Biological Resource Assessment
of APN 3140-034-036
Lancaster, California

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Abstract

Development has been proposed for APN 3140-034-036. The approximately 1 acre (0.4 ha) study area was located west of Challenger Way and north of Avenue J-6, T7N, R12W, a portion of the NW1/4 of the SE1/4 of the NE 1/4 of Section 23, S.B.B.M. A line transect survey was conducted on 26 March 2022 to inventory biological resources. The study area was characteristic of a highly disturbed lot. A total of 10 plant species and 5 wildlife species or their sign were observed during the line transect survey. No suitable habitat for desert tortoise (*Gopherus agassizii*) was present within the study area. No desert kit foxes (*Vulpes macrotis*) or their sign were observed during the line transect survey. The study site did not support Mohave ground squirrel (*Xerospermophilus mohavensis*) habitat. No burrowing owls (*Athene cunicularia*) or their sign were observed during the field survey. No nesting Swainson's hawks have been documented nesting within 5 miles of the project site. The study area does not provide sufficient forage for Swainson's hawk or other raptors due to parcel size, human usage, and disturbed habitat. No sensitive plants, such as Joshua tree (*Yucca brevifolia*), alkali mariposa lily (*Calochortus striatus*), desert cymopterus (*Cymopterus deserticola*) or Barstow woolly sunflower (*Eriophyllum mohanense*) were observed within the study area or are expected to be present due to the high level of impacts and lack of suitable habitat. No other state or federal listed species are expected to occur within the study area. No ephemeral streams or washes occur within the study area.

Recommended Protection Measures:

Based on the condition of the habitat, the small size of the study area, surrounding land use, and lack of sensitive wildlife sign, no protection measures are recommended.

Significance: Given the adjacent land uses, and highly impacted condition of the study area this project is not expected to result in a significant adverse impact to biological resources.

Development has been proposed for APN 3140-034-036 (Figure 1). Development would include installation of paved access roads and utilities (natural gas, water, sewer, electric, telephone). 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 protected, rare, threatened and endangered species of plants and wildlife that would be expected to use the existing habitat. Species of concern included the desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Xerospermophilus mohavensis*), desert kit fox (*Vulpes macrotis*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), Joshua tree (*Yucca brevifolia*), alkali mariposa lily (*Calochortus striatus*), desert cymopterus (*Cymopterus deserticola*), and Barstow woolly sunflower (*Eriophyllum mohanense*).

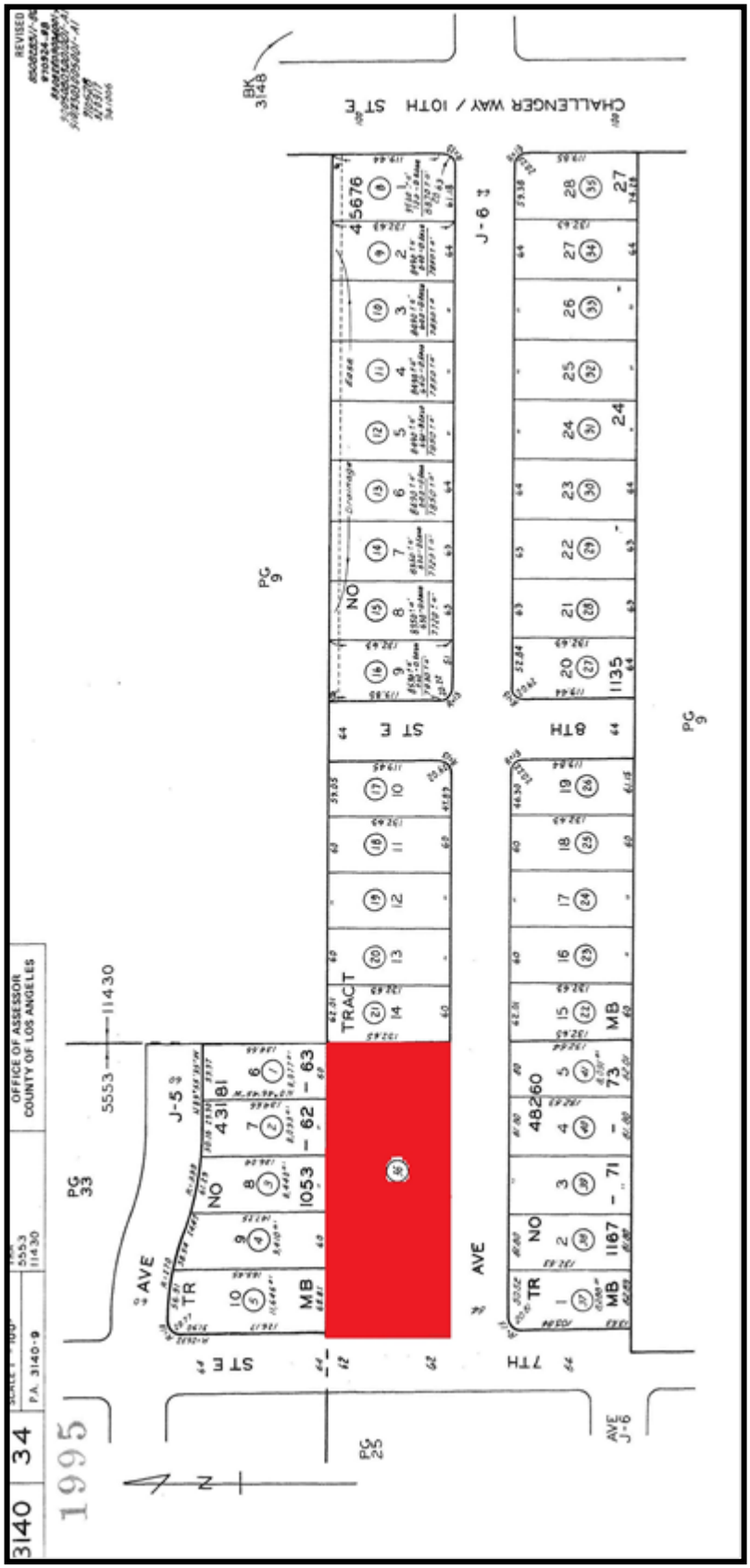

Figure 1. Location of proposed study site as depicted on APN map.

Study Area

The approximately 1 acre (0.4 ha) study area was located west of Challenger Way and north of Avenue J-6, T7N, R12W, a portion of the NW1/4 of the SE1/4 of the NE 1/4 of Section 23, S.B.B.M. (Figures 2 and 3). Block walls and single-family homes existed along the eastern and northern boundaries of the study site. The west boundary of the study site was formed by 7th Street East. Single-family housing was present west of 7th Street East. Avenue J-6 formed the southern boundary of the study site. Single-family homes were present south of Avenue J-6.

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. Consistent with survey protocol line transects were approximately 330 feet (101 m) long and spaced about 25 feet (8 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 to determine shrub species diversity, cover, and forage potential on the study site.

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 (CNDDB 2020) and eBird.org (eBird 2022). Previous surveys near the study site were reviewed for historical sightings and background information (Hagan 2007, 2010). A photograph of the study site was taken (Figure 4).

Results

A total of 4 line transects were walked on 26 March 2022. Weather conditions consisted of warm temperatures (75 degrees F), 10% cloud cover, and no wind. A sandy loam surface soil texture was characteristic throughout the study area. Topography of the study area was approximately 2,400 feet (732 m) above sea level. There were no blue line streams delineated on the U.S.G.S. topographic map within the study area. There were no washes or streams observed within the study site.

The study area was characteristic of a highly disturbed lot. A total of 10 plant species were observed during the field survey (Table 1). The study site was devoid of perennial shrub species. Red stemmed filaree (*Erodium cicutarium*) and exotic grasses were the dominant plant species. Approximately 60% of the plant species observed were nonnative or invasive. No sensitive plant species or suitable habitat were observed within the study area.

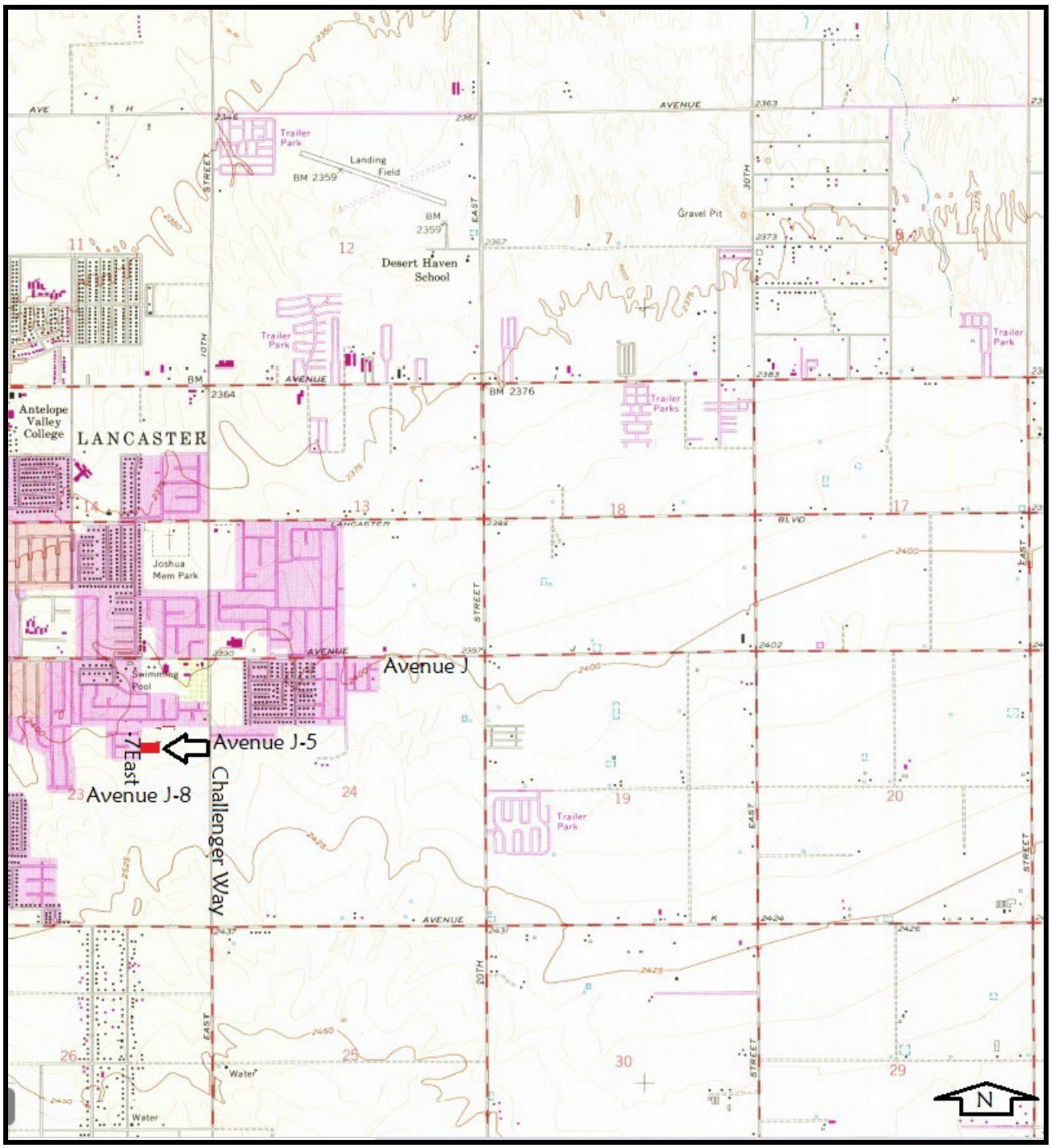

Figure 2. Approximate location of study area as depicted on excerpt from USGS Quadrangle, Lancaster East, California, 7.5' 1974.

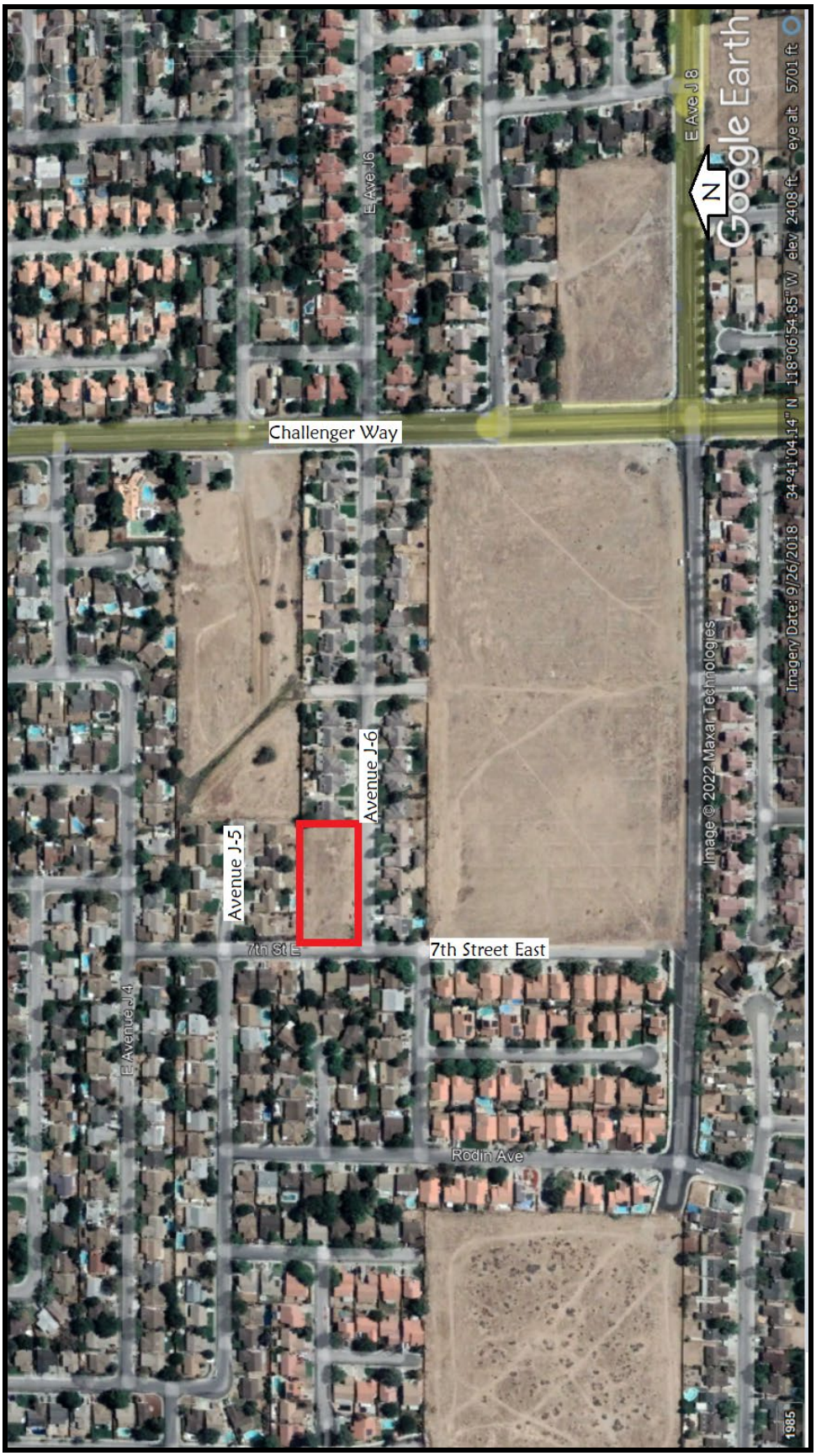

Figure 3. Approximate location of study area, Google Earth, September 2018, showing surrounding land use.

Figure 4. Representative photograph of APN 3140-034-036.

Table 1. List of plant species that were observed during the line transect survey of APN 3140-034-036, Lancaster, California.

Common Name	Scientific Name
Comb-bur	*Pectocarya recurvata*
Desert dandelion	*Malacothrix glabrata*
Goldfields	*Lasthenia californica*
Fiddleneck	*Amsinckia tessellata*
Tumble mustard	*Sisymbrium altisissiimum*
Russian thistle	*Salsola iberica*
Red stemmed filaree	*Erodium cicutarium*
Squirrel-tail grass	*Hordeum jubatum*
Tansy mustard	*Descurainia sophia*
Cheatgrass	*Bromus tectorum*

A total of 5 wildlife species, or their sign were observed during the field survey (Table 2). No desert tortoise habitat was present within the study site. No Mohave ground squirrel habitat was present within the study site. No desert kit foxes, or their sign were observed during the field survey. No burrowing owls or their sign were observed within the study site. No burrowing owl cover sites were present within the study site. A single California ground squirrel (CGS) (*Citellus beecheyi*) was observed on one of the block walls bordering the study site. No CGS burrows were present within the study site. Swainson's hawks were not observed within the study area. No bird nests were observed within the study area.

Scattered litter and debris were observed within the study site. Off-road vehicle tracks were observed within the study area. Yard waste was observed within the study site. The study site had been previously graded.

Discussion

It is probable that most annual species were visible during the time the field survey was performed. No sensitive plant species are expected to exist within the study site. Although not observed, several wildlife species would be expected to occur within the proposed project area (Table 3).

Human impacts in the area have already degraded and severely fragmented the general area and are expected to increase as urban development continues to occur near and adjacent to the study 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 listed as a state endangered and federal threatened species. The proposed project area was located within the geographic range of the desert tortoise. The proposed study site was not located in critical habitat designated for the Mojave population of the desert tortoise. No desert tortoises or their sign were observed within the study site. Suitable habitat for desert tortoises was not present within or adjacent to the study site. Desert tortoises are not present within the study site. No protection measures are recommended for desert tortoises.

The proposed project area was 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. However, the study area lacks suitable habitat to support Mohave ground squirrels (CDFW 2019). No protection measures are recommended for Mohave ground squirrels.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. The study site does not provide potential nesting sites for migratory birds. No nesting Swainson's hawk nests have been documented within 5 miles of this study site (eBird 2022, CDNDB 2020). Swainson's hawk observations appear to be strongly correlated with active agricultural fields, parks, and large retention basins within the Antelope Valley (eBird 2022, CNDDB 2020). The study area does not provide sufficient forage for Swainson's hawk or other raptors due to parcel size, human usage, and disturbed habitat. The small, highly disturbed area would be an insignificant loss to raptor foraging. No protection measures are recommended for migratory birds.

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of APN 3140-034-036, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
California ground squirrel (1 individual on wall)	*Citellus beecheyi*
Domestic dog	*Canis familiaris*
Common raven	*Corvus corax*
Harvester ants	Order: Hymenoptera

Table 3. List of wildlife species that may occur within the study area, 3140-034-036, Lancaster, California.

Common Name	Scientific Name
House finch	*Carpodacus mexicanus*
European starling	*Sturnus vulgaris*
House sparrow	*Passer domesticus*
Grasshopper	Order: Orthoptera
Spider	Order: Araneida

No suitable habitat for Joshua trees, alkali mariposa lilies, Barstow woolly sunflowers or desert cymopterus was observed within the study site. Based on the results of the field survey these species do not 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).

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). This project is not expected to result in a significant adverse impact to biological resources.

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