**APPENDIX B:**

**BIOLOGICAL ASSESSMENT**

TERACOR Resource Management, Inc.,
General Biological Assessment for a 4.75-Acre Property
in the City of Palmdale, California,
January 14, 2019.

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# GENERAL BIOLOGICAL ASSESSMENT FOR A 4.75-ACRE PROPERTY IN THE CITY OF PALMDALE, CALIFORNIA

ASSESSOR'S PARCEL NO. 3010-030-023

Located within Section 35 of the
Ritter Ridge, California Quadrangle
within Township 6 north, Range 12 west

*Prepared for:*

City of Palmdale, California

*and*

Meta Housing Corporation
11150 W. Olympic Blvd., Suite #620
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TERACOR RESOURCE MANAGEMENT

14 January 2019

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# 1.0 INTRODUCTION

## PURPOSE

### Background

A residential apartment complex is being proposed on a 4.75-acre property (Assessor's Parcel No. ["APN"] 3010-030-023) by Meta Housing Corporation ("Project Applicant") in the City of Palmdale, California. TERACOR Resource Management, Inc. ("TERACOR") assessed the subject property's general biological resources in Fall 2018.

### General Biological Assessment

The purpose of this biological assessment is to evaluate the biological resources that have been detected or determined to be present or potentially present within the subject property. This assessment inventories biotic resources on the project site. It is based on habitat conditions present and discusses the potential impacts to biological resources based on TERACOR's field evaluation.

The assessment is based on our knowledge of desert biological resources in the western Mojave Desert and relevant scientific literature. Information derived from field reconnaissance was also used to determine the extent of potential impacts and proposed mitigation measures.

The impact analysis presented in Section 7.0 represents Project-specific impacts to biological resources on the subject site, and required/recommended mitigation measures to offset these impacts.

## PROPERTY LOCATION

The subject property is located on the southeast corner of the Division Street / Avenue R intersection in the City of Palmdale, California. The site is located approximately one-quarter (0.25) of a mile east of the Antelope Valley Freeway (State Route 14), approximately 0.5 mile south of E. Palmdale Boulevard (State Route 138) and approximately 0.75 mile west of Sierra Highway. The location of the property relative to local thoroughfares is illustrated in *Exhibit 1 - Regional Location Map*, attached.

Geographically, the property is approximately one (1) mile north of Lake Palmdale in the Mojave Desert. It is located within Section 35 of Township 6 north, Range 12 west, of the *Ritter Ridge, California United States Geological Survey ("USGS") 7.5 minute Quadrangle. Exhibit 2 - USGS Topographic Map*, attached, illustrates the general location and topography of the project site.

## DESCRIPTION OF THE PROPERTY

As noted above, the 4.75-acre property is comprised of a single parcel; APN 3010-030-023. The site is currently vacant, with the exception of roadway easements and primitive roads.

The subject site is depicted on the attached *Exhibit 3 – 2017 Aerial Photograph*.

## Site Characteristics

### Disturbances

The subject property is characterized by varying degrees of human-disturbances. The site includes an unimproved (i.e., dirt) southwest-northeast-oriented roadway in the central portion of the project site. Two (2) roadway easements/right-of-ways are located along the northern and western property boundaries along Avenue R and Division Street, respectively.

Evidence of mowing along the site's perimeter was observed, as was the introduction of invasive plant species and trash. The property has an annual non-native grass and weed component which consists of cheat grass (*Bromus tectorum*), Russian thistle (*Salsola tragus*), short-pod mustard (*Hirschfeldia incana*) and sisymbrium (*Sisymbrium* sp.). These invasive plant species are generally considered detrimental to both native desert fauna and desert annual plant species.

During TERACOR personnel's on-site investigation, a small amount of trash was detected on the site. This trash primarily included plastic cups, bags and glass bottles.

### Vegetation Communities and Land Covers

The subject property is comprised of vegetation associations typical of the western Mojave Desert. Those present on the site include Great Basin sagebrush (*Artemisia tridentata*) – rubber rabbitbrush (*Ericameria nauseosa*) scrub, shadscale (*Atriplex confertifolia*) - four-wing saltbush (*Atriplex canescens*) scrub and annual non-native grassland. An additional land cover present on-site includes disturbed areas. A detailed description of these vegetation communities and land covers is presented in Section 3.0 below.

### Topography

The topography of the subject property gently slopes from southwest to northeast. According to Google Earth Pro, the property ranges in elevation from 829 meters above mean sea level ("msl") (2,720 feet) at the northeast corner to 832 meters above msl (2,729 feet) at the southwest corner.

### Soils

Soils on-site are comprised of the Vernalis series, specifically Vernalis loam, 0 to 2 percent slopes (VbA). According to the *United States Department of Agriculture Natural Resources Conservation Service Official Soil Series Description*, the Vernalis series consists of very deep, well drained soils on alluvial fans and floodplains. These soils formed in alluvium from mixed rock sources. Runoff is negligible to low, and permeability is moderate. Soils on-site are depicted in *Exhibit 4 - Soil Survey Map*, attached.

Conditions encountered on the site during field investigations conducted in Fall 2018 are depicted on the attached *Exhibit 5 – Site Resource Photographs*.

## SURROUNDING AREA CHARACTERISTICS

### Climate

Climate associated with the subject property and surrounding area is characterized by arid conditions, as is typical of areas located within the western Mojave Desert. Average annual precipitation in Palmdale, California is 7.4 inches according to U.S. Climate Data. Temperatures in the western Mojave are characterized by extremes as compared to southern California coastal areas. Temperatures in the summer are often over 100°F and often fall below freezing during the winter.

### Surrounding Land Features and Uses

The subject site is located on the east side of Division Street and on the south side of Avenue R. Open space is present between Avenue R and a residential development to the north and between Division Street and the Antelope Valley Freeway (State Route 14) to the west. Single-family residential development is located immediately to the south, and the Ridgeview Village Apartments are immediately east of the project site. The Palmdale Learning Plaza is immediately northwest of the subject property across the Avenue R / Division Street intersection. Palm Tree Elementary School is located approximately 1,000 feet to the east, while Pelona Vista Park is approximately one-half (0.5) of a mile southwest of the subject property.

The subject property is also approximately one-quarter (0.25) of a mile east of the mapped downstream terminus of Anaverde Creek, a USGS-designated blueline stream. As mentioned above, the site is located approximately one (1) mile north of Lake Palmdale.

## PROPOSED PROJECT DESCRIPTION

The following description of the proposed project is derived from the project's Site Plan, dated October 2018. The Project Applicant's Juniper Grove project consists of 101 residential apartment units. This apartment complex would be three (3) stories high and would comprise 109,406 square feet of building area. In addition, 60,737 square feet of parking area and 62,097 square feet of landscaped open / amenity area would be provided.

# 2.0 METHODS

## LITERATURE REVIEW

Existing biological conditions for the subject site were investigated directly through review of existing biological information and pertinent scientific literature. Literature reviewed in determining community names and vegetation associations and descriptions for the property were derived from: *The Jepson Manual, Vascular Plants of California - Second Edition* (Baldwin et. al. 2012), *The Jepson Desert Manual – Vascular Plants of Southeastern California* (Baldwin et. al. 2002), the California Department of Fish and Wildlife's ("CDFW's") *California Natural Community List (2018)*, and *A Manual of California Vegetation - Second Edition* (Sawyer, Keeler-Wolf and Evens 2009). Vegetation communities are discussed in detail in Section 3.0. Floral inventories with current scientific names for each species are provided as Appendix A of this report.

Other relevant information was derived from reports and species lists for habitat types similar to those found on-site, including communications with recognized experts in relevant fields, other TERACOR biological investigations in the western Mojave Desert, and personal experience of site investigators of the western Mojave Desert area.

## SENSITIVE SPECIES AND HABITATS

Primary references for federally-designated sensitive species include the *Federal Register*, and the U.S. Fish and Wildlife Service ("USFWS") Endangered Species Program website.

TERACOR reviewed the potential for the subject site to support sensitive, threatened, and endangered species and sensitive habitats found in the vicinity of the subject property by querying the *California Natural Diversity Data Base* ("CNDDB"). The CNDDB is a computerized inventory of information, published by CDFW, describing the location of California's rare, threatened, endangered, and otherwise sensitive plants, animals, and natural communities. Updates to the CNDDB are issued monthly to subscribers. Valuable information regarding the species occurrence, population numbers, observer, occurrence dates and potential threats to the organism(s) are included with each occurrence record. TERACOR maintains a subscription to this CDFW service and queried the *Ritter Ridge* and *Palmdale Quadrangles* and surrounding quadrangles for local records of sensitive organisms and habitats.

Historical records of species occurrence are found not only in the CNDDB and Los Angeles County Museum ("LACM") records, but also in other well-known publications including Schoenherr, 1976, Hall, 1981, Garrett and Dunn, 1981; Grinnell and Miller, 1944; Small 1995; Williams 1986; and Thelander, et al, 1994.

This property encompasses limited vegetative diversity and is therefore not expected to support the full-range of organisms known to occur in the region. Potential species occurrence is largely predicated on the presence of appropriate support resources, species mobility, extent of habitat disturbance, connectivity to adjoining habitats, and other facilitating or constraining factors. The potential of the subject property to support rare, threatened, or endangered species was evaluated based on habitat conditions, surrounding land use and habitat predilections of rare organisms known to occur in the region.

## FEDERAL AND STATE PROTECTED SPECIES

Protected sensitive species are usually classified by both state and federal resource management agencies as threatened or endangered, under provisions of the State and federal Endangered Species Acts. Vulnerable or "at-risk" species which have been proposed or are being considered for listing as threatened or endangered or "species of special concern" are categorized administratively by the USFWS. The CDFW uses various terminology and classifications to describe sensitive species. There are also other species classifications and categories used in this report; all are described below.

## FEDERAL PROTECTION AND CLASSIFICATIONS

The federal Endangered Species Act of 1973 ("ESA") defines an endangered species as "any species which is in danger of extinction throughout all or a significant portion of its range..." 16 U.S.C. § 1532(6).

Threatened species are defined as "any species which is likely to become an endangered species in the foreseeable future throughout all or significant portions of its range..." 16 U.S.C. § 1532(20).

Federal listing status is as follows:

| | |
|---|---|
| Federally listed as Endangered | = FE |
| Federally listed as Threatened | = FT |
| Federally Proposed as Threatened | = FPT |
| Federally Proposed as Endangered | = FPE |
| Federally Proposed for Delisting | = FPD |
| Federal Candidate Species | = FC |
| Federally Delisted as Endangered or Threatened | = FDL |

### Migratory Bird Treaty Act (1918)

The Migratory Bird Treaty Act ("MBTA") of 1918 implemented the 1916 Convention between the U.S. and Great Britain (for Canada) for the protection of migratory birds. Later amendments to the MBTA implemented treaties between the U.S. and Mexico, the U.S. and Japan, and the U.S. and the Soviet Union (now Russia).

Specific provisions in the statute include:

> Establishment of a Federal prohibition, unless permitted by regulations, to *"pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird."* (16 U.S.C. 703)

## STATE OF CALIFORNIA PROTECTION AND CLASSIFICATIONS

### California Endangered Species Act

California's Endangered Species Act ("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."* Cal. Fish & Game Code § 2062.

The state 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."* California Fish & Game Code § 2067.

## State Fully Protected Species

The state defines a "fully protected" species as:

*"The classification of Fully Protected was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts; white-tailed kite, golden eagle, trumpeter swan, northern elephant seal and ring-tailed cat are the exceptions. The white-tailed kite and the golden eagle are tracked in the CNDDB; the trumpeter swan, northern elephant seal and ring-tailed cat are not."*

*"The Fish and Game Code sections dealing with Fully Protected species state that these species "....may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected" species, although take may be authorized for necessary scientific research. This language arguably makes the "Fully Protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003 the code sections dealing with fully protected species were amended to allow the Department to authorize take resulting from recovery activities for state-listed species."* (California Department of Fish and Game ["CDFG"], Special Animals 2009).

## State Species of Special Concern

A Species of Special Concern is defined as:

*"…a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:*

*a) is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role;*

*b) is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed;*

*c) is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;*

d) *has naturally small populations exhibiting high susceptibility to risk from any factor(s); that if realized, could lead to declines that would qualify it for State threatened or endangered status."*

The Species of Special Concern list is broken down into separate lists for Mammal and Bird species. The Reptile and Amphibian species list is combined as one.

Mammal Species

The Mammalian List of Species of Special Concern ("Mammal List") lists such species into three separate categories: "Highest Priority", "Second Priority", and "Third Priority." According to the Mammal List:

"*The definitions for these categories are based on the perceived proximity of threats or extinction. Species listed in the Highest Priority category appear to face a high probability of extinction or extirpation from their entire geographic range in California if current trends continue. Populations of species in the Second Priority category are definitely jeopardized and declining, but the threats of extinction or extirpation appear less imminent. Populations of species listed in the Third Priority category appear not to face extinction in the near future, but they are declining seriously or are otherwise highly vulnerable to extirpation because of human developments, and require special attention in land and resource management decisions. Some species listed in the Second and Third Priority categories are relatively rare and virtually no current data on their distributions and population status are available; when investigated in detail, some of these may be found to face greater or lesser threats*."

Mammal species of special concern which are not listed in the three (3) categories described above are listed in the "Additions to List" category.

Bird Species

The Bird List of Species of Special Concern ("Bird List"), similar to the Mammal List described above, is comprised of three (3) priority categories (First Priority, Second Priority, and Third Priority) derived through a scoring and ranking process and two (2) unranked categories (Taxa Extirpated from the State Totally or in Their Primary Seasonal or Breeding Role, and Taxa Listed as Federally, but Not State, Threatened or Endangered) based solely on the Species of Special Concern definition.

No formal discussion on the definitions of the First, Second, and Third Priority categories is given.

Reptile and Amphibian Species

The Reptile and Amphibian List of Species of Special Concern ("Herp List") is relatively simpler than the Mammal or Bird Lists in that it lists sensitive herp species into five (5) groups: Turtles, Lizards, Snakes, Salamanders, and Frogs. No further categories comprise the Reptile and Amphibian List.

### State Candidate 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."* California Fish & Game Code § 2068.

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 FESA, CESA does not include listing provisions for invertebrate species.

### State "Watch List" Bird Species

The CDFW has recently created a new designation for bird species; a "watch list" species. A "watch list" species is defined by CDFW as:

> *"A new category of "Taxa to Watch" was created in the new California Bird Species of Special Concern report. The birds on this watch list are 1) not on the current Special Concern list but were on previous lists and they have not been state listed under CESA; 2) were previously state or federally listed and now are on neither list; or 3) are on the list of "fully protected" species."* (CDFG, Special Animals 2009).

### State "Special Animal"

The state defines a "Special Animal" as:

> *""Special Animals" is a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special status species". The Department of Fish and Game considers the taxa on this list to be those of greatest conservation need."* (CDFG, Special Animals 2009).

State listing status is as follows:

| | |
|---|---|
| State listed as Endangered | = SE |
| State listed as Threatened | = ST |
| State listed as Rare (Plants only) | = SR |
| Species of Special Concern | = SSC |
| State Fully Protected | = SFP |
| State Candidate for Endangered | = SCE |
| State Candidate for Threatened | = SCT |
| State Watch List Bird Species | = SWL |
| State Special Animal | = SSA |

State Delisted as Endangered
or Threatened = SDL

CALIFORNIA NATIVE PLANT SOCIETY

The California Native Plant Society ("CNPS") is a statewide, non-profit organization dedicated to the preservation of native flora. The *California Native Plant Society's Inventory of Rare and Endangered Plants of California* (2001) includes information regarding the distribution, ecology, rarity, and legal status of over 2,000 rare plants which occur in California. The inventory has been updated and is maintained on a regular basis on the *Inventory of Rare and Endangered Plants of California* (2019).

The CNPS regulatory status designation consists of two (2) parts. The first portion of the designation is the rarity code and the second is the threat code. For example, a plant designated as a *Rare Plant Rank 1B.1* is considered rare, threatened, or endangered in California and elsewhere, and is seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat). A description of the rarity and threat code designations is presented below.

The CNPS codes presented for regulatory status flora below include the following:

| | |
|---|---|
| Rare Plant Rank 1A: | Presumed Extirpated in California and Either Rare or Extinct elsewhere |
| Rare Plant Rank 1B: | Rare, Threatened, or Endangered in CA and elsewhere |
| Rare Plant Rank 2A: | Presumed Extirpated in CA, but common elsewhere |
| Rare Plant Rank 2B: | Rare, Threatened, or Endangered in CA but more common elsewhere |
| Rare Plant Rank 3: | Plants about which more information is needed - a review list |
| Rare Plant Rank 4: | Plants of Limited Distribution - a watch list |
| Rare Plant Rank CBR: | Considered But Rejected |

The Threat Code is as follows:

.1 - Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat).
.2 - Moderately threatened in California (20 - 80% of occurrences threatened/moderate degree and immediacy of threat).
.3 - Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

Sensitive or regulatory status plant species descriptions have been provided in *Section 5.0 – Sensitive Species Analysis*, *Table 1 – Local Sensitive Species* below. These species descriptions are based on plant information provided in the *Jepson Manual* as well as the *CNPS Online Inventory*. Species information from these two (2) sources, such as elevational ranges or blooming periods of regulatory status plant species, is not always consistent. Because the regulatory status plant species listed below in *Table 1* are CNPS-ranked, and the CNPS generally provides broader descriptive information relative to distribution, the species information as summarized in the *CNPS Online Inventory* has generally been presented in this biological assessment.

A full list of scientific and background literature references has been provided as *Appendix C - References*.

## FIELD SURVEY

General biological resources were assessed by S. Reed and J. Reed on 05 December 2018. Vegetation communities on-site were mapped on aerial photography. All plant species encountered were identified and are included in Appendix A. Uncertain identifications were confirmed by M. Long, Consulting Biologist. Because the field survey was conducted in late Fall, native spring and summer annuals were limited in extent and were generally not observable throughout the project site.

Herpetological species were searched for by turning debris and scanning sunning and foraging areas. Birds were identified by sight using binoculars and by sound, with nomenclature following Sibley (2016) and Garrett and Dunn (1983, 1987, 1999), amended as necessary to conform to current nomenclature changes. Mammals were identified by sight, track, or scat, using standard field guide references when necessary to confirm determinations. Nocturnal mammal species presence was deduced from tracks, burrows, scats or other distinctive evidence, and augmented from scientific literature records. Faunal species accounts, both present and predictive, have been presented as Appendix B.

With regard to determining the presence of secretive or sensitive animal species, this assessment is habitat based and, in part, predictive. No focused surveys were conducted.

## PRESENCE/ABSENCE AND/OR PROBABILITY OF OCCURRENCE

TERACOR based its predictive analysis on each species known distribution or range including elevation, the subject property's disturbance levels, and site resources. Each individual is listed in common and scientific name, with habitat and distributional information. An "occurrence probability rating" has been designated for each species based on the above-described factors. Species occurrence has been: 1) Confirmed Present, 2) determined Not Present, or 3) potential presence determined to be one of the following:

- Low - The subject property is within the known range or distribution of the species. Suitable habitat on the property is marginal to non-existent. Site factors, such as disturbance or other human factors, likely preclude species occurrence. Focused investigation for the species is not warranted.

- Moderately Low - The subject property is within the historic range of the species. The property may be somewhat suitable but other conditions may exist (adjacent urbanization, isolation, etc.) to suggest a fairly low probability of occurrence. The species has not recently been detected within the vicinity, or site conditions are such that sustained presence is unlikely.

- Moderate - The species has a reasonable possibility of occurrence within the subject property. Habitats are generally suitable and the species is known to occur in the area.

- Moderately High - Habitats within the subject property are suitable for the species and occurrence is recently confirmed in the vicinity of the site.

- High - The subject property contains highly suitable habitat for the species. The organism has recently been detected in the vicinity, or ecological conditions are such that qualified personnel can reasonably anticipate presence.

## 3.0 VEGETATION COMMUNITIES AND LAND COVERS

Geographically, the subject property is located within the California Floristic Desert Province. Specifically, the project site is located within the western Mojave Desert region. The Desert Province comprises the southeastern portion of California. Climates of this Province are unpredictable from year to year. According to *The Jepson Manual*, "*Creosote-bush scrub is characteristic throughout, though there has been much degradation from military activity and other off-road vehicles. Military reservations have also been responsible for preserving some desert communities more or less intact*" (Hickman, 1993). The Mojave Desert region consists of the northern two-thirds of the Desert Province.

Classification of plant communities generally follows CDFW's 2018 *California Natural Community List*.

As shown in *Exhibit 6 - Vegetation Communities and Land Covers*, attached, plant assemblages found on the subject property include great basin sagebrush – rubber rabbitbrush scrub, shadscale - four-wing saltbush scrub and annual non-native grassland. Other land covers present include disturbed areas. Designations for each element and their respective California Natural Community Codes ("CaCodes") have been described in the following text.

### SCRUB COMMUNITIES

Associations of desert scrub occur regularly throughout the western Mojave Desert. Those which comprise the subject property are common.

All vegetation and land covers present on the subject property were comprised of varying degrees of disturbance due to the presence of non-native, invasive plant species, particularly short-pod mustard, sisymbrium and Russian thistle. The presence of these species is the result of anthropogenic activities and degrades native habitats by outcompeting important native annual species.

#### Great Basin Sagebrush – Rubber Rabbitbrush Scrub (CaCode 35.110.01)

This community comprises 1.52 acres on-site. The dominant species include Great Basin sagebrush and rubber rabbitbrush. Other species noted included Cooper's box thorn (*Lycium cooperi*), winter fat (*Krascheninnikovia lanata*) and creosote bush (*Larrea tridentata*). Great Basin sagebrush – rubber rabbitbrush scrub is a common community in the Mojave Desert.

#### Shadscale – Four-Wing Saltbush Scrub (CaCode 36.320.06)

Shadscale – four-wing saltbush scrub comprises 0.33 acre of the project site. The dominant species include shadscale and four-wing saltbush. Other species noted within this community were winter fat, rubber

rabbitbrush and goosefoot (*Chenopodium* sp.). Shadscale – four-wing saltbush is a common community in the western Mojave Desert.

### GRASSLAND COMMUNITIES

#### Annual Non-Native Grassland (No corresponding CaCode)

Annual/non-native grassland functions at a diminished level of productivity or functionality compared to native grassland. Annual non-native grassland has several negative characteristics including: 1) it maintains an excessive demand for near-surface soil moisture thereby out-competing native annual plant species; 2) it inhibits passage and access to the soil surface for most smaller ground-dwelling invertebrates, reptiles and small mammals; and 3) over time it forms an impenetrable layer over the soil precluding establishment of annual plants, shrubs or trees. Non-native grassland does, however, have some positive attributes. It can support similar assemblages of plant and animal species as native grasslands, albeit at lower densities for undetermined lengths of time, particularly if it is grazed or burned periodically.

Annual non-native grassland is the only discernible grassland community on the subject property. No specific alliances within the annual non-native grassland community on-site were discernible. Many of the same species described in the scrub communities above are also present within the annual non-native grassland. No native grass species were detected on-site. Annual non-native grassland totals 1.10 acres on-site and is located within the central, northern, and southern portions of the subject property.

### OTHER LAND COVERS

#### Disturbed (No corresponding CaCode)

The total 1.80 acres of disturbed areas located on-site consists of roadway easements, an unimproved northeast-southwest-oriented road and mowed areas. As described above in Section 1.0, roadway easements are located along the northern property boundary adjacent to Avenue R and the western property boundary adjacent to Division Street. The unimproved road is present within the central portion of the subject property, and the mowed areas are located along the southern and eastern perimeters of the project site. These areas appeared to be routinely maintained and were therefore considered disturbed.

## 4.0 WILDLIFE

### WILDLIFE VALUES IN THE VICINITY OF THE PROPERTY

Land within the vicinity of the subject site is largely developed; therefore land in this area of the western Mojave Desert is moderately disturbed. Land in the vicinity of the subject property that is characterized by desirable biotic and abiotic features, therefore, is considered to have a moderately low wildlife habitat value, especially to desert specialist species such as long-nosed leopard lizard (*Gambelia wislizenii*), Great Basin whiptail (*Aspidoscelis tigris tigris*), southern desert horned lizard (*Phrynosoma platyrhinos calidiarum*), desert spiny lizard (*Sceloporus magister),* black-throated sparrow (*Amphispiza bilineata*), black-tailed gnatcatcher

(*Polioptila melanura)*, and white-tailed antelope squirrel (*Ammospermophilus leucurus*). These species, therefore, have a low probability of occurrence on the project site.

A number of sensitive organisms may occur on land characterized by certain biotic and abiotic features, including American badger (*Taxidea taxus*), Mohave ground squirrel (*Xerospermophilus mohavensis*), desert tortoise (*Gopherus agassizii*), Mojave fringe-toed lizard (*Uma scoparia*) and others. Generally, desert scrub habitats in the vicinity of the subject site are considered to have low to moderate habitat value because they provide marginal to structurally suitable habitat for a number of native birds, mammals and reptiles, including several species of concern.

Generally, areas immediately surrounding the subject property are comprised of a mix of vacant lands with varying degrees of habitat quality and development. Several human-impediments to low to moderate quality habitat for native species exist within the vicinity of the property. Avenue R and Division Street, which adjoin the project site to the north and west, respectively, and State Route 14 have regular traffic that impedes wildlife movement and greatly increases mortality. The developed portions of surrounding properties are likely only utilized by common urban-adapted species such as white-winged Dove (*Zenaida asiatica*) and the non-native rock pigeon (*Columba livia*). The remaining surrounding areas are comprised of relatively intact native habitats.

The primary limiting factors for wildlife use of these lands are human presence, habitat fragmentation and adjacent development.

## WILDLIFE VALUES WITHIN THE PROPERTY

The subject property, in conjunction with connected habitats, has low to moderate wildlife values. Habitat values varied from low to moderate across the property, with areas subject to disturbance and degradation noted along the site's perimeter, in roadway easement areas, and along dirt access ways. Generally speaking, the habitat quality in the eastern and western central portions of the subject site remained highest. The majority of the subject property has moderately low value to wildlife due to relatively intact desert scrub communities. Human-impacts are evident on-site. These impacts consist of transitory use, unimproved roadways, trash, and debris dumping, and the introduction of invasive plant species.

Those wildlife species potentially present that are considered sensitive due to their general rarity or human-induced population declines are discussed in Section 5.0 of this report.

### Mammals

TERACOR field survey personnel observed wildlife directly or through sign (tracks, scat, burrows, etc.). Audubon's cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), squirrel and Botta's pocket gopher (*Thomomys bottae*) burrows/mounds, and unidentified fossorial mammal burrows were all detected on-site and are discussed below. Other mammalian species could use the subject property, including other mesopredator species, such as bobcat (*Lynx rufus*) or common gray fox (*Urocyon cinereoargenteus*) though TERACOR personnel did not observe any indications of such current use.

Ringtail (*Bassariscus astutus*) and American badger, both shy and reclusive predators known to occur within the western Mojave Desert, could potentially utilize the subject property on a transitory basis; however, due to anthropogenic disturbances, particularly the negative effects of adjacent roads and development, these species would not be expected to den on the subject site. Furthermore, TERACOR personnel did not observe any indications of such use and there is no data in the CNDDB of such use. Ringtail and badger are unlikely to utilize the subject site.

Other mammals which may occur on the subject property include striped skunk (*Mephitis mephitis*), northern racoon (*Procyon lotor*), western spotted skunk (*Spilogale gracilis*), and potentially desert kit fox (*Vulpes macrotis arsipus*). Small fossorial mammals such as deer mice or white-footed mice (*Peromyscus* spp.), western harvest mouse (*Reithrodontomys megalotis*), pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), little pocket mouse (*Perognathus longimemebris*), and several species of kangaroo rat (*Dipodomys* spp.) are known to occur in the western Mojave Desert; therefore, these species may potentially occur on-site though there are no records of occurrence on the subject property.

### Birds

TERACOR biologists observed eleven (11) bird species utilizing or flying over the subject property. Year-round resident bird species diversity is low, which is generally the case in the upland desert habitats present on-site. Bird species detected included common raven (*Corvus corax*), house sparrow (*Passer domesticus*), American crow (*Corvus brachyrhynchos*), white-crowned sparrow (*Zonotrichia leucophrys*), bushtit (*Psaltriparus minimus*), northern mockingbird (*Mimus polyglottos*), orange-crowned warbler (*Oreothlypis celata*), Bell's sage sparrow (*Artemisiospiza bellii bellii*), chipping sparrow (*Spizella passerina*), European starling (*Sturnus vulgaris*) and mourning dove (*Zenaida macroura*). A list of bird species observed and expected to utilize the subject property for foraging, nesting or during migration is included in Appendix B.

### Reptiles

No reptiles were observed on the subject site. Reptiles which could occur on-site include desert spiny lizard, common side-blotched lizard (*Uta stansburiana*), and Mohave rattlesnake (*Crotalus scutulatus*). Other lizard and snake species which are less likely to occur, although not observed, include Great Basin whiptail, long-nosed leopard lizard, southern desert horned lizard, Mojave zebratail lizard (*Callisaurus draconoides rhodostictus*), northern California legless lizard (*Anniella pulchra*), red racer (M*asticophis flagellum piceus*), Mohave glossy snake (*Arizona elegans candida*), Mojave shovel-nosed snake (*Chionactis occipitalis*) and California kingsnake (*Lampropeltis getula californiae*). Support resources on-site are sufficient to support a moderately low herpetological profile.

A full list of reptile species expected to utilize the subject property is included in Appendix B.

### Amphibians

No amphibian species were observed on-site. Western toad (*Anaxyrus boreas*), however, has a low likelihood of utilizing the subject property.

# 5.0 SENSITIVE SPECIES ANALYSIS

## Sensitive Species with Potential to Occur

The following table contains sensitive species known either historically or currently throughout the area and their presence, absence, or probability of occurrence within the subject property.

Table 1 – Local Sensitive Species

| SPECIES | SENSITIVE SPECIES STATUS | PRESENCE/ABSENCE/PROBABILITY OF OCCURRENCE ON THE SITE |
|---|---|---|
| Plants | | |
| Cushenbury milkvetch (*Astragalus albens*) | CNPS Rare Plant Rank 1B.1<br>FE | Not Present. This species was listed as federally endangered 24 August 1994. It usually occurs on carbonate substrates, and rarely on granitic substrates, in Mojavean desert scrub, Joshua tree woodland, and pinyon/juniper woodland below 2000 meters in elevation. This species was not detected on-site, nor is it expected to occur due to the lack of rocky areas on-site. |
| Lane Mountain milkvetch (*Astragalus jaegerianus*) | CNPS Rare Plant Rank 1B.1<br>FE | Not Present. This perennial herb was listed as federally endangered on 06 October 1998. It blooms from April to June in desert mountain environments between 900 meters and 1,200 meters in elevation. It occurs in granitic, sandy or gravelly conditions in Joshua tree woodland and Mojavean desert scrub. It was not detected on-site nor would it be expected to occur due to the subject property's location outside of this species' known geographic range. |
| triple-ribbed milkvetch (*Astragalus tricarinatus*) | CNPS Rare Plant Rank 1B.2<br>FE | Not Present. This perennial herb which blooms from February through May was listed as federally endangered on 06 October 1998. It occurs between 450 and 1,190 meters in sandy or gravelly substrates in Joshua tree woodland and Sonoran desert scrub on exposed rocky slopes and canyon walls along desert washes. Although sandy substrates are present on-site, the subject site is outside of this species' known geographic range. TERACOR personnel did not detect any *Astragalus* spp. on-site. |
| white pygmy-poppy (*Canbya candida*) | CNPS Rare Plant Rank 4.2<br>This species has no formal governmental listing. | Low. This annual herb occurs in gravelly, sandy and granitic places within Mojavean desert scrub, Joshua tree woodland, and pinyon/juniper woodland between 600 and 1,460 meters in elevation. It blooms from March through June. According to CNPS and Jepson, this species is shown to occur in the general area. Site conditions, however, likely preclude occurrence of white pygmy-poppy on-site. |
| desert cymopterus (*Cymopterus deserticola*) | CNPS Rare Plant Rank 1B.2<br>This species has no formal governmental listing. | Not Present. This taprooted perennial occurs within Mojavean desert scrub and Joshua tree woodland in sandy substrates. TERACOR personnel did not detect this species during the field survey on-site. Site conditions would likely preclude desert cymopterus from occurring on the subject property. |
| Parish's daisy (*Erigeron parishii*) | CNPS Rare Plant Rank 1B.1<br>FT | Not Present. This California endemic was listed as federally threatened on 24 August 1994. Parish's daisy, a perennial, often grows on limestone and carbonate, and sometimes granitic, substrates in rocky blackbush or creosote bush scrub and pinyon/juniper woodlands below 2,000 meters. It was not detected within the project site. Limestone is lacking on the subject property; therefore, this species would not be expected to occur. |

| SPECIES | SENSITIVE SPECIES STATUS | PRESENCE/ABSENCE/PROBABILITY OF OCCURRENCE ON THE SITE |
|---|---|---|
| Cushenbury buckwheat (*Eriogonum ovalifolium* var. *vineum*) | CNPS Rare Plant Rank 1B.1<br>FE | Not Present. Cushenbury buckwheat was listed as federally endangered on 24 August 1994. This perennial herb occurs on carbonate, gravel or rocky substrates in Joshua tree woodland, Mojavean desert scrub, and pinyon/juniper woodlands. It is found between 1,400 and 2,440 meters above sea level and blooms from May to August. This varietal was not detected during the survey, nor is it expected to occur due to a lack of suitable habitat on the site. |
| Barstow woolly sunflower (*Eriophyllum mohavense*) | CNPS Rare Plant Rank 1B.2<br>This species has no formal governmental listing. | Not Present. Barstow woolly sunflower is an annual herb which occurs primarily in creosote bush scrub, but can also occur in chenopod scrub and playas. This species blooms from March to May. TERACOR did not detect this species on-site, and the subject property is outside this plant's known geographic distribution. |
| sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*) | CNPS Rare Plant Rank 2B.2<br>This species has no formal governmental listing. | Low. This annual herb occurs in sand dunes and sandy flats around clay slicks within Great Basin scrub and Sonoran desert scrub at elevations below 1,615 meters. According to the CNDDB, sagebrush loeflingia was detected on a gravel quarry on the northeast side of Pearblossom Highway (Highway 138) in 2005, approximately seven (7) miles southeast of the site. This varietal was not detected on the subject property. |
| short-joint beavertail (*Opuntia basilaris* var. *brachyclada*) | CNPS Rare Plant Rank 1B.2<br>This species has no formal governmental listing. | Not Present. This varietal occurs primarily in chaparral, though it has also been detected in Joshua tree woodland, Mojavean desert scrub, and pinyon/juniper woodland. Short-joint beavertail occurs on sandy soil or course, granitic loam between 425 and 1,800 meters in elevation. As shown on the attached *Exhibit 7 – CNDDB Occurrences*, the nearest detection of this varietal to the subject property occurred in the Anaverde Valley between the California Aqueduct and Anaverde Creek in 1989, 2.25 miles west of the project site. No *Opuntia* spp. were detected on-site. |
| Invertebrates | | |
| Crotch bumble bee (*Bombus crotchii*) | This species has no formal governmental listing. | Not Present. This bumble bee is known to occur from coastal California east to the Sierra-Cascade Crest and south into Mexico. Its' known food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*. As depicted by the attached *Exhibit 7 – CNDDB Occurrences*, this species was detected in the vicinity of Palmdale in 1931. None of the above-listed plant genera were detected on-site; therefore habitat on-site is unsuitable for the crotch bumble bee. |
| Reptiles | | |
| northern California legless lizard (*Anniella pulchra*) | SSC | Moderately Low. This burrowing species feeds upon small, soft-bodied arthropods. It occurs in sandy or loose loamy soils under sparse vegetation. As depicted by the attached *Exhibit 7 – CNDDB Occurrences*, northern California legless lizard has been detected in several locations within the vicinity of the subject property. The nearest occurrence to the project site was a 2005 detection located northwest of the site across the Division Street / Avenue R intersection, east of State Route 14. Habitat on-site is structurally suitable, although this species' presence is likely precluded on-site from human disturbance and adjacent development. |

| SPECIES | SENSITIVE SPECIES STATUS | PRESENCE/ABSENCE/PROBABILITY OF OCCURRENCE ON THE SITE |
|---|---|---|
| California glossy snake (*Arizona elegans occidentalis*) | SSC | Low. California glossy snake is patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular Ranges, and south to Baja California. This subspecies is a habitat generalist that utilizes scrub and grassland habitats, often with loose or sandy soils. The CNDDB reports a 1937 detection in the vicinity of Vincent near the Antelope Valley Freeway (State Route 14). Marginally suitable habitat is present on-site, although sustained presence is unlikely due to human disturbance on the subject property. |
| western pond turtle (*Emys marmorata*) | SSC | Not Present. The western pond turtle is an aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches usually with aquatic vegetation. It requires basking sites and sandy banks or grassy open fields up to 0.5 kilometer from water for egg-laying. Two (2) CNDDB detections have been reported; the nearest being in 1995 in Amargosa Creek, south of Ritter Ridge, approximately six (6) miles west-northwest from the subject property. Suitable aquatic habitat is not present on-site; therefore this species would not occur on the project site. |
| desert tortoise (*Gopherus agassizii*) | FT, ST | Low. Desert tortoise typically requires firm ground for constructing burrows in banks, washes, compacted sand, rock shelters and exposed, eroded caliche layers in walls of washes. It frequently resides in desert oases, riverbanks, washes, dunes, and rocky slopes. In the United States, the desert tortoise utilizes creosote bush flats and hillsides as well as blackbrush and juniper woodland. No burrows suitable for use by this species were observed on-site. Human disturbance would likely preclude prolonged occurrence of desert tortoise on the subject property. |
| coast horned lizard (*Phrynosoma blainvillii*) | SSC | Low. The coast horned lizard frequents a wide variety of habitats, but is most common in lowlands along sandy washes with scattered low bushes. This species prefers open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants and other insects. According to the CNDDB, several detections of coast horned lizard have occurred within the general vicinity of the subject property. The nearest detection to the project site occurred in 1964 just west of Sierra Highway, approximately 2.5 miles north-northeast of the subject site. Disturbances on-site likely preclude this organism from occurring on the subject property. |
| two-striped gartersnake (*Thamnophis hammondii*) | SSC | Not Present. The two-striped gartersnake ranges from coastal California from the vicinity of Salinas to northwest Baja California from sea level to approximately 7,000 feet in elevation. This snake is highly aquatic, and is found in or near permanent fresh water and often along streams with rocky beds and riparian vegetative growth. According to the CNDDB, this species was detected in Amargosa Creek in 1995 and 1999. The 1995 detection is closer to the subject property and is approximately six (6) miles west-northwest of the project site. Aquatic habitat is absent on-site; therefore two-striped gartersnake would not occur on the subject property. |
| Mojave fringe-toed lizard (*Uma scoparius*) | SSC | Not Present. This species inhabits areas of the western Mojave Desert that are comprised of wind blown sand (sand dunes). It feeds on small invertebrates primarily, but will also consume vegetative material such as blossoms and leaves. The subject property lacks suitable habitat and therefore the species is not likely to occur on-site. |

| SPECIES | SENSITIVE SPECIES STATUS | PRESENCE/ABSENCE/PROBABILITY OF OCCURRENCE ON THE SITE |
|---|---|---|
| Birds | | |
| Cooper's hawk (*Accipiter cooperii*) | SWL (Nesting) | Not Present. This raptor species occurs chiefly in open, interrupted or marginal type woodlands. The Cooper's hawk typically nests within riparian growths of deciduous trees in canyon bottoms on river floodplains, and also within live oaks (*Quercus* spp.). As shown in the attached *Exhibit 7 – CNDDB Occurrences*, Cooper's hawk was observed in the vicinity of Palmdale in 1921. Suitable habitat is not present on-site; therefore this hawk would not be expected to occur on the subject property. |
| sharp-shinned hawk (*Accipiter striatus*) | SWL (Nesting) | Low. This species of raptor does not occur in southern California, except for high elevation mountainous areas, during the nesting season. It could potentially, however, utilize the subject property for wintering or as a migratory stopover. The sharp-shinned hawk will seldom occur in desert areas in winter. This species was not detected on-site. |
| tricolored blackbird (*Agelaius tricolor*) | SCE, SSC – First Priority (Nesting colony) | Not Present. This highly colonial species is largely endemic to California and is most numerous in the vicinity of the Central Valley. The tricolored blackbird requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of its colony. The attached *Exhibit 7 – CNDDB Occurrences* shows a 2011 detection in Lake Palmdale, approximately 1.33 miles south-southeast of the subject property. Suitable habitat is not present, and this species was not detected on-site. |
| southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) | SWL | Low. Southern California rufous-crowned sparrow is a resident of coastal sage scrub and sparse mixed chaparral. This sparrow frequents relatively steep, often rocky hillsides with grass and forb patches. According to the CNDDB, one (1) detection was observed in the northern foothills of the Sierra Pelona Mountains, southwest of the Anaverde Valley, approximately 4.25 miles west-southwest of the subject property. Desert habitat on-site is marginally suitable for this subspecies; however it would not be expected to occur on the project site due to disturbance levels. |
| golden eagle (*Aquila chrysaetos*) | SFP, SWL<br>The species is also protected under the Bald Eagle Protection Act (1940). | Not Present. These large birds of prey could occasionally forage above the subject property, but would not nest anywhere near the project site due to a lack of preferred nesting habitat (i.e., cliffs). Golden eagle was not detected on-site. |
| Bell's sage sparrow (*Artemisiospiza bellii bellii*) | SWL | Confirmed Present. This sparrow nests in chaparral dominated by fairly dense stands of chamise (*Adenostoma fasciculatum*). It is also found in coastal sage scrub in the southern part of its range. According to the CNDDB, this subspecies was detected just east of Ritter Canyon and south-southeast of Messer Ranch at the southeast end of Leona Valley in 2005, just over six (6) miles west-northwest of the subject property. Bell's sage sparrow was detected on-site. |
| short-eared owl (*Asio flammeus*) | SSC – Third Priority (Nesting) | Not Present. Although not commonly known from this area, this diurnal/crepuscular (active dusk and dawn) owl frequents grasslands, marshes and deserts. It would not be expected to nest on-site, as this owl's breeding range extends from northern California north into Canada. |

| SPECIES | SENSITIVE SPECIES STATUS | PRESENCE/ABSENCE/PROBABILITY OF OCCURRENCE ON THE SITE |
|---|---|---|
| long-eared owl (*Asio otus*) | SSC – Third Priority (Nesting) | Not Present. The long-eared owl roosts in dense vegetation and forages in open grasslands or shrublands, and also in open coniferous or deciduous woodlands. This owl often builds its nest in brushy vegetation adjacent to open habitats. This species does not nest within the general region of the subject property, and would not be expected to occur on-site. |
| burrowing owl (*Athene cunicularia*) | SSC – Second Priority (Burrow sites and some wintering sites) | Low. This species of owl is unique in that it utilizes the burrows of large, fossorial mammals (i.e. California ground squirrel) for both wintering and nesting. It is usually found in open grasslands or scrublands with low-growing vegetation. According to the CNDDB, several detections of burrowing owl have occurred within the vicinity of the subject property. As shown in the attached *Exhibit 7 – CNDDB Occurrences*, a burrowing owl was detected north of Avenue Q and east of 10th Street, approximately 1.25 miles northwest of the project site, in 2006. This species does not nest on the subject property. The project site does; however, contain a small number of burrow complexes (i.e., ground squirrel burrows) which are suitable for burrowing owl; however, these complexes lacked any sign of burrowing owl use or occupation (i.e., feathers, pellets, and/or wash). Burrowing owl was not detected on the subject property. |
| ferruginous hawk (*Buteo regalis*) | SWL (Wintering) | Moderately Low. The ferruginous hawk utilizes open grasslands, sagebrush flats, and desert scrub on low foothills and fringes of pinyon and juniper woodlands. This hawk eats mostly lagomorphs (rabbits), ground squirrels, and mice. According to the CNDDB, this species was detected in two (2) locations at the northwest end of Anaverde Valley in 2011, approximately 4.33 miles west-northwest of the subject property. Habitat on-site is structurally suitable, although sustained presence is unlikely due to the site's disturbance levels. |
| Swainson's hawk (*Buteo swainsoni*) | ST (Nesting) | Low. The Swainson's hawk breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. This raptor requires adjacent suitable foraging habitat such as grasslands, or alfalfa or grain fields supporting rodent populations. The attached *Exhibit 7 – CNDDB Occurrences* shows a detection of Swainson's hawk in the vicinity of Palmdale in 1927. Marginally suitable habitat is present, although this species would not be expected to occur on-site due to the level of disturbance on the property. |
| mountain plover (*Charadrius montanus*) | SSC – Second Priority (Wintering) | Low. The mountain plover occurs in short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. This species prefers short vegetation, bare ground, flat topography, and grazed areas with burrowing rodents. According to the CNDDB, the mountain plover was detected at A&G Sod Farms southwest of the intersection of 50th Street East and Avenue N, just east of Palmdale Airport, approximately six (6) miles northeast of the subject property. Habitat on-site is marginally suitable, although this species was not detected on the project site. |

| SPECIES | SENSITIVE SPECIES STATUS | PRESENCE/ABSENCE/PROBABILITY OF OCCURRENCE ON THE SITE |
|---|---|---|
| northern harrier (*Circus hudsonius*) | SSC – Third Priority (Nesting) | Not Present. The northern harrier breeds in large, undisturbed wetlands, grasslands with low, thick vegetation, freshwater and brackish marshes, lightly grazed meadows, old fields, tundra, dry upland prairies, drained marshlands, high-desert shrubsteppe and riverine woodlands across Canada and the northern U.S. During winter this species utilizes a range of habitats with low vegetation, including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, old fields, estuaries, open floodplains and marshes. Marginally suitable wintering habitat is present on-site, although this raptor would not nest on the subject property. |
| California horned lark (*Eremophila alpestris actia*) | SWL | Moderately Low. The California horned lark is common throughout the state; however, numbers have been recently declining in urbanized areas of southern California. This bird favors bare, dry ground and areas of short, sparse vegetation; and avoids places where grasses grow more than a couple of inches high. Common habitats include prairies, deserts, tundra, beaches, dunes, and heavily grazed pastures. Horned larks also frequent human-cleared areas, such as plowed fields and mowed expanses around airstrips. This species was not detected on-site. |
| prairie falcon (*Falco mexicanus*) | SWL (Nesting) | Not Present (Low Foraging Potential). This raptor breeds in open country with bluffs and cliffs to nest on. Breeding habitats include grasslands, shrubsteppe desert, areas of mixed shrubs and grasslands, or alpine tundra that supports abundant ground squirrel or pika populations. This species would not nest on-site due to the lack of cliffs on the subject property, but could potentially forage on-site. |
| American peregrine falcon (*Falco peregrinus anatum*) | FDL, SDL, SFP (Nesting) | Not Present. The American peregrine falcon breeds in open landscapes with cliffs or skyscrapers and nests along rivers, coastlines and cities, where rock pigeons offer a reliable food supply. During migration and winter, this falcon occurs in nearly any open habitat, but more commonly along barrier islands, mudflats, coastlines, lake edges and mountain chains. Habitat on-site is unsuitable for nesting; therefore this subspecies would not be expected to nest on-site. |
| loggerhead shrike (*Lanius ludovicianus*) | SSC – Second Priority (Nesting) | Moderately Low. The loggerhead shrike occurs in the western Mojave Desert year-round. This species occurs in a variety of habitats, but in the western Mojave Desert it occurs in Mojavean desert scrub habitats and Joshua tree woodland. The loggerhead shrike, often referred to as the "butcher bird" because of how it will often impale its prey on thorns or other sharp objects to be consumed later, preys on arthropods, amphibians, small reptiles, small birds, and small mammals. According to the CNDDB, the nearest detection of loggerhead shrike occurred in the Sierra Pelona Mountains, approximately three (3) miles southwest of the project site. Although this species was not detected on the subject property, it could potentially occur due to structurally suitable habitats being present. Sustained presence, however, would likely be precluded due to the level of disturbance on-site. This species was not detected on the subject property. |

| SPECIES | SENSITIVE SPECIES STATUS | PRESENCE/ABSENCE/PROBABILITY OF OCCURRENCE ON THE SITE |
|---|---|---|
| black-tailed gnatcatcher (*Polioptila melanura*) | SWL | Moderately Low. This species of leaf-gleaning insectivore occurs in the western Mojave Desert, and prefers to nest and forage along desert washes and arroyos with dense creosote bush and/or saltbush (*Atriplex* spp.) along the edge. The black-tailed gnatcatcher; however, will also occur in desert scrub habitats. This species was not detected on the subject property, but contains a moderately low probability of occurrence on-site. |
| Crissal thrasher (*Toxostoma crissale*) | SSC – Third Priority | Not Present. This species occurs primarily at the upper reaches of arroyos in the western Mojave Desert. These areas are often comprised of dense or even closed-canopy habitats. Habitat on the subject property is not suitable, and Crissal thrasher was not detected on-site. |
| Le Conte's Thrasher (*Toxostoma lecontei*) | SSC – First Priority | Moderate. Habitats on the subject property are suitable for this species. Le Conte's thrasher prefers habitats of open desert scrub often comprised of saltbush and creosote bush. The attached *Exhibit 7 – CNDDB Occurrences* shows a detection of this thrasher in the vicinity of Palmdale in 1920. This species was not detected on the subject property. |
| least Bell's vireo (*Vireo bellii pusillus*) | FE, SE (Nesting) | Not Present. Least Bell's vireo is a summer resident of southern California and occurs in low riparian areas in the vicinity of water or in dry river bottoms. This vireo nests along margins of shrubs or on twigs projecting into pathways, usually on willow (*Salix* spp.), *Baccharis* spp. or mesquite (*Prosopis* spp.). As depicted on the attached *Exhibit 7 – CNDDB Occurrences*, least Bell's vireo was detected on the margin of Una Lake in 2005. Suitable habitat is not present on-site, and this species would not be expected to occur on the subject property. |
| Mammals | | |
| pallid bat (*Antrozous pallidus*) | SSC | Not Present. This species of bat, similar to that of the California leaf-nosed bat, is a "gleaning" bat in which it forages on the ground for insects; however, it detects its prey through sound. The pallid bat roosts in rock crevices, mines, and hollow trees. Suitable roosting habitat is not present on-site, and this bat was not detected on the subject property. |
| pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*) | SSC | Moderately Low. This subspecies occurs primarily in open desert scrub habitats. Detailed life history information is lacking on this subspecies; however, Hall (1959) depicts this subspecies' range which includes the subject property. Unidentified fossorial mammal burrows were detected on-site, although trapping was not conducted. |
| Townsend's big-eared bat (*Corynorhinus townsendii*) | SSC | Moderately Low. The Townsend's big-eared bat is a highly versatile flier, and primarily preys upon moths. This species roosts in caves, mines, and buildings. No suitable roost sites were detected on the subject property; however, it could occasionally utilize the site to forage. |
| spotted bat (*Euderma maculatum*) | SSC | Moderately Low. This species occurs in a wide array of habitats. The spotted bat may travel as much as 50 miles to foraging areas. This species roosts in rock crevices on cliff faces and within caves. No suitable roost sites are present within the project site; however, it could occasionally utilize the site to forage. |

| SPECIES | SENSITIVE SPECIES STATUS | PRESENCE/ABSENCE/PROBABILITY OF OCCURRENCE ON THE SITE |
|---|---|---|
| western mastiff bat (*Eumops perotis californicus*) | SSC | Low. This species prefers rocky canyons. It requires adequate space beneath its roost in order to take flight because the western mastiff bat cannot achieve flight from the surface. This species roosts in rock crevices on cliff faces and occasionally buildings. No suitable roost sites are present within the site; however, it could occasionally utilize the site to forage. |
| silver-haired bat (*Lasionycteris noctivagans*) | SSA | Not Present. This species occurs primarily within or near forested areas, usually near a water source. It roosts in loose bark, secondary cavities (i.e., unused woodpecker holes), and hollow trees. Habitat adjacent to and on the subject property is not suitable. |
| western red bat (*Lasiurus blossevillii*) | SSC | Not Present. Lasurine bats are generally solitary. This species prefers riparian areas, and often roosts in cottonwood (*Populus* spp.) and willow (*Salix* spp.) trees. Moths are the preferred food item; however, other species of flying insects will be consumed. No suitable roost sites are present on the subject property. |
| hoary bat (*Lasiurus cinereus*) | SSA | Not Present. This species prefers deciduous and coniferous forests, and often those types of trees to roost. Moths are the preferred food item; however, other species of flying insects and occasionally small bat species will be consumed. No suitable roost sites or habitat is present on-site. |
| California leaf-nosed bat (*Macrotus californicus*) | SSC | Moderately Low. This species of bat is a "gleaning" bat in which it forages on the ground for insects utilizing primarily sight. It uses a specialized hovering flight to capture prey. This bat roosts by day in caves and mines, and often in buildings and below bridges by night. No suitable roost sites are present on-site; however, it could occasionally utilize the site to forage. |
| western small-footed myotis (*Myotis ciliolabrum*) | SSA | Moderately Low. The western small-footed myotis roosts singly or in small communal groups in rock crevices, mines, caves, under exfoliating bark, or in buildings. This species consumes a wide variety of flying insects which include moths and beetles. Suitable roost sites are not present on-site, although this species may occasionally forage above the property. |
| long-eared myotis (*Myotis evotis*) | SSA | Not Present. The long-eared myotis occurs primarily in forested areas. This species gleans moths and beetles from vegetation. Researchers believe that this species may rely more upon hearing to locate prey, rather than echolocation. The long-eared myotis roosts in a variety of areas. Habitat on the subject property is not suitable for this species. |
| fringed myotis (*Myotis thysanodes*) | SSA | Not Present. This species occurs in oak, pinyon pine, ponderosa pine, and desert scrub habitats. It often occurs at high elevations 1,220 meters to 3,050 meters (4,000 feet to 10,000 feet). The fringed myotis hunts prey (i.e., moths, beetles, and other insects) on the wing, but may occasionally glean from vegetation. Although desert scrub is present on-site, elevations on the site are lower than those typical of where this species occurs. |
| long-legged myotis (*Myotis volans*) | SSA | Not Present. This species occurs in coniferous forests at high elevations. It forages for flying insects, typically moths, on the wing within forest openings. The long-legged myotis roosts in snags (i.e., dead trees), crevices, caves, and buildings. Habitats on the subject property are not suitable for this species. |
| Yuma myotis (*Myotis yumanensis*) | SSA | Low. The Yuma myotis roosts in large groups in vertical cracks in cliff faces, buildings, and under bridges. This species' distribution is closely tied to bodies of water, which are not present on the subject site. |

| SPECIES | SENSITIVE SPECIES STATUS | PRESENCE/ABSENCE/PROBABILITY OF OCCURRENCE ON THE SITE |
|---|---|---|
| pocketed free-tailed bat (*Nyctinomops femorosaccus*) | SSC | Not Present. Free-tailed bats are swift fliers, and often pursue small flying insects, such as small moths, on the wing. This species prefers habitats close to riparian areas, and often roosts in caves, rock crevices, and buildings. The pocketed free-tailed bat gets its common name due to an anatomical fold under the leg formed by the attachment of the wing membrane to the tibia. No suitable roost sites were detected on the subject property due to the lack of riparian habitat. |
| big free-tailed bat (*Nyctinomops macrotis*) | SSC | Not Present. This species has long, narrow, tapering wings which give it speed and allow it to travel long distances. This species prefers rugged habitats, and often roosts in crevices in cliff faces, buildings, and occasionally hollow trees. No suitable roost sites were detected on the subject site; therefore it likely does not utilize the site. |
| San Joaquin pocket mouse (*Perognathus inornatus*) | SSA | Moderately Low. San Joaquin pocket mouse is associated with fine-textured, sandy, and friable soils in grassland, oak savanna and arid scrubland in the southern Sacramento Valley, Salinas Valley, San Joaquin Valley and adjacent foothills, and south to the Mojave Desert. As depicted by the attached *Exhibit 7 – CNDDB Occurrences*, this pocket mouse was detected in the vicinity of Palmdale in 1931. Unidentified fossorial mammal burrows were detected on-site, although trapping was not conducted. |
| Mohave ground squirrel (*Xerospermophilus mojavensis*) | ST | Low. Mohave ground squirrel is restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo Counties. Preferred habitats include open desert scrub, alkali desert scrub, Joshua tree woodland and sparse annual grasslands. The Mohave ground squirrel prefers sandy to gravelly soils, and tends to avoid rocky areas. A small number of potentially suitable burrows were detected on-site. The attached *Exhibit 7 – CNDDB Occurrences* shows two (2) historic detections near the subject property; the nearest being at the intersection of Sierra Highway and Avenue P in 1944, approximately 1.5 miles north-northwest of the site. Predation from animals within the adjacent residential development, habitat fragmentation and adjacent roadways would likely preclude presence of Mohave ground squirrel on-site. |
| American badger (*Taxidea taxus*) | SSC | Low. The American badger is a secretive organism in open grassland and disturbed habitats, but has become rare in areas of human activity. It could roam onto the site from adjacent open areas, but this possible occurrence is expected to be transient. |

# 6.0 WILDLIFE CORRIDORS AND BIOGEOGRAPHY

## WILDLIFE CORRIDORS AND BIOGEOGRAPHY

Wildlife use of corridors may be fixed or flexible, depending upon the type of organism and the size and complexity of the corridor zone. Animals that move along corridors as part of an evolutionary-based pattern of migration or dispersal may be genetically programmed to follow predetermined and sometimes ancient migration routes and may have little or no individual ability to modify their behavior, even in the face of abrupt physical changes or barriers. When confronted with impassible barriers, they may have no appropriate avoidance or alternative choice response behaviorally. In such cases, actions that physically obstruct corridors

may result in population dislocation, inability to reach essential seasonal resource areas, loss of individual animals, and overall population declines.

Organisms are generally driven to disperse through mechanisms such as the scarcity of support resources (such as food, water, microhabitats, shelter, etc.), migratory genetic programming, and accidental dispersal, such as flooding events carrying individuals to downstream locations, fire-driven flight, or similar mechanisms. They sometimes do so along well-defined corridors (for example, the Pacific Flyway for migratory birds or through connected stream systems in the case of amphibians dependent on moist environments). Terrestrial habitat generalists (for example, deer, rattlesnakes, coyote, bobcat, woodrats, etc.) usually do not migrate or move substantially unless seasonal behaviors or ecological factors necessitate movement in order to locate and utilize critical support resources.

Biogeographic theory maintains that any habitat patch, or island, which experiences genetic isolation, will undergo eventual extinction if the habitat unit is too small to support genetic variability in any given species. It is not the movement of the animal which is important; it is the movement of genetic material on a per species basis through an ecosystem which is important over time. The connection is vital not so that individual animals can move freely (although that can be true with larger predators like mountain lion), but so that genetic exchange and corresponding genetic variability can be achieved incrementally throughout the habitat through reproductive processes.

The subject property is located on a relatively flat area of the western Mojave Desert with very little topographic variation. The project site maintains some potential for the downward and outward movement of a number of highly mobile organisms. Because the property is located within the western Mojave Desert, an area which is often considered inhospitable to numerous people, natural connective desert scrub and desert wash habitats remain intact throughout much of the surrounding area. Existing development surrounding much of the subject property significantly inhibits animal movement in the vicinity of the project site.

*Exhibit 8 – 2017 Biogeographic Aerial Photograph*, attached, depicts the site relative to its biogeographic location. The majority of the subject property's perimeter is surrounded by existing development. Though the proposed project adds incrementally to habitat loss in the western Mojave Desert, it does not obstruct a wildlife corridor or movement pathway.

## AVIAN MIGRATORY STOPOVER

Desert scrub and annual non-native grassland habitats within the subject property may serve as a stopover, resting, and foraging area for some migratory birds moving along the Pacific Flyway. Birds which typically migrate through the desert include, but are not limited to, black-throated sparrow (though considered a short-distance migrant), white-crowned sparrow (*Zonotrichia leucophrys*), long-eared owl (*Asio otus*), ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), and phainopepla (*Phainopepla nitens*).

# 7.0 PROJECT ASSOCIATED IMPACTS AND RECOMMENDED MITIGATION MEASURES

## PURPOSE

The purpose of this section is to assess the potential environmental impacts of the construction of the proposed project on the subject property. This section identifies the direct and indirect effects of these activities on natural habitats and organisms found on or in close proximity to the subject site. Potential negative effects have been classified as direct or indirect, and significant or not significant.

In response to these potential impacts, mitigation measures identified below have been proposed for consideration by the City of Palmdale in order to minimize or offset these effects. Proposed mitigation measures in this assessment are considered preliminary and subject to modification and negotiation until such time as the City of Palmdale has determined that potentially significant impacts associated with the proposed project have been avoided, substantially reduced, fully mitigated, or satisfactorily minimized to a level of non-significance.

## PROJECT IMPACTS

Project implementation would develop the entirety of the subject property. Table 2, below, summarizes these impacts.

Table 2 – Vegetation Communities and Land Cover Impacts (Acres)

| Vegetation Community/Land Cover | Impact |
|---|---|
| Great Basin Sagebrush – Rubber Rabbitbrush Scrub | 1.52 |
| Shadscale – Four-Wing Saltbush Scrub | 0.33 |
| Annual Non-Native Grassland | 1.10 |
| Disturbed | 1.80 |
| TOTAL | 4.75 |

## SENSITIVE SPECIES IMPACTS

All of the species described in Section 5.0 above, which have even a "Low" probability of occurring on the subject property, may be affected by project implementation. Mitigation measures to offset these potential impacts are described and recommended below.

## OTHER PROJECT ASSOCIATED IMPACTS

### Direct Impacts

1. Grading and construction activities will result in the generation of dust and particulate matter in the immediate vicinity of the project site. Habitat areas surrounding the project site will be subject to coating by dust throughout the construction period. This impact would be considered less-than-significant with the implementation of dust-suppressing actions such as watering the project site frequently.

2. Without training, construction personnel have the potential to be destructive to all forms of plant and animal life. Small mammals and reptiles are particularly subject to disturbance from harassment, capture, or destruction. This temporary direct effect can be minimized to a level of non-significance by providing written and verbal instructions to all personnel on the project site and contractually obligating these personnel to respect the natural environment. Construction fencing (orange safety fencing) is recommended around the perimeter of the work area.

### Indirect Impacts

1. Nighttime lighting is detrimental to most forms of wildlife, particularly nocturnal organisms like small mammals and snakes, because it exposes these animals to higher predation pressure. Lighting should be designed to not shine directly onto adjacent natural areas.

2. Noise, both temporary construction noise and operational noise from the project site, is detrimental to area wildlife.

## PROPOSED MITIGATION MEASURES

### General Mitigation Measures

1. Those standard Best Management Practices ("BMPs") that apply to the proposed project shall be adhered to in order to minimize secondary affects from construction activities.

2. All construction personnel shall be advised to stay out of natural habitat to the greatest extent feasible. Orange safety fencing shall be installed around the perimeter of the work area to discourage entry into natural areas.

3. During all construction activities, a water truck shall apply water to all areas which have the potential to generate dust to minimize the potential for dust pollution. Additionally, stabilized construction entrances/exits will aid in the reduction of dust pollution.

4. All workers on the project site during grading and construction should be given literature and a brief instruction seminar which will advise them on identifying sensitive organisms and habitats and how to best avoid these organisms and areas.

5. In accordance with the MBTA, if vegetation removal shall occur during the bird nesting season; generally March 1 to August 1, a qualified biologist will conduct pre-construction bird nesting surveys in order to avoid impacts to nesting birds. If active bird nest(s) are detected during the pre-construction nesting surveys, an adequate no disturbance buffer around the active nest(s) will be established as determined by a qualified biologist until the nest(s) have fledged.

## DETERMINATION OF IMPACT SIGNIFICANCE WITH MITIGATION MEASURES

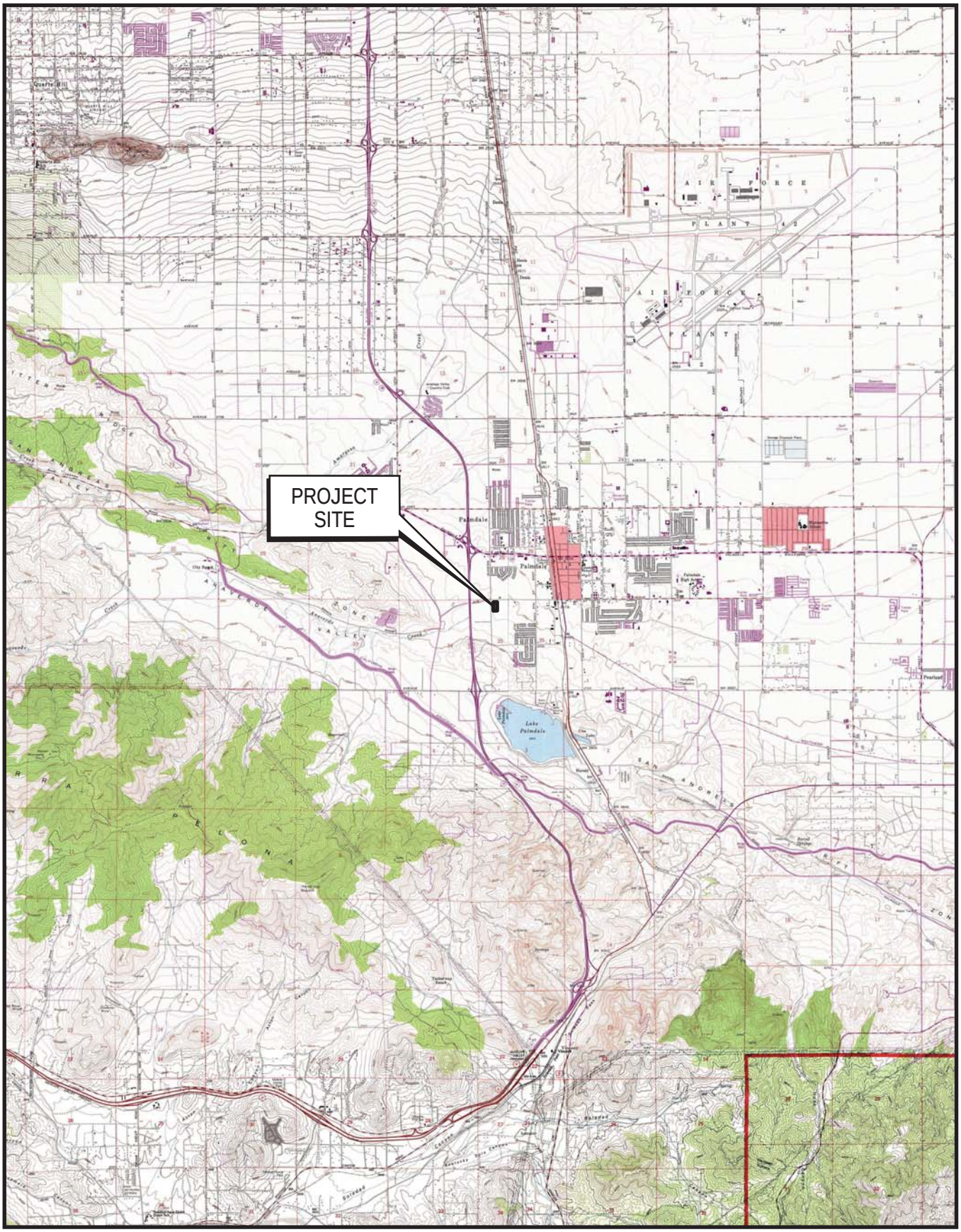
With the implementation of the mitigation measures suggested above, or similar measures which may be required by the City of Palmdale, CDFW, and USFWS, the environmental effects anticipated to occur from

the proposed project to biological resources of the immediate area can be reduced and mitigated to a level considered not significant.

**CERTIFICATION**: I hereby certify that the statements and exhibits contained in this report present data and information required for this General Biological Assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

14 January 2019

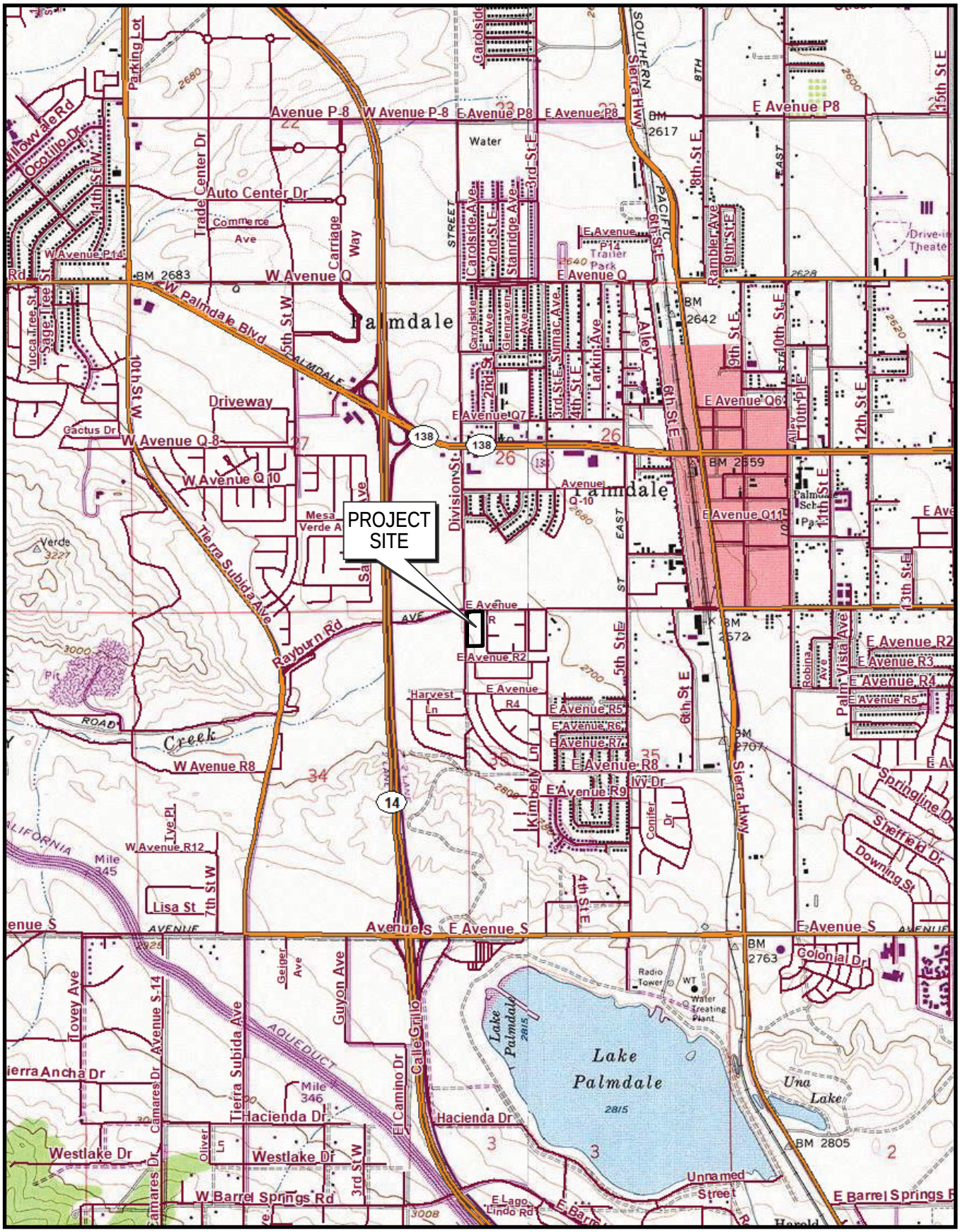
Samuel Reed, Principal, Scientific Collecting Permit No. 002267 — Date
USFWS Recovery Permit No. TE839896-6




TERACOR RESOURCE MANAGEMENT

JUNIPER GROVE APARTMENTS - PALMDALE
REPORT DATE: JANUARY 2019
SOURCE: NATIONAL GEOGRAPHIC TOPO!

**Exhibit 1**
Regional Location Map



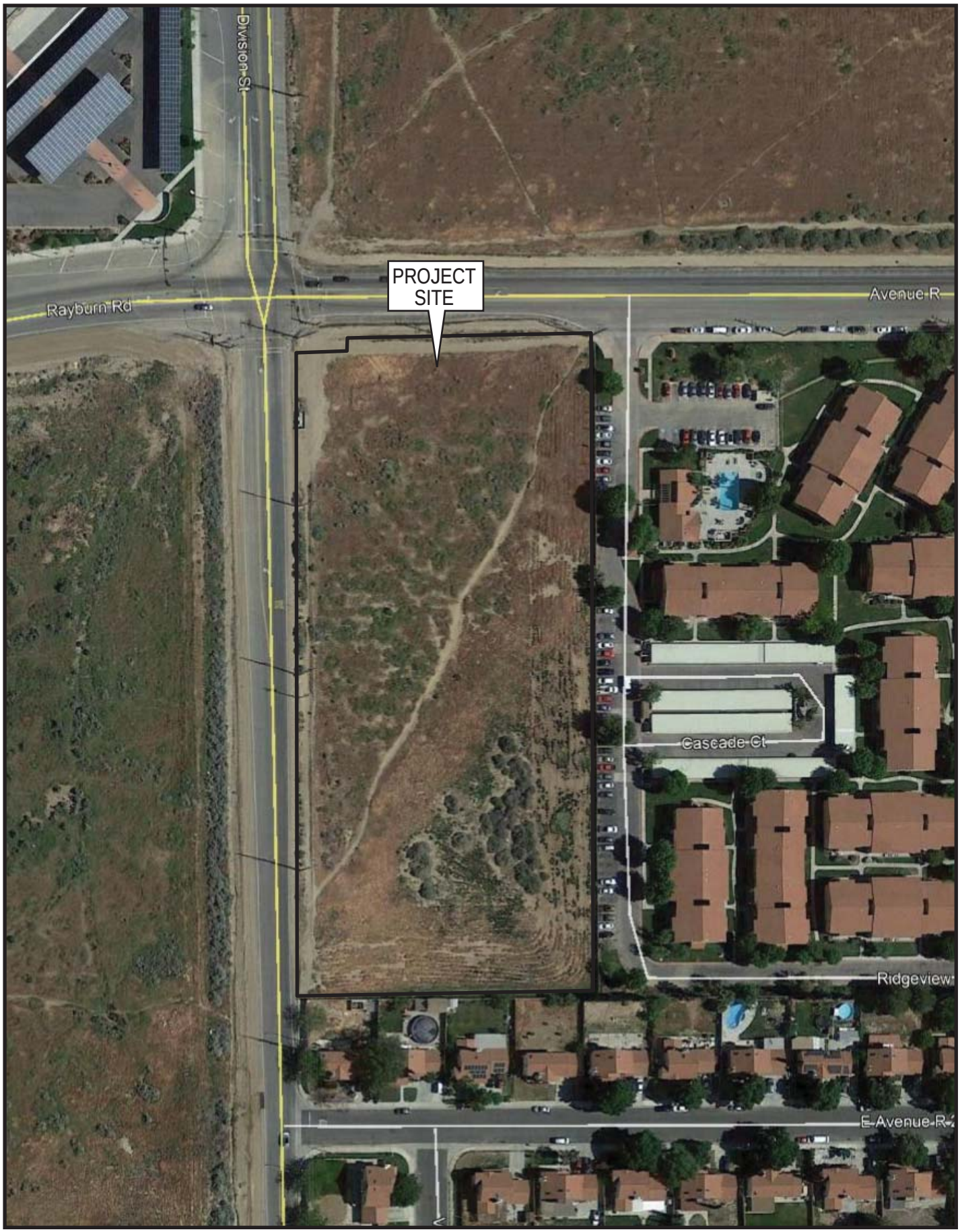

TERACOR RESOURCE MANAGEMENT

North

JUNIPER GROVE APARTMENTS - PALMDALE
SOURCE: RITTER RIDGE AND PALMDALE
CALIFORNIA USGS QUADRANGLES

0 1/2
Mile

Exhibit 2
USGS Topographic Map




TERACOR RESOURCE MANAGEMENT

North

JUNIPER GROVE APARTMENTS - PALMDALE
REPORT DATE: JANUARY 2019
SOURCE: GOOGLE EARTH PRO

**Exhibit 3**
2017 Aerial Photograph


TERACOR RESOURCE MANAGEMENT

North

JUNIPER GROVE APARTMENTS - PALMDALE
REPORT DATE: JANUARY 2019
SOURCE: NRCS WEB SOIL SURVEY

Exhibit 4
Soil Survey Map


Photo 1 - This westerly view toward Division Street from near the southeast corner of the subject property depicts the southern portion of the project site. The southern portion of the site has been disked, presumably for fire suppression purposes. As a result, weedy and non-native grass vegetation is abundant in this portion of the property.


Photo 2 - A northwest-facing view of the subject site from near the southeast corner of the property toward the intersection of Division Street and Avenue R shows the shadscale - four-wing saltbush scrub on-site. Weedy and non-native grass vegetation is prevalent.


Photo 3 - This north-facing view toward Avenue R shows a close-up of the shadscale - four-wing saltbush scrub in the southeastern portion of the subject property.


Photo 4 - The northern portion of the project site adjacent to Avenue R is disturbed and largely unvegetated. The intersection of Avenue R and Division Street and the Antelope Valley Freeway (State Route 14) is shown in the background.


Photo 5 - The majority of the subject property is shown in this southwestern view from near the northeast corner of the project site. The foreground of the photo is disturbed and largely unvegetated, while the central portion of the site contains more intact desert scrub.

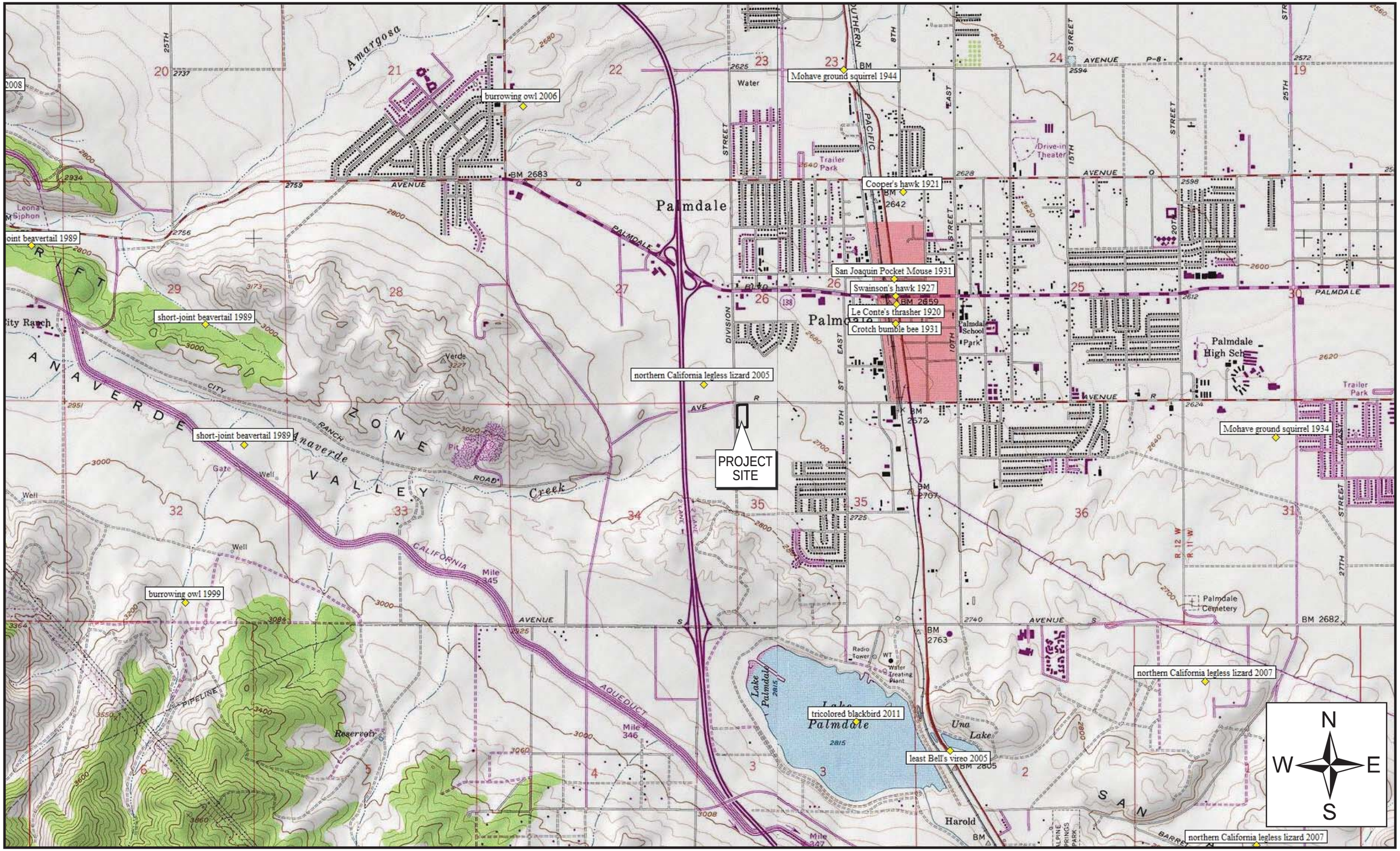

Photo 6 - This small mammal burrow shown was detected in the southern portion of the subject site. This burrow appeared to be utilized by a ground squirrel.


TERACOR RESOURCE MANAGEMENT

North

JUNIPER GROVE APARTMENTS - PALMDALE
REPORT DATE: JANUARY 2019
SOURCE: GOOGLE EARTH PRO

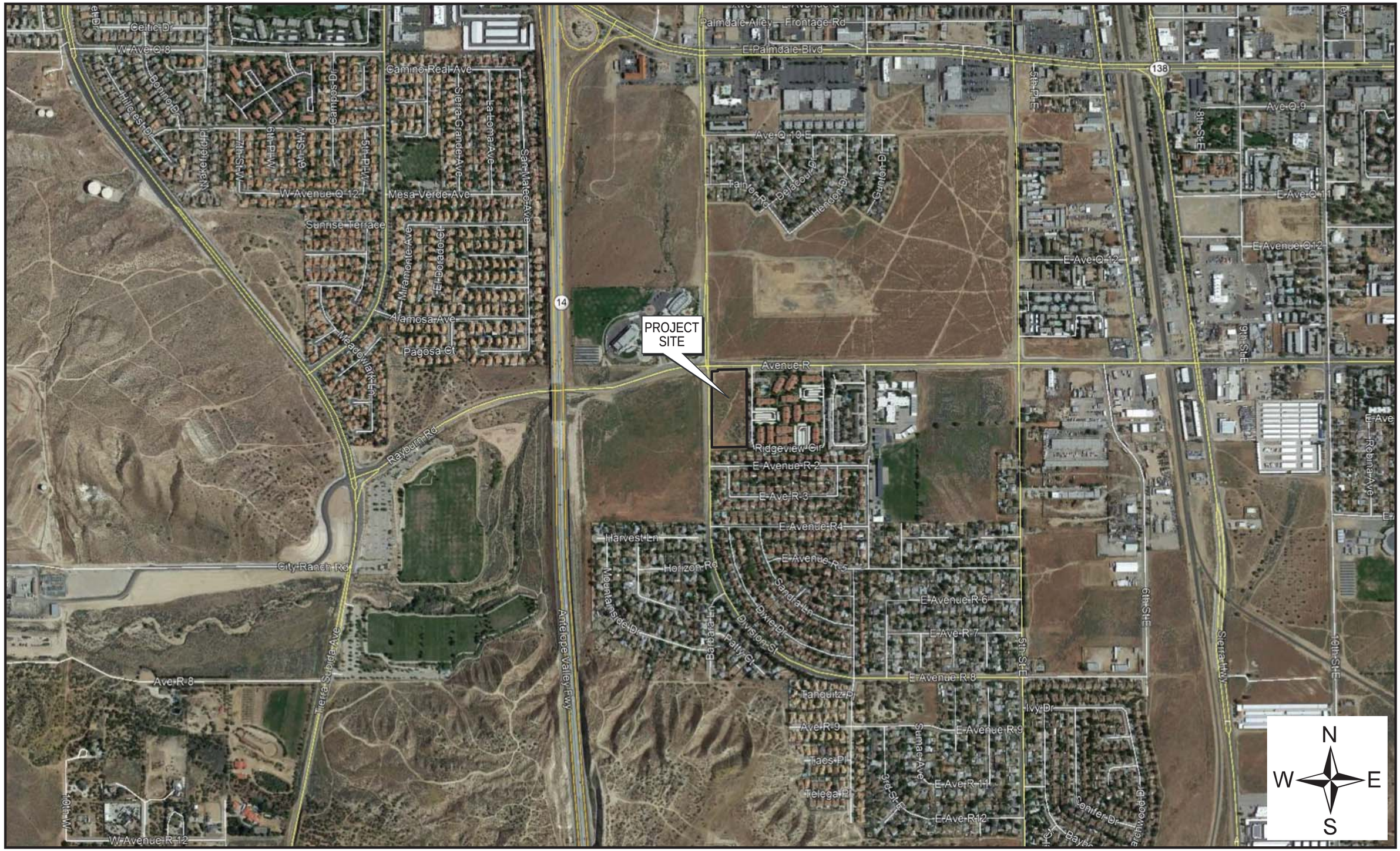
**Exhibit 6**
Vegetation Communities and Land Covers




JUNIPER GROVE APARTMENTS - PALMDALE
REPORT DATE: JANUARY 2019
SOURCE: NATIONAL GEOGRAPHIC TOPO! AND CNDDB

TERACOR RESOURCE MANAGEMENT

Exhibit 7
CNDDB Occurrences




TERACOR RESOURCE MANAGEMENT

JUNIPER GROVE APARTMENTS
REPORT DATE: JANUARY 2019
SOURCE: GOOGLE EARTH PRO

**Exhibit 8**
2017 Biogeographic Aerial Photograph

# APPENDIX A
# FLORAL COMPENDIUM

The species listed below were detected within the subject property during the 05 December 2018 field survey. Field identifications are a composite list prepared by S. Reed and J. Reed. Uncertain identifications were confirmed by M. Long, Consulting Biologist. Scientific names follow *The Jepson Manual*, 2012, and have been updated following the Jepson Online Interchange for California Floristics database (2014). Non-native species have been noted with an asterisk (*) following the scientific name.

| Scientific Name | Common Name | Species Status |
|---|---|---|
| Asteraceae | Sunflower Family | |
| *Artemisia tridentata* | Great Basin sagebrush | Common |
| *Ericameria nauseosa* | rubber rabbitbrush | Common |
| | | |
| Brassicaceae | Mustard Family | |
| *Hirschfeldia incana** | short-pod mustard | Common |
| *Sisymbrium* sp.* | sisymbrium | Common |
| | | |
| Chenopodiaceae | Goosefoot Family | |
| *Atriplex canescens* | four-wing saltbush | Common |
| *Atriplex confertifolia* | shadscale | Common |
| *Chenopodium* sp. | goosefoot | Common |
| *Krascheninnikovia lanata* | winter fat | Common |
| *Salsola tragus** | Russian thistle | Common |
| | | |
| Euphorbiaceae | Spurge Family | |
| *Croton setiger* | doveweed | Common |
| | | |
| Oleaceae | Olive Family | |
| *Olea europaea** | European olive | Common |
| | | |
| Poaceae | Grass Family | |
| *Bromus tectorum** | cheat grass | Common |
| | | |
| Solanaceae | Nightshade Family | |
| *Lycium cooperi* | Cooper's box-thorn | Common |
| | | |
| Zygophyllaceae | Caltrop Family | |
| *Larrea tridentata* | creosote bush | Common |

# APPENDIX B
# FAUNAL COMPENDIUM

## BIRDS

Birds were observed with 8x32 and 10x42 binoculars. Birds were identified following The Sibley Field Guide to Birds of Western North America (2016), and updated to conform to changes in nomenclature consistent with the most recent American Ornithological Society checklist. Species observed on the subject site are noted by a bold dot (●). Bird species not observed but with the potential to occur on the subject property during the breeding season, non-breeding season, or as a migratory stopover have also been included. Non-native species are denoted with an asterisk (*).

| Scientific Name | Common Name |
|---|---|
| Accipitridae | Hawks, Eagles, Kites |
| *Accipiter striatus* | sharp-shinned hawk |
| *Aquila chrysaetos* | golden eagle |
| *Buteo jamaicensis* | red-tailed hawk |
| *Buteo regalis* | ferruginous hawk |
| *Buteo swainsoni* | Swainson's hawk |
| *Circus hudsonius* | northern harrier |
| | |
| Aegithalidae | Bushtits |
| *Psaltriparus minimus*● | bushtit |
| | |
| Alaudidae | Larks |
| *Eremophila alpestris actia* | California horned lark |
| | |
| Apodidae | Swifts |
| *Aeronautes saxatalis* | white-throated swift |
| | |
| Caprimulgidae | Nightjars, Goatsuckers |
| *Caprimulgus vociferus* | common poorwill |
| *Chordeilus acutipennis* | lesser nighthawk |
| | |
| Cardinalidae | Cardinals |
| *Guiraca caerulea* | blue grosbeak |
| *Passerina amoena* | lazuli bunting |
| *Pheucticus melanocephalus* | black-headed grosbeak |
| | |
| Cathartidae | American Vultures |
| *Cathartes aura* | turkey vulture |

| Scientific Name | Common Name |
|---|---|
| Charadriidae | Plovers |
| *Charadrius montanus* | mountain plover |
| | |
| Columbidae | Pigeons, Doves |
| *Columba livia** | rock pigeon |
| *Zenaida asiatica* | white-winged dove |
| *Zenaida macroura*● | mourning dove |
| | |
| Corvidae | Crows, Jays |
| *Corvus brachyrhynchos*● | American crow |
| *Corvus corax*● | common raven |
| | |
| Cuculidae | Cuckoos, Roadrunners, Anis |
| *Geococcyx californianus* | greater roadrunner |
| | |
| Falconidae | Falcons |
| *Falco mexicanus* | prairie falcon |
| *Falco sparverius* | American kestrel |
| | |
| Fringillidae | Finches |
| *Haemorhous mexicanus* | house finch |
| *Spinus psaltria* | lesser goldfinch |
| *Spinus tristis* | American goldfinch |
| | |
| Icteridae | Blackbirds |
| *Icterus bullockii* | Bullock's oriole |
| *Icterus cucullatus* | hooded oriole |
| | |
| Laniidae | Shrikes |
| *Lanius ludovicianus* | loggerhead shrike |
| | |
| Mimidae | Mockingbirds, Thrashers |
| *Mimus polyglottos*● | northern mockingbird |
| *Toxostoma lecontei* | Le Conte's thrasher |
| | |
| Motacillidae | Wagtails, Pipits |
| *Anthus rubescens* | American pipit |
| | |
| Parulidae | Wood Warblers |
| *Oreothlypis celata*● | orange-crowned warbler |
| *Setophaga coronata* | yellow-rumped warbler |
| | |

| Scientific Name | Common Name |
|---|---|
| Passerellidae | Sparrows |
| *Aimophila ruficeps canescens* | southern California rufous-crowned sparrow |
| *Artemisiospiza belli bellii*● | Bell's sage sparrow |
| *Amphispiza bilineata* | black-throated sparrow |
| *Spizella passerina*● | chipping sparrow |
| *Zonotrichia leucophrys*● | white-crowned sparrow |
| | |
| Passeridae | Old-World Sparrows |
| *Passer domesticus**● | house sparrow |
| | |
| Picidae | Woodpeckers |
| *Colaptes auratus* | northern flicker |
| | |
| Ptilogonatidae | Silky Flycatchers |
| *Phainopepla nitens* | phainopepla |
| | |
| Strigidae | Typical Owls |
| *Athene cunicularia* | burrowing owl |
| *Bubo virginiensis* | great horned owl |
| *Otus kennicottii* | western screech owl |
| | |
| Sturnidae | Starlings |
| *Sturnus vulgaris**● | European starling |
| | |
| Sylviidae | Gnatcatchers |
| *Polioptila caerulea* | blue-gray gnatcatcher |
| *Polioptila melanura* | black-tailed gnatcatcher |
| | |
| Thraupidae | Tanagers |
| *Piranga ludoviciana* | western tanager |
| | |
| Trochilidae | Hummingbirds |
| *Archilochus alexandri* | black-chinned hummingbird |
| *Calypte anna* | Anna's hummingbird |
| *Calypte costae* | Costa's hummingbird |
| *Selasphorus rufus* | rufous hummingbird |
| *Selasphorus sasin* | Allen's hummingbird |
| *Stellula calliope* | calliope hummingbird |
| | |
| Troglodytidae | Wrens |
| *Campylorhynchus brunneicapillus* | cactus wren |
| | |

| Scientific Name | Common Name |
|---|---|
| Turdidae | Thrushes |
| *Catharus guttatus* | hermit thrush |
| *Catharus ustulatus* | Swainson's thrush |
| *Sialia mexicana* | western bluebird |
| *Turdus migratorius* | American robin |
| | |
| Tyrannidae | Tyrant Flycatchers |
| *Myiarchus cinerascens* | ash-throated flycatcher |
| *Sayornis nigricans* | black phoebe |
| *Sayornis saya* | Say's phoebe |
| *Tyrannus verticalis* | western kingbird |
| *Tyrannus vociferans* | Cassin's kingbird |
| | |
| Tytonidae | Barn Owls |
| *Tyto alba* | barn owl |

MAMMALS

Records included herein were derived from field observations and peer-reviewed literature. Species seen or otherwise detected are noted with a bold dot (●). Nomenclature follows *Peterson Field Guides: Mammals of North America* (4th Edition) (Reid 2006). Non-native species are denoted with an asterisk (*).

| Scientific Name | Common Name |
|---|---|
| Canidae | Coyotes, Dogs, Foxes, Jackals, and Wolves |
| *Canis latrans* | coyote |
| *Urocyon cinereoargenteus* | gray fox |
| *Vulpes macrotis arsipus* | desert kit fox |
| | |
| Felidae | Cats |
| *Lynx rufus* | bobcat |
| | |
| Geomyidae | Pocket Gophers |
| *Thomomys bottae*● | Botta's pocket gopher |
| | |
| Heteromyidae | Pocket Mice and Kangaroo Rats |
| *Chaetodipus fallax pallidus* | pallid San Diego pocket mouse |
| *Perognathus inornatus* | San Joaquin pocket mouse |
| | |
| Leporidae | Hares and Rabbits |
| *Lepus californicus* | black-tailed jackrabbit |
| *Sylvilagus audubonii* | desert cottontail |

| Scientific Name | Common Name |
|---|---|
| Mephitidae | Skunks and Stink Badgers |
| *Mephitis mephitis* | striped skunk |
| *Spilogale gracilis* | western spotted skunk |
| | |
| Molossidae | Free-Tailed Bats |
| *Eumops perotis californicus* | western mastiff bat |
| *Tadarida brasiliensis* | Brazilian free-tailed bat |
| | |
| Muridae | Mice, Rats and Voles |
| *Mus musculus** | house mouse |
| *Neotoma lepida* | desert woodrat |
| *Peromyscus boylii* | brush mouse |
| *Peromyscus eremicus* | cactus mouse |
| *Peromyscus maniculatus* | North American deer mouse |
| *Rattus norvegicus** | Norway rat |
| *Reithrodontomys megalotis* | western harvest mouse |
| | |
| Mustelidae | Badgers, Otters, Weasels, and Relatives |
| *Taxidea taxus* | American badger |
| | |
| Phyllostomidae | Leaf-Nosed Bats |
| *Macrotus californicus* | California leaf-nosed bat |
| | |
| Sciuridae | Squirrels and Allies |
| *Ammospermophilus leucurus* | white-tailed antelope ground squirrel |
| *Otospermophilus beecheyi* | California ground squirrel |
| *Xerospermophilus mojavensis* | Mohave ground squirrel |
| | |
| Vespertilionidae | Evening Bats |
| *Antrozous pallidus* | pallid bat |
| *Corynorhinus townsendii* | Townsend's big-eared bat |
| *Eptesicus fuscus* | big brown bat |
| *Euderma maculatum* | spotted bat |
| *Lasiurus xanthinus* | western yellow bat |
| *Myotis californicus* | California myotis |
| *Myotis ciliolabrum* | western small-footed myotis |
| *Myotis yumanensis* | Yuma myotis |
| *Pipistrellus hesperus* | western pipistrelle |

REPTILES AND AMPHIBIANS

Identification of reptile species were made visually, with nomenclature following R.C. Stebbins (2003) *A Field Guide to Western Reptiles and Amphibians,* third edition, updated to conform to the most recent changes in nomenclature utilizing The Center for North American Herpetology ("CNAH"). Species seen or otherwise detected are noted with a bold dot (●). Non-native species are indicated as such with an asterisk (*).

| SCIENTIFIC NAME | COMMON NAME |
|---|---|
| Amphibians | |
| | |
| Toads | |
| | |
| Bufonidae | True Toads |
| *Anaxyrus boreas* | western toad |
| | |
| Reptiles | |
| | |
| Turtles | |
| | |
| Testudinidae | Land Tortoises |
| *Gopherus agassizii* | desert tortoise |
| | |
| Lizards | |
| | |
| Anguidae | Alligator Lizards and Allies |
| *Elgaria multicarinata* | southern alligator lizard |
| | |
| Anniellidae | North American Legless Lizards |
| *Anniella pulchra* | northern California legless lizard |
| | |
| Crotaphytidae | Collared and Leopard Lizards |
| *Gambelia wislizenii* | long-nosed leopard lizard |
| | |
| Iguanidae | Iguanas |
| *Dipsosaurus dorsalis dorsalis* | desert iguana |
| | |
| Phrynosomatidae | Zebra-tailed, Fringe-toed, Spiny, Tree, Side-Blotched, and Horned Lizards |
| *Callisaurus draconoides rhodostictus* | Mojave zebratail lizard |
| *Phrynosoma blainvillii* | coast horned lizard |
| *Phrynosoma platyrhinos calidiarum* | southern desert horned lizard |
| *Sceloporus magister* | desert spiny lizard |

| SCIENTIFIC NAME | COMMON NAME |
|---|---|
| *Uta stansburiana* | common side-blotched lizard |
| | |
| Teiidae | Whiptails and Allies |
| *Aspidoscelis tigris tigris* | Great Basin whiptail |
| | |
| Xantusiidae | Night Lizards |
| *Xantusia vigilis* | desert night lizard |
| | |
| Snakes | |
| | |
| Boidae | Boas |
| *Lichanura trivirgata gracia* | desert rosy boa |
| | |
| Colubridae | Colubrids |
| *Arizona elegans candida* | Mojave glossy snake |
| *Arizona elegans occidentalis* | California glossy snake |
| *Chionactis occipitalis occipitalis* | Mojave shovel-nosed snake |
| *Lampropeltis getula californiae* | California kingsnake |
| *Masticophis flagellum piceus* | red racer |
| *Pituophis catenifer deserticola* | Great Basin gopher snake |
| *Rhinocheilus lecontei* | longnose snake |
| *Salvadora hexalepis* | western patchnose snake |
| *Tantilla planiceps* | western blackhead snake |
| *Trimorphodon lyrophanes* | Baja California lyre snake |
| | |
| Dipsadidae | Slender Rear-Fanged Snakes |
| *Hypsiglena chlorophaea* | desert night snake |
| | |
| Leptotyphlopidae | |
| *Leptotyphlops humilis humilis* | southwestern threadsnake |
| | |
| Viperidae | Vipers |
| *Crotalus mitchellii* | speckled rattlesnake |
| *Crotalus oreganus helleri* | southern pacific rattlesnake |
| *Crotalus scutulatus* | Mojave rattlesnake |

# APPENDIX C
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