Area*
			low forest that forms even-aged stands surrounded by a matrix of chaparral. Elevation: 450 – 1500 meters	habitat.
Holocarpha virgata	graceful tarplant	CRPR: 4.2 MSHCP: Group 2	This plant is endemic to Orange County, Riverside County and San Diego County. It is known from heavy clay soils around vernal pools and wet meadows. Elevation: Below 900 meters Blooming period: July to November	Low potential to occur due to limited presence of clay soils within the survey area. Most of the clay soil is now developed.
Hordeum intercedens	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.
Juglans californica	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	Low potential to occur; suitable habitat present. Likely would have been observed during 2016 surveys.
Juncus luciensis	Santa Lucia dwarf rush	CRPR: 1B.2, FSS	Habitat includes chaparral, great basin scrub, lower montane coniferous forest, meadows and seeps, and vernal pools. Blooming period: April to July	Low potential to occur; limited suitable habitat present.
Lasthenia glabrata ssp. coulteri	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, 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	Low to moderate potential to occur; suitable habitat (including Traver soils) present. CNDDB occurrence within survey area was from the 1920's. Additional surveys may be required in portions of Survey Area that fall within the CASSA.

Scientific Name	***Common Name***	***Status***	***General Habitat Description***	***Potential for Occurrence within the Survey Area***
Lilium parryi	lemon lily	CRPR: 1B.2, FSS MSHCP: [Group 2]	Typical habitat consists of forested, shady stream banks within narrow canyon bottoms. Lemon lily requires moisture year-round and the distribution of this species is limited to the banks of seeps, springs and permanent streams. Elevation: Above 1,300 meters Blooming period: July and August	Very low potential due to lack of suitable habitat (i.e. year-round moisture in seeps, springs, and permanent streams higher than 1,300 m).
Limnanthes alba ssp. parishii	Parish's meadowfoam	SE, BLMS, FSS CRPR: 1B.2 MSHCP: [Group 3]	This species is endemic to San Diego and Riverside Counties. Parish's meadowfoam is limited to ephemeral wetlands in the mountains of southern California. It occurs on gentle slopes or in swales, in forest glades, among mima mounds and in areas likely to be inundated. Elevation: 600 to 1,700 meters Blooming period: April to May	Low potential to occur; survey area is lower than the typical elevational range of the species.
Monardella hypoleuca ssp. intermedia	intermediate monardella	CRPR: 1B.3	Occurs in wetlands in another region, but occurs almost always under natural conditions in non- wetlands in California. Typically occurs in chaparral, oak woodland, occasionally conifer forest, dry slopes. Blooming period: June to August	Very low potential to occur due to lack of suitable habitat.
Myosurus minimus ssp. apus	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 similar habitat adjacent to northern portion of the survey area. Additional surveys may be required in portions of Survey Area that fall within the CASSA.
Navarretia fossalis	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	Moderate potential to occur; suitable habitat present. Additional surveys may be required in portions of Survey Area that fall within the NEPSSA.
Navarretia prostrata	prostrate vernal pool navarretia	CRPR: 1B.1 MSHCP: [Group 3]	Prostrate spineflower is found in sandy soil, often in association with sandy barrens and sandy openings in chamise	Moderate potential to occur; suitable habitat present.

Scientific Name	***Common Name***	***Status***	***General Habitat Description***	***Potential for Occurrence within the Survey Area***
			chaparral, coastal sage scrub, and occasionally grasslands. Blooming period: April to July	
Orcuttia californica	California Orcutt grass	FE, SE, CRPR: 1B.1 MSHCP: NEPSSA 2 [Group 3]	All known Californica Orcutt grass localities are associated with vernal pools. Blooming period: April to August.	Moderate potential to occur; suitable habitat present. Additional surveys may be required in portions of Survey Area that fall within the NEPSSA.
Polygala cornuta var. fishiae	Fish's milkwort	CRPR: 4.3 MSHCP: [Group 2]	Perennial deciduous shrub native to California and Baja California. Habitat includes chaparral, cismontane woodland, and riparian woodland. Elevation: 100 - 1000 meters Blooming Period: May to August	Low potential to occur due to limited presence of suitable habitat (i.e. riparian woodland) within the survey area.
Romneya coulteri	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. It is a popular ornamental plant, kept for its large, showy flowers. Blooming period: March to July	Low potential to occur due to limited presence of suitable habitat (i.e. Riversidean sage scrub) within the survey area.
Scutellaria bolanderi ssp. austromontana	southern mountains skullcap	CRPR: 1B.2, FSS	This plant grows in mid- to late-successional forests dominated by oaks and pine trees. The soil is acidic, rocky, and shallow, sometimes as shallow as 3 centimeters. It is dry to somewhat moist in the habitat. Blooming period: June to August	Very low potential to occur due to lack of suitable habitat.
Sibaropsis hammittii	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	Low potential to occur due to limited presence of clay soils within the survey area. Most of the clay soil is now developed. Additional surveys may be required in portions of Survey Area that fall within the NEPSSA
Sidalcea neomexicana	salt spring checkerbloom	CRPR: 2B.2, FSS	It can be found in a diverse number of habitat types including chaparral and coastal sage scrub, Yellow Pine Forest, and riparian zones, creosote bush scrub, and alkali flats and other salty substrates. Blooming period: March to June	Moderate potential to occur; suitable habitat present.

Scientific Name	***Common Name***	***Status***	***General Habitat Description***	***Potential for Occurrence within the Survey Area***
Sphaerocarpos drewei	bottle liverwort	CRPR: 1B.1	This liverwort grows in shady spots in coastal sage scrub habitat. It is associated with another rare endemic liverwort, *Geothallus tuberosus*. Much of its habitat is near urbanized areas and it is threatened with habitat loss.	Low potential to occur due to limited presence of suitable habitat (Riversidean sage scrub) within the survey area.
Symphyotrichum defoliatum	San Bernardino aster	CRPR: 1B.2, BLMS, FSS	This plant grows near ditches, streams, springs, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic). Blooming period: July to November	Moderate potential to occur; suitable habitat present.
Tortula californica	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.
Trichocoronis wrightii var. wrightii	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. Additional surveys may be required in portions of Survey Area that fall within the NEPSSA
ANIMALS				
Invertebrates / Crustaceans				
Branchinecta lynchi	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.	Moderate potential to occur; suitable habitat located within survey area.
Streptocephalus woottoni	Riverside fairy shrimp	FE MSHCP: Elsinore Subunit PS [Group 3]	*S. wootoni* is restricted to deep (greater than 12" in depth) seasonal vernal pools, vernal pool like ephemeral ponds, and stock ponds and other human modified depressions.	Moderate potential to occur; suitable habitat located within survey area and previously documented CNDDB occurrence within the survey area. Most seasonal pools/depressions observed were not of suitable depth.
Invertebrates / Insects				
Euphydryas editha quino	quino checkerspot	FE MSHCP: Elsinore	Each phase has distinct habitat requirements. Habitat associations seem to be tied to both host plant species and	Very low to low potential to occur due to general lack of

Scientific Name	*Common Name*	*Status*	*General Habitat Description*	*Potential for Occurrence within the Survey Area*
	butterfly	Subunit PS [Group 3]	topography. Larvae feed immediately upon *Plantago erecta*, *Plantago patagonia, Antirrhinum coulterianum*, *Cordylanthus rigidus* and possibly other *Plantago* species and *Collinsia concolor*, and *Castilleja exserta*. After diapause, the larvae feed again on *Plantago erecta* 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.	suitable habitat. Limited Riversidean sage scrub along the southwestern portion of the survey area is not ideal habitat mostly lacking open canopy.
Amphibians				
Anaxyrus californicus	arroyo toad	FE, SSC MSHCP: [Group 3]	Arroyo toads are found in foothill canyons and inter-mountain valleys where the river is bordered by low hills and the stream gradient is low. Extremely specialized habitat needs, including exposed sandy streamsides with stable terraces for burrowing with scattered vegetation for shelter, and areas of quiet water or pools free of predatory fishes with sandy or gravel bottoms without silt for breeding. Arroyo toads are known to either breed, forage, and/or aestivate in aquatic habitats, riparian, coastal sage scrub, oak, and chaparral habitats. Inhabits washes, arroyos, sandy riverbanks, riparian areas with willows, sycamores, oaks, cottonwoods.	Very low potential to occur due to lack of suitable habitat.
Rana aurora draytonii	California red-legged frog	FT, SSC MSHCP: [Group 3]	The California red-legged frog inhabits lowland streams, wetlands, riparian woodlands, and livestock ponds. The species may also occur in uplands near breeding areas and along intermittent drainages connecting wetlands.	Low to moderate potential to occur; suitable habitat present however wetlands are often dry and moist refuges are not plentiful.
Scaphiopus hammondii	western spadefoot toad	SSC, FSS MSHCP: [Group 2]	This species may be found in coastal sage scrub, chaparral, and grasslands habitats, but is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas.	Moderate potential to occur; suitable habitat present within survey area.
Taricha torosa torosa	Coastal Range	SSC	The species can be found in coastal areas and coastal range	Low potential to occur;

Scientific Name	*Common Name*	*Status*	*General Habitat Description*	*Potential for Occurrence within the Survey Area*
	newt	MSCHP: [Group 3]	mountains in oak forests, woodlands, or rolling grasslands. In the terrestrial phase they live in moist to dry habitats under woody or leafy debris, in rock crevices, and in animal burrows. In the aquatic phase they are found in ponds, reservoirs, lakes and slow-moving streams.	somewhat suitable habitat present (woodland) in limited areas within survey area.
Reptiles				
Aspidoscelis hyperythra	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; suitable habitat (Riversidean sage scrub) present in limited area.
Emys marmorata	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.	Low potential to occur; suitable habitat limited to open water and adjacent areas.
Crotalus ruber	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.	Moderate potential to occur; suitable habitat present within survey area.
Phrynosoma blainvillii	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.
Salvadora hexalepis virgultea	coast patch-nosed snake	SSC	Habitat includes semi-arid brush areas, canyons, rocky hillsides, and plains.	Moderate potential to occur; suitable habitat present within survey area.
Thamnophis hammondii	two-striped gartersnake	SSC, FSS	Highly aquatic species; prefer habitat adjacent to permanent or semi-permanent bodies of water.	Low potential to occur; suitable habitat limited to areas adjacent to open water within survey area.
Birds				
Accipiter cooperii	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	Moderate potential to occur; suitable habitat within survey

Scientific Name	***Common Name***	***Status***	***General Habitat Description***	***Potential for Occurrence within the Survey Area***
			feeders, and even along busy streets if there are trees around.	area.
Aimophila ruficeps canescens	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 to moderate potential to occur; suitable habitat generally limited to Riversidean sage scrub habitat within southwestern portion of study area.
Aquila chrysaetos	golden eagle	WL, FP, BCC, BLMS MSHCP: [Group 2]	Range-wide, golden eagles occur locally in open country (*e.g.,* tundra, open coniferous forest, desert, barren areas), especially in hills and mountainous regions.	Low potential to occur; suitable foraging habitat present.
Artemisiospiza belli belli	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 throughout most of its range.	Low potential to occur; suitable habitat is generally lacking within the survey area. The shrub habitats (Riverside sage scrub) are not typically semi-open.
Athene cunicularia	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.	Present. Two burrowing owls were observed during the 2016 surveys. Suitable habitat is present throughout the survey area.
Botaurus lentiginosus	American bittern	MSHCP: Elsinore Subunit PS [Group 2]	They are usually found in shallow freshwater marshes, typically toward the margins and among reeds and other vegetation; they are rarely out in the open.	Low to moderate potential to occur; suitable habitat present, particularly during wet years when water and marsh habitat are more abundant.
Charadrius alexandrinus nivosus	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.	Low potential to occur due to suitable habitat limited to lake Elsinore inlet/edges and lack of recent observation (CNDDB occurrence within survey area from 1970s).
Charadrius montanus	mountain plover	SSC, BLMS, BCC MSHCP: Elsinore Subunit PS [Group 3]	A native of the short-grass prairie, the mountain plover is a dull-colored shorebird of open, dry areas. Despite its name, it breeds in the high tablelands, not the mountains. Breeds on	Moderate potential to occur; suitable habitat present within the survey area.

Scientific Name	*Common Name*	*Status*	*General Habitat Description*	*Potential for Occurrence within the Survey Area*
			open plains at moderate elevations. Winters in short-grass plains and fields, plowed fields, and sandy deserts.	
Circus cyaneus	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.	Present; observed onsite during 2016 survey.
Elanus leucurus	white-tailed kite	FP, BLMS MSHCP: Elsinore Subunit PS [Group 2]	Inhabits riparian thickets of willow & other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	Moderate potential to occur; suitable habitat present within the survey area.
Empidonax traillii extimus	southwestern willow flycatcher	FE, SE, MSHCP: Elsinore Subunit PS [Group 3]	The southwestern willow flycatcher is present in breeding territories by mid-May. It builds nests and lays eggs in late May and early June and fledges young in early to mid-July. Between August and September, the southwestern willow flycatcher migrates to wintering grounds in Mexico, Central America, and possibly northern South America. This species is an insectivore and forages within and above dense riparian vegetation. The breeding range of the species includes southern California. The southwestern willow flycatcher breeds in relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands including lakes and reservoirs. Habitat patches must be at least 0.25 ac in size and at least 30 feet wide. Following modern changes to riparian communities, this subspecies still nests in native vegetation, but also uses thickets dominated by non-native tamarisk and Russian olive, or in mixed native non-native stands.	Moderate potential to occur; suitable habitat present with the wetlands and other dense woodland vegetation within the survey area.
Eremophila alpestris actia	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 a number of surveys within the survey area.
Icteria virens	yellow-breasted chat	SSC MSHCP: [Group 2]	Yellow-breasted chats in southern California and within the Plan Area are primarily found in dense, relatively wide riparian	Low to moderate potential to occur; suitable habitat present

Scientific Name	***Common Name***	***Status***	***General Habitat Description***	***Potential for Occurrence within the Survey Area***
			woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds.	and limited to the willow scrub and woodland habitat within the survey area.
Lanius ludovicianus	loggerhead shrike	SSC, BCC MSCHP: 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 survey area.
Nycticorax nycticorax	black-crowned night heron	MSHCP: Elsinore Subunit PS [Group 2]	The black-crowned night heron is likely to use shallow bulrush (*Scirpus* spp.) or cattail (*Typha* spp.) marshes, most often within a grassland landscape. In addition, they will also nest in cottonwoods, willows, or other wetland vegetation.	High potential to occur; suitable habitat present and multiple past recent occurrences documented within the 25-acre Summerly mitigation site.
Pandion haliaetus	osprey	WL MSHCP: Elsinore Subunit PS [Group 3]	The species are found near any body of water: saltmarshes, rivers, ponds, reservoirs, estuaries, and even coral reefs. Their conspicuous stick nests are placed in the open on poles, channel markers, and dead trees, often over water.	Moderate potential to occur; suitable habitat present within the survey area.
Pelecanus erythrorhynchos	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.	Present; observed flying over the Survey Area.
Phalacrocorax auritus	double-crested cormorant	WL MSHCP: Elsinore Subunit PS [Group 2]	They are frequently seen in freshwater. They breed on the coast as well as on large inland lakes. They form colonies of stick nests built high in trees on islands or in patches of flooded timber.	Moderate potential to occur; suitable habitat present within the survey area.
Plegadis chihi	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.	Low to moderate potential to occur; suitable habitat present within the survey area, particularly in wet years when wetlands are full of water.
Polioptila californica	coastal California	FT, SSC	Obligate, permanent resident of coastal sage scrub below 835	Moderate potential to occur;

Scientific Name	*Common Name*	*Status*	*General Habitat Description*	*Potential for Occurrence within the Survey Area*
californica	gnatcatcher	MSHCP: [Group 2]	meters in Southern California. Low, coastal sage scrub in arid washes, on mesas & slopes. Not all areas classified as coastal sage scrub are occupied.	suitable habitat is generally limited to the Riversidean sage scrub habitat in the south-western portion of the survey area and CNDDB occurrence within this habitat in the survey area.
Vireo bellii pusillus	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.	Moderate to high potential to occur; suitable habitat present within the survey area particularly willow scrub, mulefat scrub, and other riparian associated habitats and previously documented CNDDB occurrences within and near the survey area.
Mammals				
Chaetodipus fallax fallax	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 to moderate potential to occur; suitable habitat generally limited to the Riversidean sage scrub habitat within the survey area.
Dipodomys stephensi	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.	Moderate potential to occur; suitable habitat within the survey area.
Lepus californicus bennettii	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.	Present; observed during 2016 surveys. Observed during 1997-98 and 2003 surveys on Summerly project site.
Lynx rufus	bobcat	MSHCP: Elsinore Subunit PS [Group 2]	Although widespread throughout Riverside County, the bobcat is most closely associated with rocky and brushy areas near springs or other perennial water sources, primarily in foothills comprised of chaparral habitats. Bobcats prefer areas with adequate cover in the form of rock cavities, snags, stumps and dense brush.	Low to moderate potential to occur; some suitable habitat located within the survey area in areas of dense brush and near water sources.

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.
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 CPRP). 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)

APPENDIX E:

Lake Elsinore Back Basin
Permitting Fact Sheet

LAKE ELSINORE BACK BASIN PERMITTING FACT SHEET

The Lake Elsinore Back Basin is regulated under the western Riverside Multiple Species Habitat Conservation Plan (MSHCP), the California Department of Fish & Wildlife (DFW), the U.S. Army Corps of Engineers (ACOE) and the Santa Ana Regional Water Quality Control Board (RWQCB). All projects in the Back Basin must comply with the following conditions:

MSHCP

All projects in the Back Basin must contribute to the open space criteria identified in the MSHCP by dedicating a portion of the site as habitat conservation/open space. This area can be utilized as mitigation for CEQA, biological, and regulatory permits.

DFW

DFW has jurisdiction over the Back Basin at or under elevation 1265' MSL. Any ground disturbance/ vegetation removal requires a Section I 602 Streambed Alteration Agreement from DFW and may also require a Section 401 Water Quality Certification from RWQCB. The owner should submit a notification; Go to:
http://www.dfg.ca.gov/habcon/1600/forms.html
This link will bring you to the Lake and Streambed Alteration Program site and will provide the notification instruction, forms, fee schedule, and general Q&A.

ACOE

ACOE has jurisdiction over the Back Basin at or under elevation 1246' MSL (ordinary high water mark) and 1260' MSL (flood storage volume);

At or under elevation I 260' MSL an applicant must:

- ☐ Submit to the City for plan check review and approval a HEC-5 analysis and grading plans demonstrating no loss of flood storage capacity in the Back Basin (as described in more detail on page 2).

- ☐ Submit a HEC-5 analysis and grading plans review and written approval to the
  - Elsinore Valley Municipal Water District (EMVWD)
  - Riverside County Flood Control and Water Conservation District
  - Army Corps of Engineers
  - Bureau of Reclamation
  - CA Department of Fish and Wildllife

- ☐ All applicants must provide proof of an archaeological and paleontological monitor to oversee grading. The monitors must have authority to halt work and notify the City if resources are discovered. Monitoring logs must be submitted to the City upon completion of grading.

- ☐ The applicant shall obtain and provide to the City prior to project approval, written approval from the ACOE that the project is consistent with the Lake Management Plan Section 404 Permit, including the preservation of the 356-acre Wetlands Mitigation Area and the Wetland Areas described in the permit.

At or under elevation 1246' MSL an applicant must:

☐ Secure a Section 404 Permit from ACOE and a Section 401 Water Quality Certification from CA Regional Water Quality Control Board.

Please contact the Engineering Division at 951-674-3124 x241 or cityhall@lake-elsinore.org with any questions.

LAKE ELSINORE

BACK BASIN
PERMITTING FACT SHEET

HEC - 5 & Grading Plan Requirements:

Applicants must submit HEC-5 and Grading Plans to the City pursuant to the following:

☐ The HEC-5 period of record analysis must be consistent with the HEC-5 analysis of the Outlet Channel design with a maximum 100 year flood elevation of 1263.3 ft. MSL, an overflow weir height of 1262 ft. MSL and an operating lake level of I 240 ft. MSL;

☐ Grading plans must demonstrate that:

- the flood storage capacity of 30,735 acre-feet is maintained in the Back Basin;
- adequate conveyance of the 45-100 year flood is maintained, and
- the project will not impact the hydrology to the 356-acre wetlands.

☐ All outfalls discharging into wetland areas can only discharge 50 year storm events with no urban or toxic runoff. No outfalls can directly discharge into wetland areas.

☐ A jurisdictional delineation must accompany grading plans for projects located at or below elevation 1246. This must be reviewed and approved by the ACOE.

FEMA

☐ Lowest floor elevation of structures shall, at a minimum, be at 1267’

☐ Applicant shall process through FEMA a CLOMR/LOMR or CLOMR-F/LOMR-F. The CLOMR/CLOMR-F shall be processed with written approval from FEMA provided to the City prior to project approval.

☐ Applicant shall not import fill dirt from outside the lake area bounded by Riverside Drive, Mission Trail, Corydon Street and Grand Avenue.