



## Route 66 (Gem Ranch) Shooting Sports Park Biological Resources Report

15810 Cajon Blvd. San Bernardino, California

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## 1 SUMMARY

This report presents the results of the general biological assessment that Rocks Biological Consulting (RBC) conducted for the Gem Ranch Development Project (project) in the City of San Bernardino, California. The 88.5-acre project site is composed of two parcels that contain mostly disturbed habitat and developed vegetation with surrounding native habitat. The site has very low or no potential to support special-status species such as the state and federally-listed as endangered southwestern willow flycatcher (*Empidonax traillii extimus*; SWFL), the state-listed as endangered arroyo toad (*Anaxyrus californicus*) and San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR), and the California Department of Fish and Wildlife (CDFW) species of special concern burrowing owl (*Athene cunicularia*; BUOW). The site supports a creek bed that would be considered jurisdictional by the US Army Corps of Engineers (Corps), Santa Ana Regional Water Quality Control Board (RWQCB), and/or CDFW. Impacts to biological resources will be less than significant with implementation of the suggested mitigation measures outlined in this report.

## 2 INTRODUCTION

### 2.1 PROJECT LOCATION AND BACKGROUND

The 88.5-acre project parcel [APNs 0350-071-01; 0350-071-34] is an active ranch and gun range located in the City of San Bernardino, County of San Bernardino, California. The site is located north and east of Cajon Boulevard and west of Interstate 15 (I-15) (Figure 1). The project is located on the U.S. Geological Survey (USGS) 7.5' quadrangle (quad) maps Cajon and Devore, Township 02N, Range 05W, Section 13. The north, east and west boundaries of the project site are bordered by undeveloped land, and the southern boundary is bordered by Historic Route 66 (Cajon Boulevard) and the Cajon wash (drainage). There is an electric transmission tower on the western portion of the project site.

### 2.2 PROJECT DESCRIPTION

The project will include the expansion and upgrade of the existing shooting range into a shooting sports complex. The expansion of the existing handgun and rifle ranges on the eastern side of the project will include the installation of 40 firing bays of various width, depth and length which will be constructed using existing earth and concrete block dividers. The bullet impact area will be at the base of the eastern hillside. The impact area will be mined to remove metal objects and projectiles every two years.

Shotgun facilities will be located on the west side of the property. The facilities will consist of 20-30 shooting stations. An archery range will be located on the center of the property, between the handgun-rifle range and shotgun sporting-clay area. The proposed project will also include the construction of small structures for development of the complex, including an office building and a new road leading to designated parking areas. The newly paved road will reroute an existing drainage that runs from the center of the property to Cajon Boulevard.

### 2.3 EXISTING CONDITIONS

The project site is located at an elevation ranging between 2,500 and 2,680 feet above mean sea level (amsl). The existing shooting range at Gem Ranch is composed of disturbed, dirt roads and ornamental vegetation that lead to various sections of the

shooting complex. Existing structures on site include houses in the center of the project site and existing shotgun range structures in the west.

Native habitat on site consists mainly of southern mixed chaparral and alluvial fan scrub in the east, and chamise chaparral in the northwest. A creek bed runs north to south at the base of the southern mixed chaparral hillside on the eastern side of the project. This creek conveys water through alluvial fan scrub habitat and continues under Cajon Boulevard into the Cajon Wash to the south.

## **2.4 REGULATORY FRAMEWORK**

This report identifies and evaluates impacts on biological resources associated with the proposed project in the context of County of San Bernardino Land Use regulations, the California Environmental Quality Act (CEQA), and state and federal regulations, such as the Endangered Species Act (ESA), Clean Water Act (CWA), and the California Fish and Game Code (CFGC).

Federal, state, and local agencies have established several regulations to protect and conserve biological resources. The descriptions below provide an overview of the agency regulations that may be applicable to the project. The final determination as to what types of permits are required will be made by the regulating agencies.

### **2.4.1 FEDERAL REGULATIONS**

#### ***Federal Endangered Species Act***

The federal ESA of 1973, as amended, provides for the listing of endangered and threatened species of plants and animals and the designation of critical habitat for these listed species. ESA regulates the “taking” of any endangered fish or wildlife species, per Section 9. As development is proposed, the responsible agency or individual landowner is required to consult with the U.S. Fish and Wildlife Service (USFWS) to assess potential impacts on listed species (including plants) or the critical habitat of a listed species, pursuant to Sections 7 and 10 of the ESA. USFWS is required to determine the extent a project would impact a particular species. If USFWS determines that a project is likely to potentially impact a species, measures to avoid or reduce such impacts must be identified. Following consultation and the issuance of a Biological Opinion, USFWS may issue an incidental take statement which allows for the take of a species if it is incidental to another authorized activity and will not adversely affect the existence of the species. Section 10 of the ESA provides for issuance of incidental take permits to non-federal parties in conjunction with the development of a habitat conservation plan (HCP); Section 7 of the ESA provides for permitting of projects requiring federal permits.

#### ***Migratory Bird Treaty Act***

The Migratory Bird Treaty Act (MBTA; 16 U.S. Code [U.S.C.] 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed at 50 CFR 10.13. USFWS enforces the MBTA and prohibits “by any means or in any manner, to pursue, hunt, take, capture, [or] kill” any migratory bird, or attempt such actions, except as permitted by regulation.

#### ***Rivers and Harbors Act of 1899***

The Rivers and Harbors Act of 1899 prohibits the discharge of any material into navigable waters of the United States, or tributaries thereof, without a permit. The act also makes it a

misdemeanor to excavate, fill, or alter the course, condition, or capacity of any port, harbor, or channel, or to dam navigable streams without a permit.

Many activities originally covered by the Rivers and Harbors Act are now regulated under the CWA of 1972, discussed below. However, the 1899 act retains relevance and created the structure under which the Corps oversees permitting under CWA Section 404.

### ***Clean Water Act***

Pursuant to Section 404 of the CWA, Corps is authorized to regulate any activity that would result in the discharge of dredged or fill material into waters of the U.S., including wetlands and those waters listed in 33 CFR 328.3. Corps, with oversight from the U.S.

Environmental Protection Agency (EPA), has the principal authority to issue CWA Section 404 permits.

A water quality certification or waiver pursuant to Section 401 of the CWA is required for all Section 404 permitted actions. The Regional Water Quality Control Boards (RWQCBs), divisions of the State Water Resources Control Board, provide oversight of the 401-permit process in California. The RWQCBs are required to provide “certification that there is reasonable assurance that an activity that may result in the discharge to waters of the United States will not violate water quality standards.” Water Quality Certification must be based on the finding that a proposed discharge will comply with applicable water quality standards.

The National Pollutant Discharge Elimination System (NPDES) permit program regulates discharge of pollutants into surface waters of the U.S. under Section 402 of the CWA. Under the permit program, a project causing substantial impacts on wetlands may require an Individual Permit whereas those projects only minimally affecting wetlands may meet the conditions of one of the existing Nationwide Permits.

## **2.4.2 STATE REGULATIONS**

### ***State of California Endangered Species Act***

The California Endangered Species Act (CESA) of 1984, in combination with the California Native Plant Protection Act of 1977, regulates the listing and take of plant and animal species designated as endangered, threatened, or rare within the state. California also lists species of special concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. The CESA defines an endangered species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.” The CESA defines a threatened species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species.” Candidate species are defined as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.” Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion

of the Fish and Game Commission. Unlike the federal ESA, the CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085 of the CESA address the taking of threatened, endangered, or candidate species by stating “no person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided.” Under the CESA, “take” is defined as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Exceptions authorized by the state to allow “take” require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the CFGC provide that notification is required prior to disturbance. CDFW is responsible for assessing development projects for their potential to impact listed species and their habitats. State-listed special-status species are addressed through the issuance of a 2081 permit (Memorandum of Understanding).

#### ***California Environmental Quality Act***

CEQA was established in 1970 as California’s counterpart to the National Environmental Policy Act (NEPA). This statute requires state and local agencies to identify significant environmental impacts related to their actions and to avoid or mitigate those impacts, where feasible.

A public agency must comply with CEQA when it undertakes an activity defined by CEQA as a “project.” A project is an activity undertaken by a public agency or a private activity that must receive some discretionary approval (meaning that the agency has the authority to deny the requested permit or approval) from a government agency that may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment.

#### ***Natural Community Conservation Planning Act***

In 1991, the California Natural Community Conservation Planning (NCCP) Act was approved and the NCCP Coastal Sage Scrub program was initiated in Southern California. California law (CFGC Section 2800 et seq.) established the NCCP program “to provide for regional protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and growth.” The NCCP Act encourages preparation of plans that address habitat conservation and management on an ecosystem basis rather than one species or habitat at a time.

#### ***California Fish and Game Code Sections 1600-1602***

Pursuant to Division 2, Chapter 6, Section 1602 of the CFGC, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats associated with watercourses. These jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes whichever is wider. CDFW jurisdiction does not extend to tidal areas or isolated resources. A Lake or Streambed Alteration Agreement Application must be submitted to CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” CDFW reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected

fish and wildlife resources. The final proposal that CDFW and the applicant mutually agree upon is termed the Lake or Streambed Alteration Agreement.

***California Fish and Game Code Sections 3503, 3511, 3513, 3800, 4700, 5050, and 5515***

Within California, fish, wildlife, and native plant resources are protected and managed by CDFW. The California Fish and Game Commission and/or CDFW are responsible for issuing permits for the take or possession of protected species. The following sections of the CFGC address protected species: Section 3511 (birds), Section 4700 (mammals), Section 5050 (reptiles and amphibians), and Section 5515 (fish). In addition, the protection of birds of prey is provided for in Sections 3503, 3513, and 3800 of the CFGC.

***Porter-Cologne Water Quality Control Act***

The Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.) provides for statewide coordination of water quality regulations through establishment of the State Water Resources Control Board (WRCB) which serves as the statewide authority and nine separate RWQCBs which oversee water quality on a day-to-day basis.

The WRCB is the primary agency responsible for protecting water quality in California. As discussed above, the WRCB regulates discharges to surface waters under the CWA and is responsible for administering the Porter-Cologne Water Quality Control Act.

Pursuant to the Porter-Cologne Water Quality Control Act, the state is given authority to regulate waters of the state, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body must first file a Report of Waste Discharge if the discharge could affect the water quality of the water body and Section 404 of the CWA is not applicable. "Waste" is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

### **2.4.3 REGIONAL AND LOCAL PLANS**

***County of San Bernardino Land Use Services, Planning Division***

According to the County's Biotic Resources Overlay Map the project site is located within the arroyo Toad, San Bernardino Kangaroo Rat, Southwestern Willow Flycatcher, and Burrowing Owl Overlay Zones (County of San Bernardino 2012). The southwestern willow flycatcher is federally and state listed as endangered. The arroyo toad and the San Bernardino kangaroo rat are state listed as endangered, and the burrowing owl is listed as a species of special concern (SSC) by CDFW.

## **3 METHODS**

RBC biologists Jim Rocks, Ian Hirschler, and Chris Thomson conducted a field study on January 29, 2018 to assess the project for significant biological resources pursuant to CEQA, including conducting: (1) general biological surveys; (2) vegetation mapping; (3) habitat assessments for listed plant and wildlife species; (4) focused habitat assessments for southwestern willow flycatcher, arroyo toad, San Bernardino kangaroo rat, and burrowing owl; and (5) an assessment for areas subject to the jurisdiction of the Corps pursuant to Section 404 of the CWA and the jurisdiction of the CDFW pursuant to Division 2, Chapter 6, Section 1600 – 1602 of the CFGC.

Site photographs were taken and are included in Appendix A. Binoculars (10x42) were used to aid in the observation of species during the survey. Plants were identified using the Jepson manual (Baldwin et al. 2012) and local botanical knowledge. Please note that due

to the winter timing of the field visit, focused surveys for special-status plants were not conducted as winter is not the appropriate time to survey for such species. Focused surveys for special-status plants may be required by CDFW to determine the presence/absence of special-status plants.

### **3.1 BIOLOGICAL RESOURCE DATABASE REVIEW**

RBC queried the CDFW's California Natural Diversity Database (CNDDDB) (CDFW 2018) and the database of threatened/endangered USFWS species for a one-mile radius around the project site (USFWS 2018). RBC also reviewed the County of San Bernardino's Biotic Resources Overlay Map (County of San Bernardino 2012) for biotic resource overlay zones within the project site and biological resources with potential to occur on site.

### **3.2 VEGETATION MAPPING AND GENERAL PLANT AND WILDLIFE SURVEYS**

Vegetation mapping was conducted in the field using a 150-scale (1" = 150') aerial photograph following Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986). RBC mapped vegetation and land uses within the property and identified flora and fauna for inclusion in plant and wildlife lists for the project site (Appendix B).

### **3.3 HABITAT ASSESSMENTS**

A focused habitat assessment was conducted for the following species:

- Southwestern Willow Flycatcher – the project site was surveyed for suitable habitat such as riparian forest or woodland, as well as SWFL individuals that could be identified by sight or sound.
- Arroyo Toad - the project site was surveyed for suitable habitat such as fine sands, stream terraces and arroyo toad sign (tracks, scat, etc.).
- San Bernardino Kangaroo Rat – the project site, with a focus on the alluvial fan scrub habitat, was surveyed for suitable burrows and SBKR sign (tail drags, scat, seed caches, etc.)
- Burrowing Owl – A habitat assessment was conducted according to the Staff Report on Burrowing Owl Mitigation developed by CDFW dated March 7, 2012. The project site was surveyed for burrowing owl, active and potential burrows, and BUOW sign (feathers, pellets, whitewash, etc.)

### **3.4 JURISDICTIONAL WETLAND AND WATERS ASSESSMENT**

Water features on site were assessed in order to determine potential jurisdiction under the United States Army Corps of Engineers (Corps), the Regional Water Quality Control Board (RWQCB), and/or CDFW. A formal wetland delineation per the Corps guidelines was not conducted.

## **4 RESULTS**

### **4.1 BIOLOGICAL RESOURCE DATABASE REVIEW**

The CNDDDB and USFWS results include historical occurrences of five special-status plant species and seven special-status wildlife species within a one-mile radius of the project site (Figure 2 and 3). Details regarding the potential for these special-status species to occur on site.

The project is within the County of San Bernardino's Burrowing Owl Overlay Zone (Biotic Resources Overlay Map, County of San Bernardino 2012).

### **4.2 SOUTHWESTERN WILLOW FLYCATCHER HABITAT ASSESSMENT**

Southwestern willow flycatcher (SWFL) is a state and federally listed endangered species. This subspecies of the willow flycatcher is one of southern California's rarest birds, restricted to riparian forest and woodland (Unit 2004). The breeding range of SWFL includes southern California, Arizona, New Mexico, southwestern Colorado and extreme southern portions of Nevada and Utah. Occupied SWFL habitat at low and mid-elevation sites typically includes dense willows and native broadleaf trees with a "height from 3 to 15 meters; characterized by trees of different size classes; often a distinct overstory of cottonwood, willow or other broadleaf tree, with recognizable sub-canopy layers and a dense understory of mixed species; exotic/introduced species may be a rare component, particularly in the understory" (Sogge et. al 2010).

CNDDDB and USFWS queries report historical occurrences of southwestern willow flycatcher within one mile of the project site. The project site contains a small stand of southern willow scrub in the northeast. However, the habitat is minimal and lacks the appropriate vegetation density and surface water that are associated with SWFL. There is no potential for southwestern willow flycatcher to occur on site.

### **4.3 ARROYO TOAD HABITAT ASSESSMENT**

Arroyo Toad breed in habitat comprised of slow-moving streams with shallow pools, nearby sandbars, and adjacent stream terraces (USFWS 2009). Fine sand is necessary in order for arroyo toad to burrow and overwinter. Outside of the breeding season, arroyo toad are predominantly terrestrial and utilize upland habitats including: sycamore-cottonwood woodlands, oak woodlands, coastal sage scrub, chaparral, and grassland (Holland 1995, Griffin et al. 1999).

CNDDDB and USFWS results show that arroyo toad has historically occurred within one mile of the project site. Suitable arroyo toad habitat containing fine sand and stream terraces is not present on site, and no toad sign was observed. Based on these conditions, there is no potential for arroyo toad to occur on site.

### **4.4 SAN BERNARDINO KANGAROO RAT HABITAT ASSESSMENT**

San Bernardino kangaroo rats (SBKR) are most commonly associated with alluvial fan scrub habitat (USFWS 2009). Alluvial fan scrub is a subtype of Riversidian sage scrub, though with more riparian species (Holland 1986). This habitat type generally occurs on xeric sites with severely drained soils.

Databases verify that SBKR has historically occurred within three (USFWS) and five (CNDDDB) miles of the project site. Marginally suitable alluvial fan scrub habitat is present

along the creek on site; however, no burrows or small mammal sign were observed. Based on the lack of burrows observed on site and the minimal suitable habitat, there is no potential for SBKR to occur on the project site.

#### 4.5 BURROWING OWL HABITAT ASSESSMENT

Suitable burrowing owl (BUOW) habitats can be found in annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation (Zarn 1974). Suitable BUOW habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface. Burrows are the essential component of BUOW habitat; both natural and artificial burrows provide protection, shelter, and nests for BUOW (Henny and Blus 1981). BUOW typically use burrows made by rodents, such as ground squirrels or badgers, but may also use human-made structures, such as concrete culverts; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt pavement.

Databases verify that BUOW has not historically occurred within five miles of the project site (CNDDDB, USFWS). The disturbed land on the western end of the project site is composed of open habitat with minimal shrub cover; however, no BUOW individuals or sign was observed on the project site. No ground squirrel activity or suitable burrows were observed on site. Although it is unlikely for BUOW to occur on site, the project site has a low potential to support BUOW.

Table 1. Special-Status Plant and Animal Species Potential to Occur

Species	Status	Habitat Description	Potential to Occur
<b>Plants</b>			
Black bog-rush ( <i>Schoenus nigricans</i> )	CRPR 2B.2	Perennial grasslike herb. Blooms Aug-Sep. Wetland-riparian. Elev 525-5,150 ft.	None. Suitable habitat not present within project site.
Plummer's mariposa-lily ( <i>Calochortus plummerae</i> )	CRPR 4.2	Perennial bulbiferous herb. Blooms May-Jul. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Elev 330-5,580 ft.	Low potential to occur though species not observed during biological resources survey.
Slender-horned spineflower ( <i>Dodecahema leptoceras</i> )	FE, SE, CRPR 1B.1	Annual herb. Blooms Apr-Jun. Chaparral, coastal scrub, and valley/foothill grasslands. Elev 50-2,590 ft.	Very low potential to occur.
Short-joint beavertail ( <i>Opuntia basilaris</i> var. <i>brachyclada</i> )	CRPR 1B.2	Stem succulent shrub. Blooms Apr-Jun. Creosote bush scrub, chaparral, Joshua tree woodland, pinyon-juniper woodland. Elev 2,460-6,235 ft.	None. Species was not observed during biological resources survey and suitable habitat not present.

White-bracted spineflower ( <i>Chorizanthe xanti</i> var. <i>leucotheca</i> )	CRPR 1B.2	Annual herb. Blooms Apr-Jun. Creosote bush scrub, pinyon- juniper woodland. Elev 1,280- 5,350 ft.	None. No suitable habitat present within project site.
<b>Fish</b>			
Santa Ana speckled dace ( <i>Rhinichthys osculus</i> ssp.)	SSC	Runs and pools of cool flowing headwaters, creeks, and small to medium rivers. Usually in shallow water.	None. Suitable habitat not present within project site.
<b>Reptiles and Amphibians</b>			
Arroyo toad ( <i>Anaxyrus californicus</i> )	SE, SSC	Exposed, sandy streambanks with stable terraces for burrowing and scattered vegetation. Sandy or gravel bottom still pools for breeding.	None. Suitable habitat not present within project site.
Coastal whiptail ( <i>Aspidoscelis tigris stejnegeri</i> )	SSC	Variety of rocky, sandy, dry habitats including sage scrub, chaparral, and woodlands on friable, loose soil.	Low potential to occur. Suitable habitat is present, but species is usually observed closer to the coast.
<b>Birds</b>			
Bell's sage sparrow ( <i>Artemisiospiza belli belli</i> )	WL	Occurs mainly in coastal sage scrub and chaparral habitats.	Low potential to occur. Some suitable habitat present but not observed during biological resources survey.
Least Bell's vireo ( <i>Vireo belli pusillus</i> )	FE	Found in riparian woodland with understory of dense young willows or mulefat.	None. Suitable habitat not present within project site.
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	FE, SE	Dense riparian woodlands comprised of willows and cottonwoods.	None. Suitable habitat not present within the project site.
<b>Mammals</b>			

<p>Los Angeles pocket mouse (<i>Perognathus longimembris brevinasus</i>)</p>	<p>SSC</p>	<p>Found in low elevation grassland, alluvial sage scrub, and coastal sage scrub.</p>	<p>Low potential to occur. Minimal alluvial fan scrub on site and no burrows or sign observed during biological resources survey.</p>
<p><b>CRPR – California Rare Plant Rank</b>  <b>1B</b> – Plants rare, threatened, or endangered in California and elsewhere  <b>2B</b> – Plants rare, threatened, or endangered in California but more common elsewhere  <b>3</b> – Plants about which more information is needed – a review list.  <b>4</b> – Plants of limited distribution – a watch list              0.1 – Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)              0.2 – Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)              0.3 – Not very threatened in California (&lt;20% of occurrences threatened / low degree and immediacy of threat or no current threats known)  <b>FE</b> – Federally Endangered (USFWS)  <b>FT</b> – Federally Threatened (USFWS)  <b>SE</b> – State Endangered (CDFW)  <b>SSC</b> – Species of Special Concern (CDFW)  <b>WL</b> – Watch List (CDFW)</p>			

**4.6 VEGETATION MAPPING AND GENERAL PLANT AND WILDLIFE SURVEYS**

The property is 88.54 acres and is comprised of alluvial fan scrub (2.15 acres), chamise chaparral (11.45 acres), developed/ornamental land (29.31 acres), disturbed habitat (25.55 acres), disturbed southern mixed chaparral (3.56 acres), a concrete-lined lake (0.24 acres), mulefat scrub (0.51 acres), southern mixed chaparral (14.11 acres), southern willow scrub (1.30 acres), and sycamore woodland (0.35 acres) (Figure 4).

The vegetation communities/land uses that occur within the project boundaries are detailed below.

***ALLUVIAL FAN SCRUB (2.15 ACRES)***

Alluvial fan scrub occurs along a creek on the eastern side of the project site. Alluvial fan scrub is typically found on xeric sites with severely drained soils. This habitat is dominated by scale-broom (*Lepidospartum squamatum*) and flat-top buckwheat (*Eriogonum fasciculatum*).

***CHAMISE CHAPARRAL (11.45 ACRES)***

Chamise chaparral is a 1-3-meter-tall chaparral habitat dominated by chamise (*Adenostoma fasciculatum*). This habitat was partially burned on site, though it has adapted to fire by stump sprouting and is in the process of recovery.

***DEVELOPED/ORNAMENTAL (ACTIVE RANCH) (29.31 ACRES)***

Developed areas on site include the majority of the active Gem Ranch. Dirt roads occur throughout the project site in order for residents and visitors to access different areas of the ranch. Ornamental vegetation has been planted and is maintained throughout this area of the property.

***DISTURBED HABITAT (25.55 ACRES)***

Disturbed habitat occurs on the western side of the project site. Disturbed habitats are those which have been physically disturbed by human activity and are no longer recognizable as a native vegetation community but continues to retain a soil substrate. Disturbed land includes areas that have been graded, off-road vehicle trails, and old homesites. The disturbed habitat in the west supports previously disked or graded land as well as the active shotgun range.

***DISTURBED SOUTHERN MIXED CHAPARRAL (3.56 ACRES)***

Southern mixed chaparral in the northeast of the project site consists of representative species including chamise and ceanothus (*Ceanothus* sp.). However, the habitat is disturbed by dirt roads and the active ranch.

***LAKE (0.24 ACRES)***

An open water, concrete-lined lake (referred to as Emerald Lake) is present on the eastern side of the property in the Developed/Ornamental area. It is surrounded by the developed Gem Ranch and ornamental trees.

***MULE FAT SCRUB (0.51 ACRES)***

Mule fat scrub is characterized by localized, dense stands of mule fat (*Baccharis salicifolia*), an erect woody perennial shrub that grows up to 12 feet tall. There is a linear patch of mule fat scrub along the northern portion of the creek on the eastern side of the property.

***SOUTHERN MIXED CHAPARRAL (14.11 ACRES)***

Southern mixed chaparral occurs on the eastern side of the project site. This vegetation community occurs on dry, rocky slopes with minimal soil and moderate temperatures. On site, the habitat is dominated by ceanothus, chamise, and manzanita (*Arctostaphylos* sp.)

***SOUTHERN WILLOW SCRUB (1.30 ACRES)***

Southern willow scrub consists of dense, broad-leaved, winter-deciduous riparian thickets dominated by several willow species (*Salix* sp.) and occasional western cottonwoods and mulefat.

***SYCAMORE WOODLAND (0.35 ACRES)***

Sycamore woodland is typically a tall, open, broad-leafed, winter-deciduous streamside woodland dominated by sycamore (*Platanus racemosa*). These stands seldom form closed canopy forests and even may appear as trees in shrubby, deciduous thickets.

## **4.7 JURISDICTIONAL ASSESSMENT**

The creek on the eastern end of the project site would be considered jurisdictional under the CORPS, RWQCB, and/or CDFW as it conveys water and has a bed, bank, and ordinary high-water mark. Two human-made concrete drainages occur on site, though they would not be considered jurisdictional by any of the aforementioned agencies.

## **4.8 WILDLIFE CORRIDORS**

A wildlife corridor can be defined as a link of wildlife habitat, usually consisting of native vegetation that joins two or more larger areas of similar wildlife habitat. Corridors are critical for the maintenance of ecological processes including allowing for the movement of animals and the continuation of viable populations. Corridors enable migration, colonization and interbreeding of plants and animals. Corridors can consist of large, linear stretches of connected habitat (such as riparian vegetation) or as a sequence of stepping-stones across the landscape (discontinuous areas of habitat such as wetlands and ornamental vegetation), or corridors can be larger habitat areas with known or likely importance to local fauna.

Regional corridors are defined as those linking two or more large patches of habitat, and local corridors are defined as those allowing resident animals to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development. A viable wildlife migration corridor consists of more than an unobstructed path between habitat areas. Appropriate vegetation communities must be present to provide food and cover for both transient species and resident populations of less mobile animals. There must also be a sufficient lack of stressors and threats within and adjacent to the corridor for species to use it successfully.

The creek along the eastern side of the project area provides a local wildlife corridor that is likely used by animals to travel along the creek through the large box culvert under Cajon Boulevard and into open habitat in the Cajon Wash (Figure 4). The rest of the project site consists of open habitat and roads that are likely used by animals, but this area would not be considered an important wildlife movement area.

# **5 IMPACTS**

## **5.1 SPECIAL-STATUS ANIMALS IMPACT ANALYSIS**

The proposed project will not impact special-status animals or habitat for special-status animals due to a lack of suitable habitat for most species and the high level of site disturbance. As noted above, the project site has no potential to support the southwestern willow flycatcher, arroyo toad or San Bernardino kangaroo rat and low potential to support burrowing owls. Through compliance with the project-specific mitigation measure in Section 6.1 of this report, project activities will avoid impacts on burrowing owls, and impacts on special-status animals would be less than significant.

## 5.2 SPECIAL-STATUS PLANTS IMPACT ANALYSIS

The proposed project will not likely impact special-status plants or habitat for special-status plants due to a lack of suitable habitat for most species and the high level of site disturbance. Due to the winter timing of the survey, focused surveys for special-status plants were not conducted. Focused surveys for special-status plants may be required by CDFW to determine the presence/absence of such species.

## 5.3 NESTING BIRD IMPACT ANALYSIS

The project site has the potential to impact active bird nests if vegetation such as the large trees onsite are removed or ground disturbing activities occur during the nesting season (February 1 to August 31). Impacts on nesting birds are prohibited by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC). A project-specific measure that will avoid project impacts on nesting birds is identified in Section 6.2 of this report. With the implementation of this measure, impacts on nesting birds would be less than significant.

## 5.4 JURISDICTIONAL RIPARIAN AREAS IMPACT ANALYSIS

The proposed project will not directly impact riparian vegetation or vernal pools.

## 5.5 JURISDICTIONAL WATERS IMPACT ANALYSIS

The proposed project has the potential to impact jurisdictional waters of the U.S. and State due to the fill created by shotgun rounds into or around the seasonal (dry) creek bed. If required, any and all necessary permits and clearances should be obtained from the appropriate agencies before any impact on the seasonal (dry) creek bed, including deposition of trash (hulls, shot, etc.) from the discharge of firearms.

## 5.6 WILDLIFE CORRIDOR IMPACT ANALYSIS

The proposed project will not impact wildlife movement or corridors as the creek bed and surrounding vegetation will not be removed and access to this area by wildlife will not be restricted or blocked.

# 6 MITIGATION AND AVOIDANCE MEASURES

The following discussion provides project-specific mitigation/avoidance measures for actual or potential impacts on special-status resources.

## 6.1 BURROWING OWL

As noted above, burrowing owls or their sign were not observed at the project site during the habitat assessment and limited suitable habitat is present on site. Although the potential for burrowing owl to occur on site is low, two take avoidance burrowing owl surveys should be conducted prior to project construction to ensure that burrowing owl have not colonized the site. To avoid impacts on burrowing owl, the following mitigation measure is recommended:

**MM-1:** A qualified biologist(s) will conduct two presence/absence surveys for burrowing owls; one 14 days prior and another 24 hours prior to scheduled site disturbance (CDFW 2012). If burrowing owls are documented on site, then a plan for avoidance or passive exclusion shall be made in coordination with the CDFW

guidelines. If the survey is negative, the project may proceed without further restrictions related to burrowing owls.

## 6.2 NESTING BIRDS

As noted above, the project site has the potential to support nesting birds. To comply with the MBTA and avoid impacts on nesting birds the following mitigation measure is recommended:

**MM-2:** The avian nesting season extends from February 15 through August 30. If vegetation removal and/or ground disturbing activities are scheduled during the nesting season, a survey for nesting birds shall be conducted by a qualified biologist prior to any vegetation removal and/or ground disturbing activities, including tree and shrub removal, disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests depending on the level of activity within the buffer and species detected, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. Raptor species will have an avoidance buffer of 500 feet and other bird species will have an avoidance buffer of 300 feet. These buffers may be reduced in consultation with the CDFW.

## 7 CONCLUSION

As outlined above, the proposed project will not result in significant impacts on biological resources with the implementation of mitigation measures 1 and 2 in Section 6. The project site is currently an active ranch that facilitates handgun, rifle, archery, and shotgun ranges.

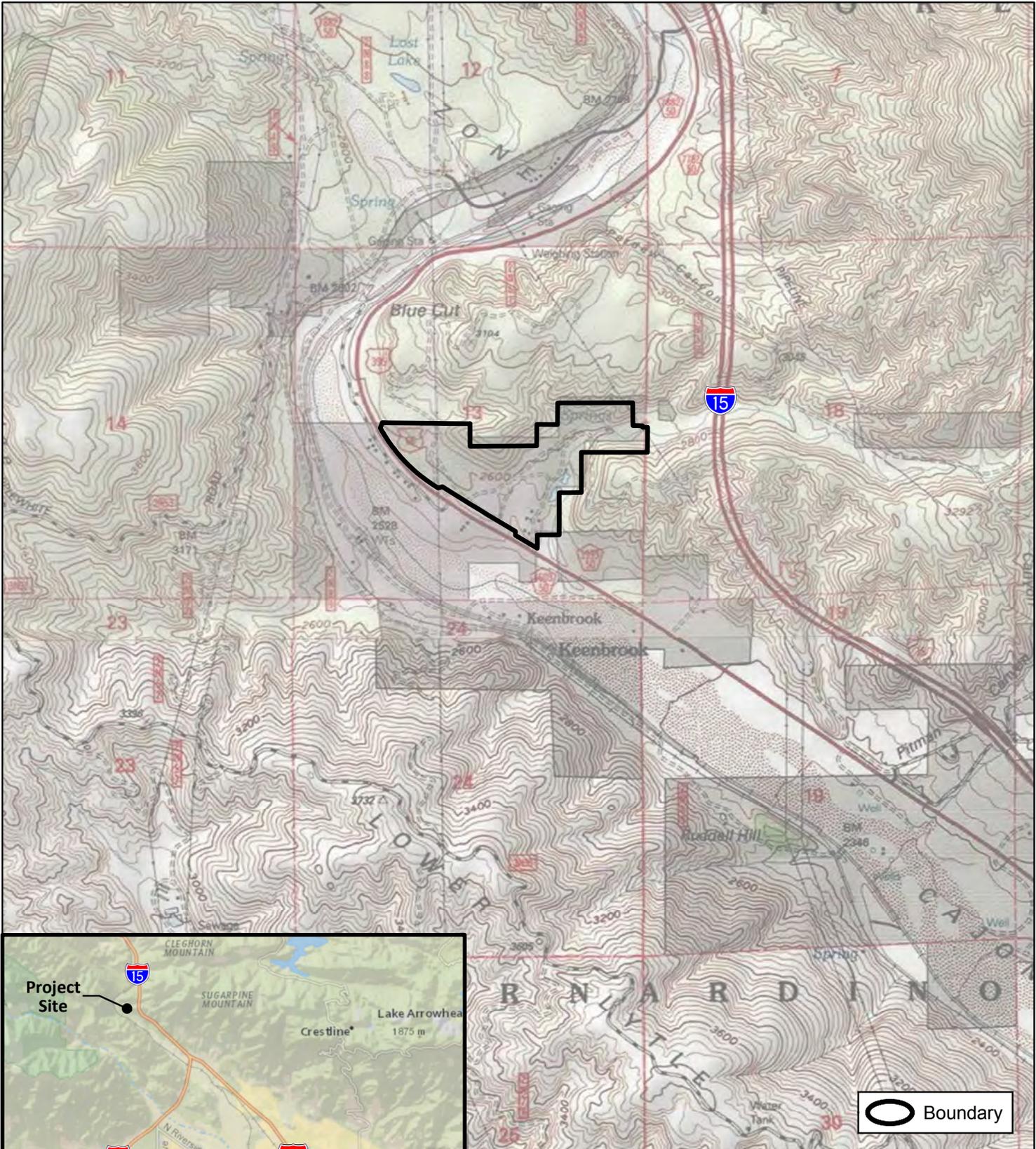
No burrowing owls, burrowing owl sign, or suitable nesting burrows were observed during the site visit and burrowing owls are presumed absent from the site. Two take avoidance surveys for burrowing owl should be conducted prior to any site disturbance in order to document the continued absence of burrowing owl from the project site (see recommended MM-1). Suitable avian nesting habitat is present on site. A pre-construction clearance survey for nesting birds should be conducted to ensure there are no impacts on nesting birds (see recommended MM-2). Please note that although the potential for special-status plant species is lacking or low, a focused survey may be required to document presence/absence of such species.

Based on the information provided to RBC, it does not appear that the proposed project will significantly impact any waters of the U.S. that are jurisdictional under Corps, RWQCB, and/or CDFW. However, the project proponent is encouraged to consult with the appropriate regulatory agencies to determine if any state or federal permits are required.

## 8 REFERENCES

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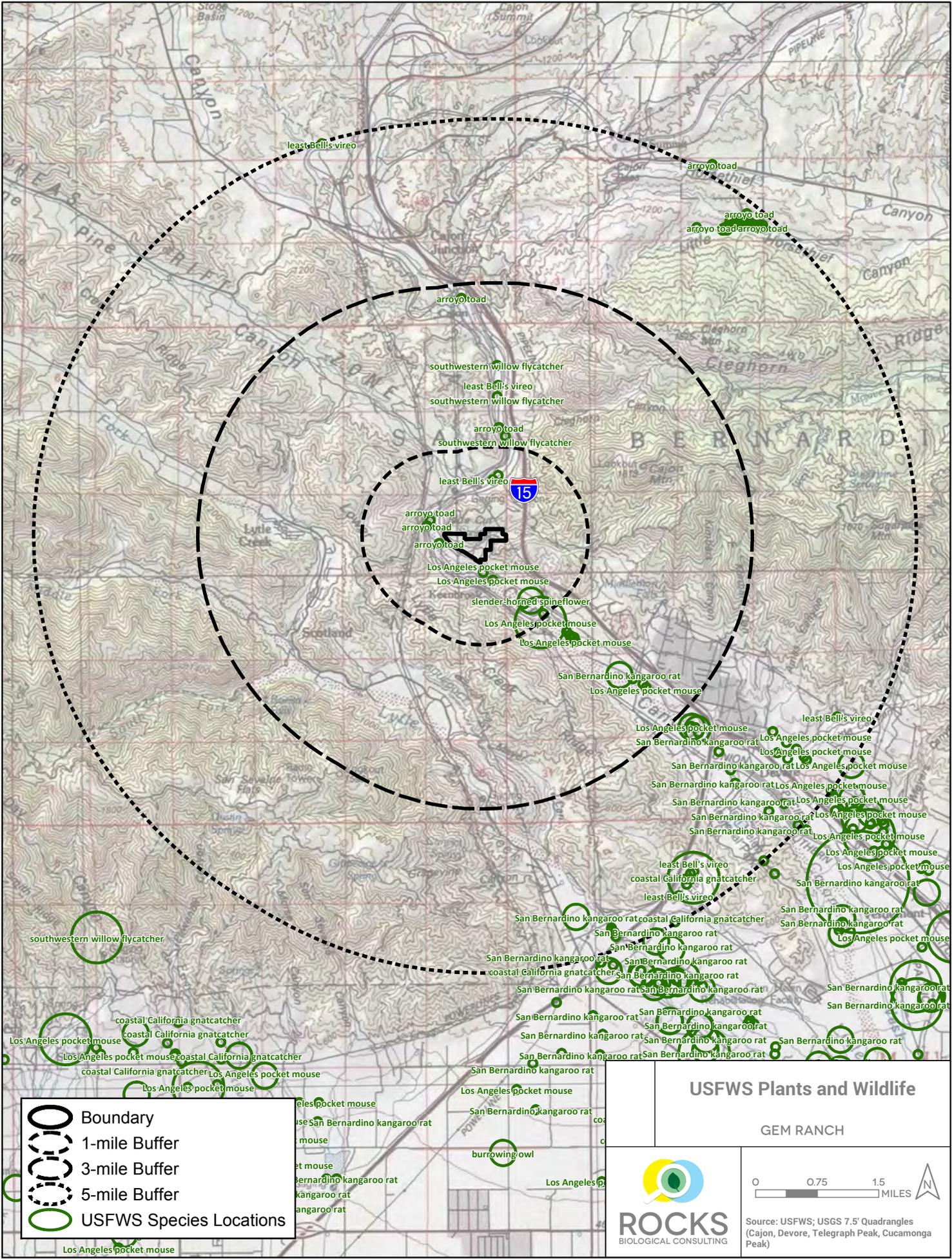


 Boundary



<p>FIGURE 1</p>	<p><b>USGS Topographic Map</b></p> <p>GEM RANCH</p>
 <p><b>ROCKS</b> BIOLOGICAL CONSULTING</p>	<p>0 1,000 2,000 FEET </p> <p>Source: USGS 7.5' Quads (Cajon, Devore); National Geographic Society</p>





Boundary  
 1-mile Buffer  
 3-mile Buffer  
 5-mile Buffer  
 USFWS Species Locations

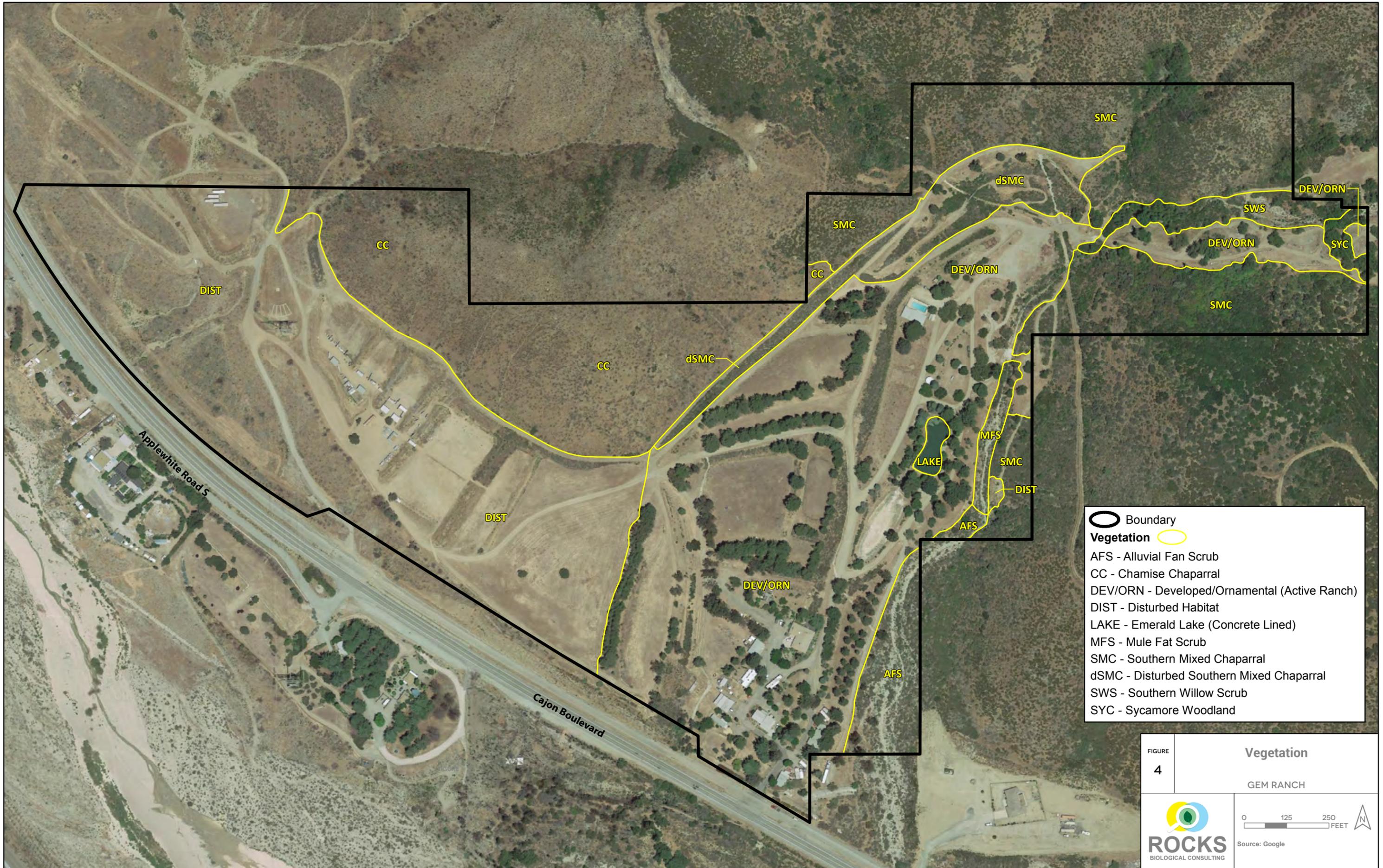
**USFWS Plants and Wildlife**

GEM RANCH





Source: USFWS; USGS 7.5' Quadrangles (Cajon, Devore, Telegraph Peak, Cucamonga Peak)



  Boundary  
**Vegetation**    
 AFS - Alluvial Fan Scrub  
 CC - Chamise Chaparral  
 DEV/ORN - Developed/Ornamental (Active Ranch)  
 DIST - Disturbed Habitat  
 LAKE - Emerald Lake (Concrete Lined)  
 MFS - Mule Fat Scrub  
 SMC - Southern Mixed Chaparral  
 dSMC - Disturbed Southern Mixed Chaparral  
 SWS - Southern Willow Scrub  
 SYC - Sycamore Woodland

FIGURE <b>4</b>	<b>Vegetation</b>  GEM RANCH
	 <small>Source: Google</small>

APPENDIX A  
SITE PHOTOGRAPHS



Photo 1. View of creek on east side of project site facing north. January 29, 2018.



Photo 2. View of creek facing north. January 29, 2018.



Photo 3. View of creek facing northeast. January 29, 2018.



Photo 4. View of creek facing south. January 29, 2018.



Photo 5. View of alluvial fan scrub from Cajon Blvd facing north. January 29, 2018.



Photo 6. View of disturbed non-native grassland on the western portion of the site. January 29, 2018.



Photo 7. View of existing concrete drainage to be re-routed for road installation; facing south towards Cajon Blvd. January 29, 2018.



Photo 8. View of existing concrete drainage facing south. January 29, 2018.



Photo 9. Disturbed land on the western portion of the site. January 29, 2018.



Photo 10. Burned vegetation on the southwestern portion of the site from Cajon Boulevard facing north. January 29, 2018.

APPENDIX B  
PLANT AND WILDLIFE SPECIES OBSERVED

Family Name	Scientific Name	Common Name
<b>Plants</b>		
Agavaceae	<i>Hesperoyucca whipplei</i>	Chaparral Candle
Anacardiaceae	<i>Rhus aromatica var. aromatica</i>	Skunkbrush
Asteraceae	<i>Baccharis salicifolia subsp. salicifolia</i>	Mule-Fat, Seep-Willow
Asteraceae	<i>Helianthus annuus</i>	Western Sunflower
Asteraceae	<i>Centaurea melitensis</i>	Tocalote
Asteraceae	<i>Heterotheca grandiflora</i>	Telegraph Weed
Asteraceae	<i>Lepidospartum squamatum</i>	Scale-Broom
Asteraceae	<i>Artemisia californica</i>	Coastal Sagebrush
Asteraceae	<i>Corethrogyne filaginifolia var. filaginifolia</i>	California Sand-Aster
Brassicaceae	<i>Hirschfeldia incana</i>	Short-Pod Mustard
Brassicaceae	<i>Lobularia maritima</i>	Sweet Alyssum
Cactaceae	<i>Cylindropuntia prolifera</i>	Coast Cholla
Cucurbitaceae	<i>Marah macrocarpa</i>	Manroot, Wild-Cucumber
Ericaceae	<i>Arctostaphylos glauca</i>	Big-Berry Manzanita
Euphorbiaceae	<i>Croton setiger</i>	Doveweed
Fabaceae	<i>Acmispon glaber var. brevialetus</i>	Short-Wing Deerweed
Geraniaceae	<i>Erodium cicutarium</i>	Red-Stem Filaree/Storksbill
Lamiaceae	<i>Salvia mellifera</i>	Black Sage
Lamiaceae	<i>Salvia apiana</i>	White Sage
Malvaceae	<i>Malacothamnus fasciculatus var. fasciculatus</i>	Chaparral Bushmallow
Namaceae	<i>Eriodictyon trichocalyx var. trichocalyx</i>	Shiny-Leaf Yerba Santa
Paeoniaceae	<i>Paeonia californica</i>	California Peony
Papaveraceae	<i>Dendromecon rigida</i>	Bush Poppy
Platanaceae	<i>Platanus racemosa</i>	Western Sycamore
Poaceae	<i>Schismus barbatus</i>	Mediterranean Schismus
Poaceae	<i>Bromus rubens</i>	Foxtail Chess, Red Brome
Polygonaceae	<i>Eriogonum fasciculatum var. fasciculatum</i>	Coast California Buckwheat
Rhamnaceae	<i>Ceanothus crassifolius var. crassifolius</i>	Thick-Leaf-Lilac
Rosaceae	<i>Heteromeles arbutifolia</i>	Toyon, Christmas Berry
Rosaceae	<i>Cercocarpus betuloides var. betuloides</i>	Birch-Leaf Mountain-Mahogany

Rosaceae	<i>Adenostoma fasciculatum var. fasciculatum</i>	Chamise
Rosaceae	<i>Prunus ilicifolia subsp. ilicifolia</i>	Islay, Holly-Leaf Cherry
Salicaceae	<i>Salix lasiolepis</i>	Arroyo Willow
Solanaceae	<i>Solanum xanti</i>	Chaparral Nightshade
Viscaceae	<i>Phoradendron leucarpum subsp. macrophyllum</i>	Big-Leaf Mistletoe
<b>Invertebrates</b>		
Lycaenidae	<i>Celistrina ladon echo</i>	Echo azure
Lycaenidae	<i>Icaricia acmon acmon</i>	Acmon blue
Pieridae	<i>Colias harfordii</i>	Harford's sulphur
<b>Reptiles</b>		
Iguanidae	<i>Uta stansburiana</i>	Side-blotched lizard
<b>Birds</b>		
Accipitridae	<i>Buteo jamaicensis</i>	Red-tailed hawk
Aegithalidae	<i>Psaltriparus minimus</i>	Bushtit
Columbidae	<i>Zenaida macroura</i>	Mourning dove
Corvidae	<i>Aphelocoma californica</i>	California scrub-jay
Corvidae	<i>Corvus brachyrhynchos</i>	American crow
Fringillidae	<i>Haemorhous mexicanus</i>	House finch
Fringillidae	<i>Spinus psaltria</i>	Lesser goldfinch
Mimidae	<i>Toxostoma redivivum</i>	California thrasher
Paridae	<i>Baeolophus inornatus</i>	Oak titmouse
Passerellidae	<i>Chondestes grammacus</i>	Lark sparrow
Passerellidae	<i>Junco hyemalis</i>	Dark-eyed junco
Passerellidae	<i>Melospiza crissalis</i>	California towhee
Passerellidae	<i>Zonotrichia leucophrys</i>	White-crowned sparrow
Picidae	<i>Colaptes auratus</i>	Northern flicker
Sylviidae	<i>Chamaea fasciata</i>	Wrentit
Trochilidae	<i>Calypte anna</i>	Anna's hummingbird
Troglodytidae	<i>Thryomanes bewickii</i>	Bewick's wren
Turdidae	<i>Sialia mexicana</i>	Western bluebird
Tyrannidae	<i>Sayornis nigricans</i>	Black phoebe
Tyrannidae	<i>Tyrannus vociferans</i>	Cassin's kingbird