Biological Resource Assessment of
APNs 3114-010-047, 049, 050 and 051
Lancaster, California

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Abstract

Development has been proposed for APNs 3114-010-047, 049, 050 and 051, Lancaster, California. The approximately 10 acre (4 ha) study area was located north of Avenue J-8 and east of 35th Street West, T7N, R12W, the SW1/4 of the SW1/4 of the NE1/4 of Section 19, S.B.B.M. A line transect survey was conducted on 21 and 22 October 2021 to inventory biological resources. The proposed project area was characteristic of a highly disturbed California Juniper tree (*Juniperus californica*), Joshua tree (*Yucca brevifolia*), desert scrub ecotone. A total of 19 plant species and 8 wildlife species or their sign were observed during the line transect survey. No desert tortoises (*Gopherus agassizii*) or their sign were observed during the field survey. The proposed project site was not located within the geographic range of the Mohave ground squirrel (*Xerospermophilus mohavensis*). No Mohave ground squirrels have been observed or documented within western Lancaster in the last 30 years. No burrowing owls (*Athene cunicularia*) or their sign were observed within the study site. California ground squirrel (*Citellus beecheyi*) burrows were observed within the study site. California ground squirrel burrows could become cover sites for burrowing owls, within the study site, in the future. No desert kit foxes (*Vulpes macrotis*), or their sign were observed within the study site. Vegetation within the study area provides potential nesting sites for smaller migratory birds. Swainson's hawk (*Buteo swainsoni*) would not be expected to use the study area due to the patch size and a lack of suitable habitat. Approximately 17 Joshua trees (*Yucca brevifolia*) were observed within the study site. No Joshua trees were over 7 feet (2 m) or were branched enough to provide raptor nesting habitat. No other sensitive plants, specifically, alkali mariposa lilies (*Calochortus striatus*), Rosamond eriastrum (*Eriastrum rosamondense*), desert cymopterus (*Cymopterus deserticola*), or Barstow woolly sunflower (*Eriophyllum mohanense*) were observed or are expected due to the lack of suitable habitat. No other state or federally listed species are expected to occur within the proposed project area. Ephemeral washes, and clay pans were observed within the study area.

<u>Recommended Protection Measures</u>:

Compensation and mitigation for impacts to Joshua trees will be determined through the Section 2081 permit process and development of a California Endangered Species Act Incidental Take Permit. If planned correctly mitigation for Joshua trees could include any wash habitat that may be required under a Lake and Streambed Alteration Agreement (LSA) .

Consistent with the "Staff Report on Burrowing Owl Mitigation" a take avoidance (preconstruction) burrowing owl survey will be accomplished no less than 14 days prior to ground disturbance activities to ensure no owls have moved into the study site (CDFG 2012). If burrowing owls are found to have moved into the site, methods noted within the Staff Report will be applied as appropriate.

If possible, removal of vegetation will occur outside the breeding season for migratory birds. Breeding generally lasts from February to July but may extend beyond this time frame. If vegetation removal will occur during or close to the nesting season, a qualified biologist will survey all potential nesting areas to be disturbed as close as possible but no more than one week prior to removal. If active bird nests are found, impacts to nests will be avoided by either delaying work or establishing initial buffer areas of a minimum of 50 feet around active migratory bird species nests. The project biologist will determine if the buffer areas should be increased or decreased based on the nesting bird response to disturbances.

An area that has any of the following characteristics which will be impacted by development: distinct bed, bank, channel, signs of scouring, evidence of water flow, may require a LSA from the CDFW prior to development activities. This project will require consultation with CDFW to determine whether an LSA is required. A jurisdictional delineation of the wash system would be required as part of the LSA process. It would be determined through the LSA process whether mitigation for the wash system is required.

Consultation with Lahontan Water Quality Control Board (LWQCB) may be required to determine the need for a Section 401 water quality permit. This project may be able to use the LWQCB's General Permit R6T-2003-0004 for minor streambed/lakebed alteration projects because the federal Clean Water Act is not applicable.

Significance:

Given the small size of the study area, surrounding development, high disturbance of the habitat, and continual human use; this project is not expected to result in a significant adverse impact to biological resources.

Development has been proposed for APNs 3114-010-047, 049, 050 and 051 (Figure 1). Development would include installation of access roads, parking, and utilities (water, sewer, electric, etc.). The entire project area would be graded prior to construction activities.

An environmental analysis should be conducted prior to any development project. An assessment of biological resources is an integral part of environmental analyses (Gilbert and Dodds 1987). The purpose of this study was to provide an assessment of biological resources potentially occurring within, or utilizing the proposed project area. Specific focus was on the presence/absence of rare, threatened and endangered species of plants and wildlife. Species of concern included the desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Xerospermophilus mohavensis*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), desert kit fox (*Vulpes macrotis)*, Northern California legless lizard (*Anniella pulchra*), Joshua tree (*Yucca brevifolia*), desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflower (*Eriophyllum mohanense*), Rosamond eriastrum (*Eriastrum rosamondense)*, and alkali mariposa lily (*Calochortus striatus*).

Study Area

The approximately 10 acre (4 ha) study area was located north of Avenue J-8 and east of 35th Street West, T7N, R12W, the SW1/4 of the SW1/4 of the NE1/4 of Section 19, S.B.B.M. (Figures 2 and 3). The southern boundary of the project site was formed by Avenue J-8. Single

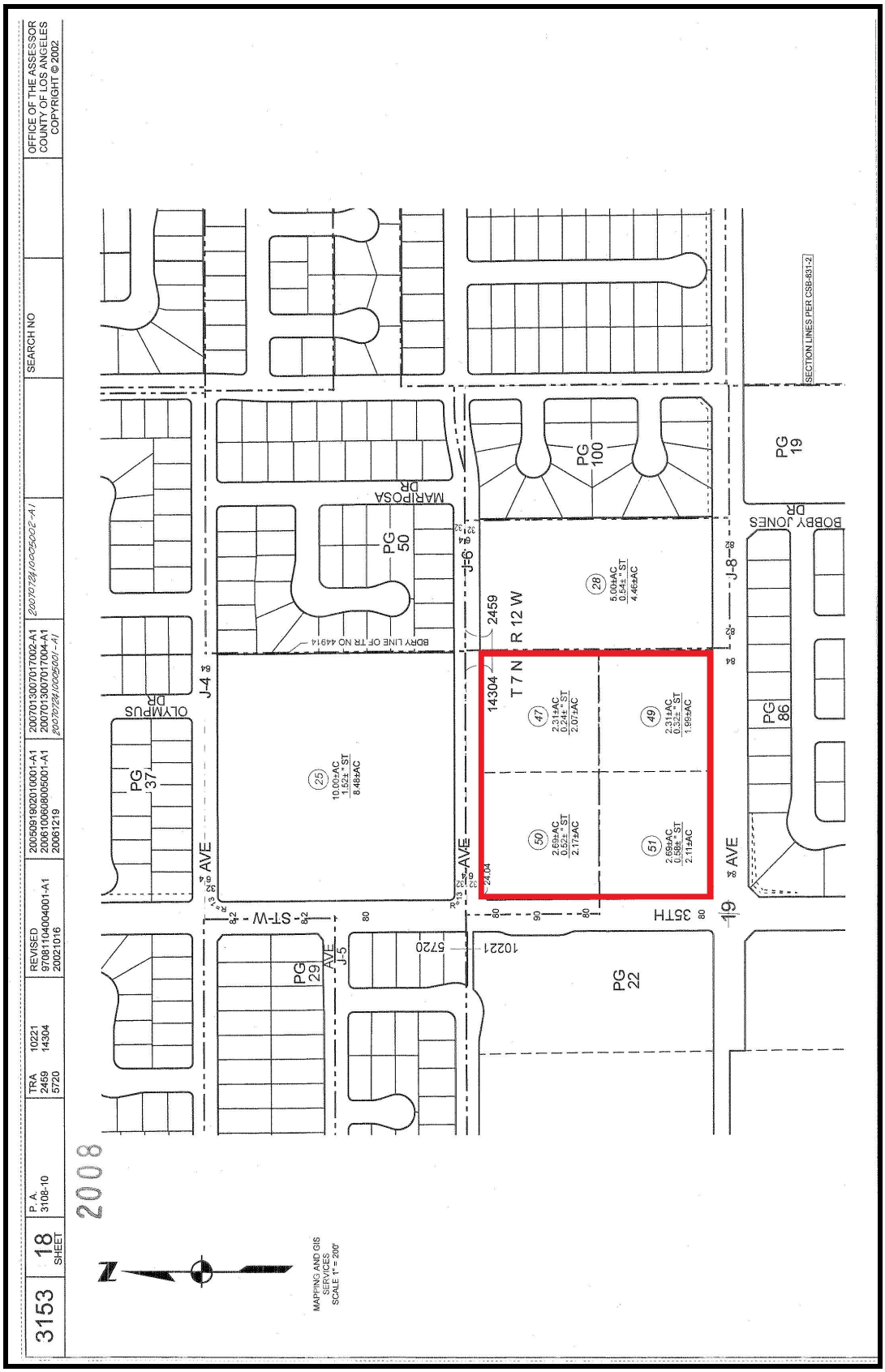

Figure 1. Location of proposed project site as depicted on APN map.

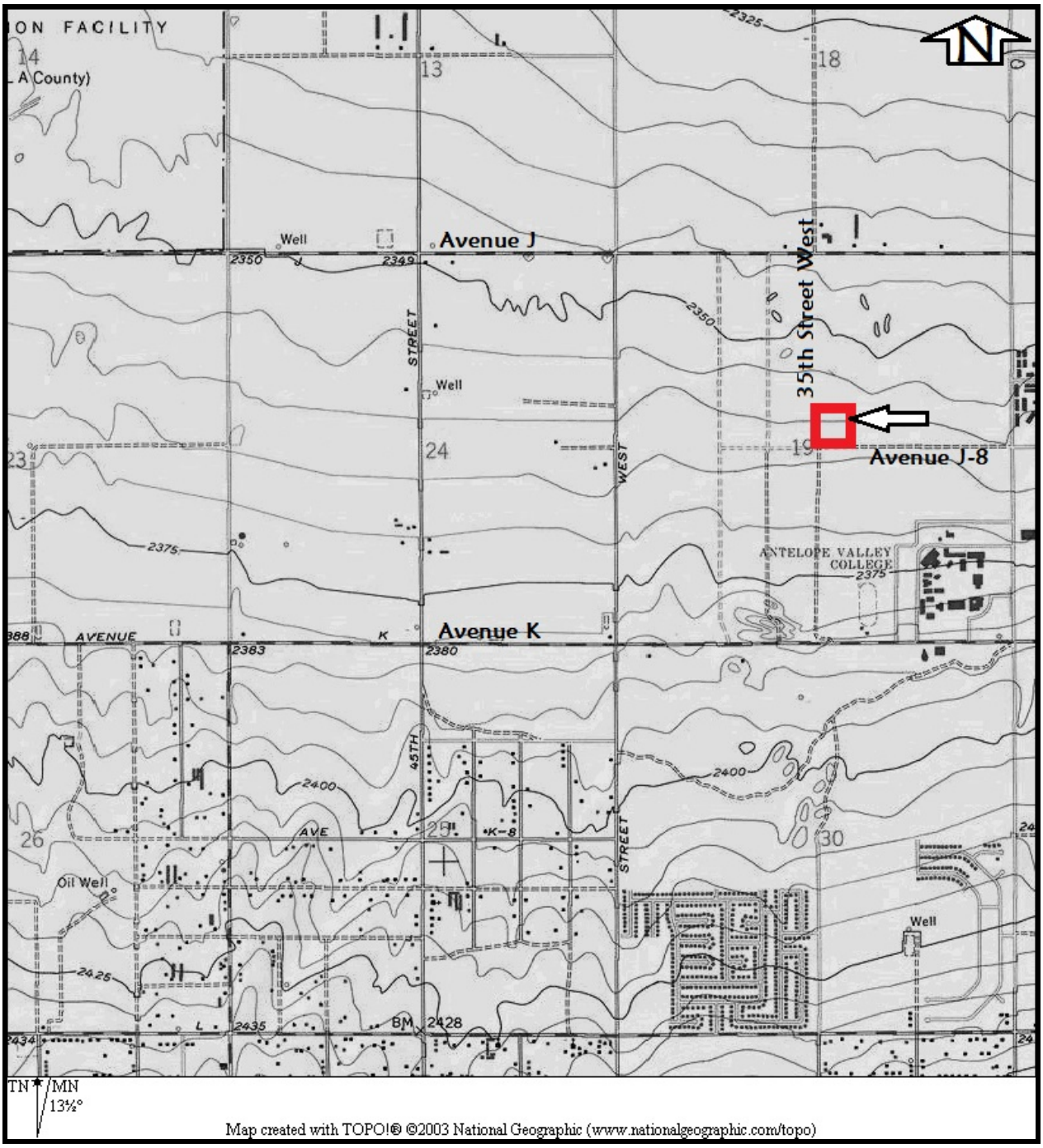

Figure 2. Approximate location of study area as depicted on U.S.G.S. Quadrangle, Lancaster West, Calif., 7.5', 1974.

Figure 3. Approximate location of study area showing surrounding land use as depicted on excerpt from Google Earth Aerial Photography, April 2017.

family homes existed south of Avenue J-8. The western boundary of the project site was formed by 35th Street West. A school existed west of 35th Street West. Avenue J-6 formed the northern boundary of the study site. Apartments existed north of Avenue J-6. A block wall formed the eastern boundary with apartments east of the block wall.

Methods

A line transect survey was conducted to inventory plant and wildlife species occurring within the proposed project area (Cooperrider et al. 1986, Davis 1990). The USFWS (2010) has provided recommendations for survey methodology to determine presence/absence and abundance/distribution of desert tortoises. Line transects were walked in an east-west orientation. Line transects were approximately 660 feet (201 m) long and were spaced approximately 45 feet (15 m) apart (U.S. Fish & Wildlife Service 2010). The California Department of Fish and Game (2012) prepared recommendations for burrowing owl survey methodology. Consistent with the survey protocol the entire site was surveyed and adjacent areas were evaluated (CDFG 2012). A habitat assessment was conducted for Mohave ground squirrels (MGS) to determine whether habitat was present for the species (CDFW 2019, Leitner and Leitner 2017).

All observations of plant and animal species were recorded in field notes. Field guides were used to aid in the identification of plant and animal species (Arnett and Jacques 1981, Borror and White 1970, Burt and Grossenheider 1976, Gould 1981, Jaeger 1969, Knobel 1980, Robbins et al. 1983, Stark 2000). Observations were aided with the use of 10x42 binoculars. Observations of animal tracks, scat, and burrows were also utilized to determine the presence of wildlife species inhabiting the proposed project area (Cooperrider et al. 1986, Halfpenny 1986, Lowrey 2006, Murie 1974). Historical aerial photographs and the USGS topographic map of the study area and surrounding vicinity were reviewed. Review of documented sightings was accomplished using the California Natural Diversity Database (CNDD) (Lancaster West 2020) and eBird.org. Photographs of the study site were taken (Figures 4 and 5).

Results

A total of 13 line transects were walked on 21 and 22 October 2021. Weather conditions consisted of warm temperatures (estimated 70 degrees F), 50% cloud cover, and moderate winds. Clay sandy loam, silty clay, and sandy loam surface soil textures were observed throughout the study area. No blue line streams were found on the USGS topographic map. Clay pans and small interconnected washes were observed within the study area. Cryptobiotic soils were observed within the study area.

The proposed project area was characteristic of a highly disturbed California Juniper tree (*Juniperus californica*), Joshua tree (*Yucca brevifolia*), desert scrub ecotone (Barbour and Major 1988, Barbour et.al. 2007). A total of 19 plant species were observed during the line transect survey (Table 1). Mormon tea (*Ephedra nevadensis*) was the dominant perennial shrub species throughout the study area. Tumble mustard (*Sisymbrium altisissiimum*), schismus (*Schismus* sp.), and cheat grass (*Bromus tectorum*) were the dominant annual species throughout the study

Figure 4. Representative photographs depicting general site characteristics.

Figure 5. Representative photographs depicting general site characteristics.

Table 1. List of plant species that were observed during the line transect survey of APNs 3114-010-047, 049, 050 and 051, Lancaster, California.

Common Name	Scientific Name
California juniper	*Juniperus californica*
Joshua tree	*Yucca brevifolia*
Mormon tea	*Ephedra nevadensis*
Great basin sagebrush	*Artemisia tridentata*
Four-wing saltbush	*Atriplex canescens*
Shadscale	*Atriplex confertifolia*
Rabbit brush	*Chrysothamnus nauseosis*
Cotton thorn	*Tetradymia spinosa*
Little leaf horsebrush	*Tetradymia glabrata*
Hop sage	*Grayia spinosa*
Winter fat	*Eurotia lanata*
Matchweed	*Gutierrezia lucida*
Desert alyssum	*Lepidium fremontii*
Silverscale	*Atriplex argentea*
Desert straw	*Stephanomeria pauciflora*
Five-hook bassia	*Bassia hyssopifolia*
Tumble mustard	*Sisymbrium altisissiimum*
Cheatgrass	*Bromus tectorum*
Schismus	*Schismus* sp.

area. Approximately 17 Joshua trees were observed within the study site. All Joshua trees were 6 feet or less in height except one 7 foot tree. Several old, large Joshua trees were dead and down within the study site. No alkali mariposa lilies, Rosamond eriastrum, Barstow woolly sunflowers, or desert cymopterus, or suitable habitat were observed within the study site.

A total of 8 wildlife species, or their sign were observed during the line transect survey (Table 2). No desert tortoises or their sign were observed during the field survey. No burrowing owls or their sign were observed within the study site during the field survey. California ground squirrel (*Citellus beecheyi*) burrows were observed within the study site. Desert kit foxes were not observed within the study site. No Northern California legless lizards or suitable habitat was observed within the study site. No bird nests were observed within the study site.

Scattered litter, debris, household waste, and yard waste were observed throughout most of the study site. Broken concrete and other construction waste were observed within the study site. Metal posts and portions of chain link fence panels were present along the north, south, and west boundaries. A dirt road, oriented southeast to northwest was observed within the study site. Buffer areas, approximately 50 feet (15 m), had been graded around all sides of the study area. Development is present on all sides of the study area.

Discussion

It is possible that some annual species were not visible during the time the field survey was performed. Cryptogamic crusts were observed within the study site. These are known by several labels such as cryptobiotic crusts, and lichen crusts. These crusts have an important niche in the environment but have not been well mapped. Healthy cryptogamic crusts fix carbon, nitrogen and trap dust effectively preventing wind blown sand (Pietrasiak, 2015). These cryptogamic crusts have a high water holding capacity within the soils that can be used by desert vegetation for a longer period of time (Pietrasiak, 2015). Although not observed, several wildlife species would be expected to occur within the proposed project area (Table 3).

Human impacts are expected to increase as urban development continues to occur in the area. Burrowing animals within the proposed project area are not expected to survive construction activities. More mobile species, such as lagomorphs (rabbits and hares), coyotes (*Canis latrans*), and birds are expected to survive, but they will have less cover and foraging habitat available.

The desert tortoise is a state endangered and federally threatened listed species. The proposed project area was located within the geographic range of the desert tortoise. The proposed project site was not located in critical habitat designated for the Mojave population of the desert tortoise. Based on field observations, desert tortoises are not present within the study area. No protection measures are recommended for desert tortoises.

The Mohave ground squirrel is a state listed threatened species by CDFW. The proposed project area was not located within the geographic range of the Mohave ground squirrel. The western limit of the geographic range of the Mohave ground squirrel is currently thought to be Highway 14. No Mohave ground squirrels have been documented in the past 30 years on the west side of Lancaster (CNDD 2020). No mitigation for this species is recommended.

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of APNs 3114-010-047, 049, 050 and 051, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
California ground squirrel	*Citellus beecheyi*
Desert cottontail	*Sylvilagus auduboni*
Domestic dog	*Canis familiaris*
Mourning dove	*Zenaida macroura*
Common raven	*Corvus corax*
Beetle, fuzzy, black	*Edrotes ventricosus*
Harvester ants	Order: Hymenoptera

Table 3. List of wildlife species that may occur within the study area, APNs 3114-010-047, 049, 050 and 051, Lancaster, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Black-tailed jackrabbit	*Lepus californicus*
Red-tailed hawk	*Buteo jamaicensis*
Northern mockingbird	*Mimus polyglottos*
House finch	*Carpodacus mexicanus*
Side blotched lizard	*Uta stansburiana*
Grasshopper	Order: Orthoptera
Cabbage white butterfly	*Pieris rapae*
Spider	Order: Araneida
Wolf spider	Order: Araneida

Burrowing owls are considered a species of special concern by the California Department of Fish and Wildlife (CDFW). No burrowing owls, or their sign were observed during the survey. California ground squirrel (*Citellus beecheyi*) burrows could become cover sites for burrowing owls within the study site in the future.

Northern California legless lizards are considered a species of special concern by the CDFW. No Northern California legless lizards were observed during the survey. This species requires sandy or loose loamy soils with sparse vegetation and high moisture soil content. The level of moisture, type of soils and density of the vegetation within the study site did not appear the be suitable for Northern California legless lizards. No protection measures for this species are recommended.

Joshua trees are currently being considered for listing under the California Endangered Species Act. A petition for listing was accepted in November 2019 and on 22 September 2020 the California Department of Fish and Game Commission decided that listing may be warranted. This started a one year listing review. The decision made the Joshua tree a candidate species until the listing review is completed. Based on Section 2085 of the Fish and Game Code candidate species are to be treated as though listed during the review period. Although a Joshua tree survey/assessment was not the focus of this study the Joshua trees within the study site appeared to be in good condition and several seedlings were present indicating reproduction was taking place. If the Joshua trees can be avoided with a minimum buffer of 25 feet (9 m) then no consultation with the CDFW would be considered necessary.

No suitable habitat for alkali mariposa lily, Rosamond eriastrum, Barstow woolly sunflower or desert cymopterus was observed within the study site. Based on the results of the field survey these species are not expected to occur within the study area and no protection measures are recommended. No other state or federally listed threatened or endangered species are expected to occur within the proposed project area (California Department of Fish and Wildlife 2020, 2021, Smith and Berg 1988, U.S. Fish & Wildlife Service 2016).

The CDFW administers the Fish and Game Code Section 1602, Lake and Streambed Alteration Program. Small ephemeral washes existed within the study area. Interconnecting clay pans existed within the study area. The study site is an isolated, fragmented remnant of a larger wash system. Given the surrounding development it is unlikely it is receiving water flow from off site. The study site would be expected to retain water within the small washes and interconnecting clay pans during rainfall events which could sustain any remaining biological resources on site. Given the condition of the study site no significant impacts to water resources, plant or wildlife species are expected. However, any project that may impact a water resource either by changing its course or depositing material into it is required to be reviewed under Section 1602.

Landscape design should incorporate the use of native plants to the maximum extent feasible. Native plants that have food and cover value to wildlife should be used in landscape design (Adams and Dove 1989). Diversity of native plants should be maximized in landscape design (Adams and Dove 1989).

Recommended Protection Measures:

Compensation and mitigation for impacts to Joshua trees will be determined through the Section 2081 permit process and development of a California Endangered Species Act Incidental Take Permit. If planned correctly mitigation for Joshua trees could include any wash habitat that may be required under a Lake and Streambed Alteration Agreement (LSA) .

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Significance:

Given the small size of the study area, surrounding development, high disturbance of the habitat, and continual human use; this project is not expected to result in a significant adverse impact to biological resources.

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