Biological Resource Assessment of
APN 3109-025-051
Lancaster, California

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Abstract

Development has been proposed for APN 3109-025-051, Lancaster, California. The approximately 2 acre (0.8 ha) study area was located north of Avenue L-8 and west of 10th Street West, T7N, R12W, a portion of the W1/2 of the SE1/4 of the SE1/4 of the NE1/4 of Section 33, S.B.B.M. A line transect survey was conducted on 18 January 2021 to inventory biological resources. The proposed project area was characteristic of a heavily disturbed rabbit brush (*Chrysothamnus nauseosis*) field. A total of nineteen plant species and eight wildlife species or their sign were observed during the line transect survey. No desert tortoises (*Gopherus agassizii*) or their sign were observed 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. California ground squirrel (*Citellus beecheyi*) burrows were present, which could provide potential cover sites in the future for burrowing owls. Vegetation within the study area provides potential nesting sites for migratory birds. No migratory bird nests were observed within the study site. No nesting Swainson's hawks have been observed within 5 miles of the study area (eBird 2020). No sensitive plants, such as alkali mariposa lily (*Calochortus striatus*), desert cymopterus (*Cymopterus deserticola*) or Barstow woolly sunflower (*Eriophyllum mohanense*) were observed within the study area. No sensitive plants are expected to be present due to lack of suitable habitat. No other state or federal listed species are expected to occur within the study area. An ephemeral stream and small washes occur within the study area. This project would not result in a significant adverse impact to biological resources.

Recommended Protection Measures:

If ground disturbing activities do not take place within 30 days of this survey, a burrowing owl survey should be accomplished to ensure burrowing owls have not moved into the study area. If burrowing owls are discovered the guidance outlined in the publication titled "Staff Report on Burrowing Owl Mitigation" will be used for addressing burrowing owl issues on the study site (California Department of Fish and Game 2012).

If possible, removal of vegetation will occur outside the nesting season for migratory birds. Nesting generally lasts from February to July but may extend beyond this time frame. If ground disturbing activities will occur during or close to the nesting season, a qualified biologist will survey all potential nesting areas in and adjacent to the project site as close as possible but no more than one week prior to removal of vegetation. 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 500 feet (161 m) around raptor nests, and 50 feet (16.1 m) around active migratory non-raptor 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 incidental take permit, Section 2081, is required to take any Joshua tree until a final ruling is made on its status as a threatened species. Consultation with the City of Lancaster Planning Department and CDFW to determine Joshua tree requirements is necessary.

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 Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) prior to development activities. This project may require consultation with CDFW to determine whether a Streambed Alteration Agreement is required.

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

Development has been proposed for APN 3109-025-051 (Figure 1). Development would include installation of access roads, parking, and utilities (water, sewer, electric, etc.). The entire project area would be cleared and 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 trees (*Yucca brevifolia*), alkali mariposa lily (*Calochortus striatus*), desert cymopterus (*Cymopterus deserticola*), and Barstow woolly sunflower (*Eriophyllum mohanense*).

Study Area

The approximately 2 acre (0.8 ha) study area was located north of Avenue L-8 and west of 10th Street West, T7N, R12W, a portion of the W1/2 of the SE1/4 of the SE1/4 of the NE1/4 of Section 33, S.B.B.M. (Figure 2). A disturbed Joshua tree (*Yucca brevifolia*) desert scrub habitat exists to the north, and west of the study site (Figure 3). A highly disturbed field was present along the southeastern boundary. A commercial facility was present along the northeastern boundary of the study site. A dirt road forms the northern boundary along the study site. Avenue L-8 forms the southern boundary of the study site. Commercial facilities, landscaped areas, and a disturbed field were present south of Avenue L-8.

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 a north-south orientation. Consistent with the survey protocol, line transects were approximately 615 feet

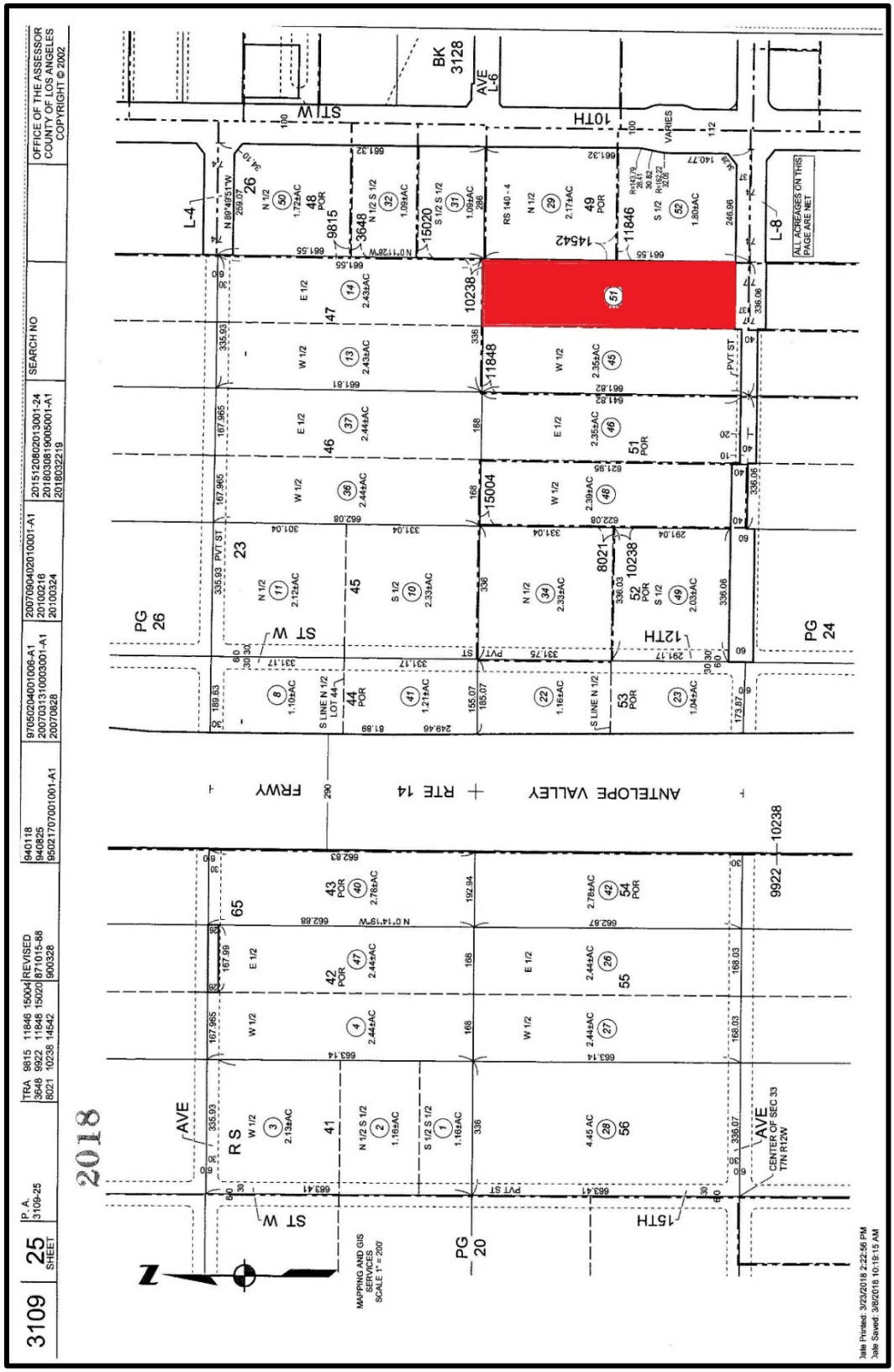

Figure 1. Location of proposed project site as depicted on APN map.

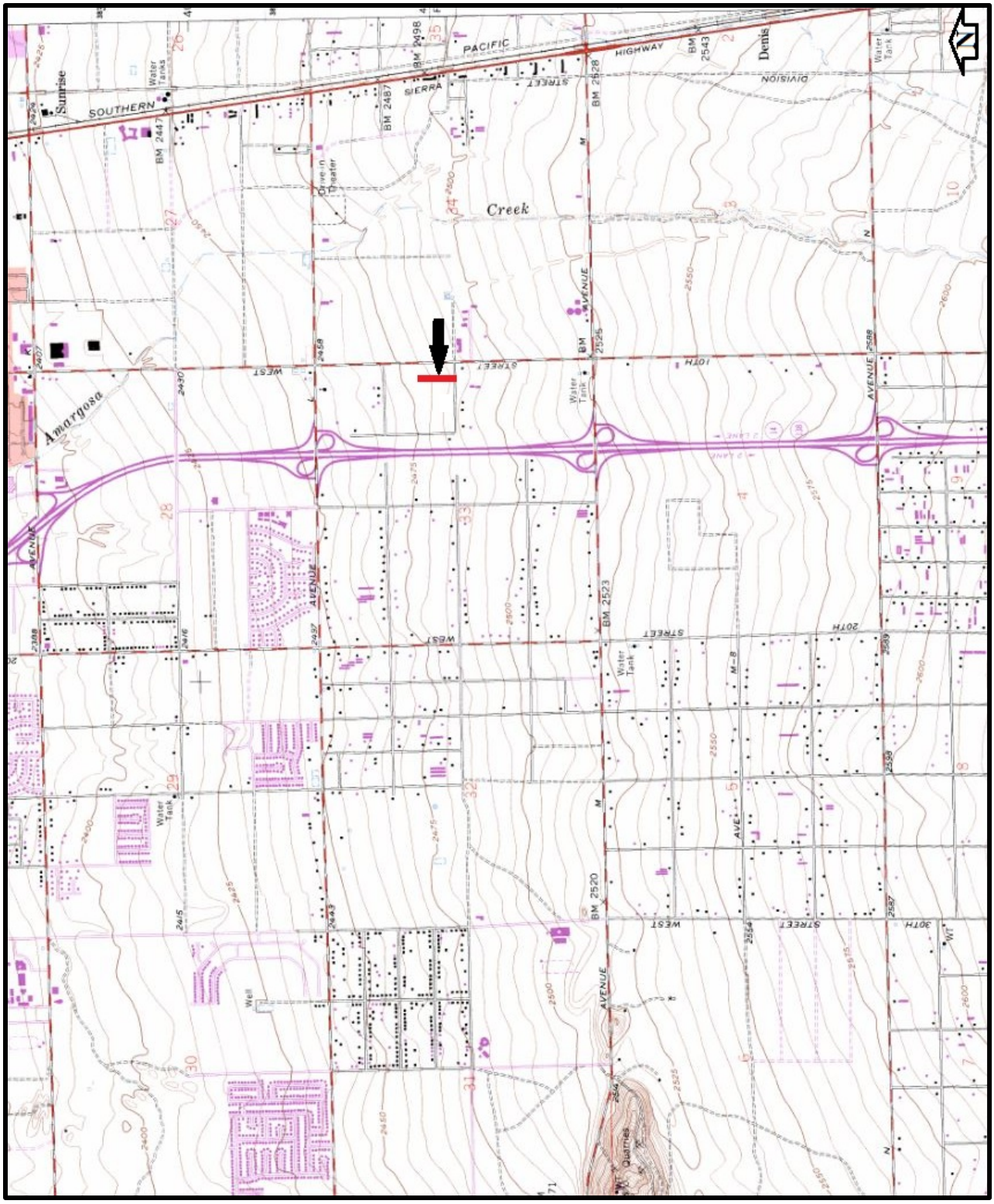

Figure 2. Approximate location of study area as depicted on excerpt from USGS Quadrangle, Lancaster West, California, 7.5' 1974.

Figure 3. Approximate location of study area, Google Earth, April 2017, showing surrounding land use.

(187 m) long and spaced about 30 feet (10 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 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. Photographs of the study site were taken (Figures 4 and 5).

Results

A total of 4 line transects were walked on 18 January 2021. Weather conditions consisted of warm temperatures (estimated 70 degrees F), 0% cloud cover, and light to moderate wind. A sandy loam surface soil texture was characteristic within the study area. An ephemeral stream and small desert washes were observed within the study area. No blue line streams were found on the USGS topographic map within the study area. Topography of the study area ranged from approximately 2,473 to 2,481 feet (798 to 800 m) above sea level.

The proposed project area was characteristic of a heavily disturbed rabbit brush (*Chrysothamnus nauseosis*) field. A total of nineteen plant species were observed during the line transect survey (Table 1). The dominant shrub species throughout the study area was rabbit brush. Red stemmed filaree (*Erodium cicutarium)* was the dominant annual species throughout the study area. Three Joshua trees (*Yucca brevifolia*) were present within the study site, >12 foot, 5 foot, and 2 foot high. One >12 foot and one 11 foot Joshua trees were located just outside but within 10 feet (3 m) of the study area boundary. No sensitive plant species or suitable habitat were observed within the study area.

A total of eight 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. California ground squirrel (*Citellus beecheyi*) burrows were 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. Swainson's hawks were not observed within the study area. Observations documented in eBird indicated no Swainson's hawks had been observed nesting within 5 miles (8.05 km) of the study area (eBird 2021). No bird nests were observed within the study area.

Vehicle tracks were observed throughout the study area. Dirt roads were present within the study site. Scattered debris, broken asphalt, landscape rocks, and trash were present within the study site. Many soil piles were observed within the study site.

Figure 4. Representative photographs of the study area. Top photograph view is from north boundary to south. Bottom photograph view is from north boundary to southeast.

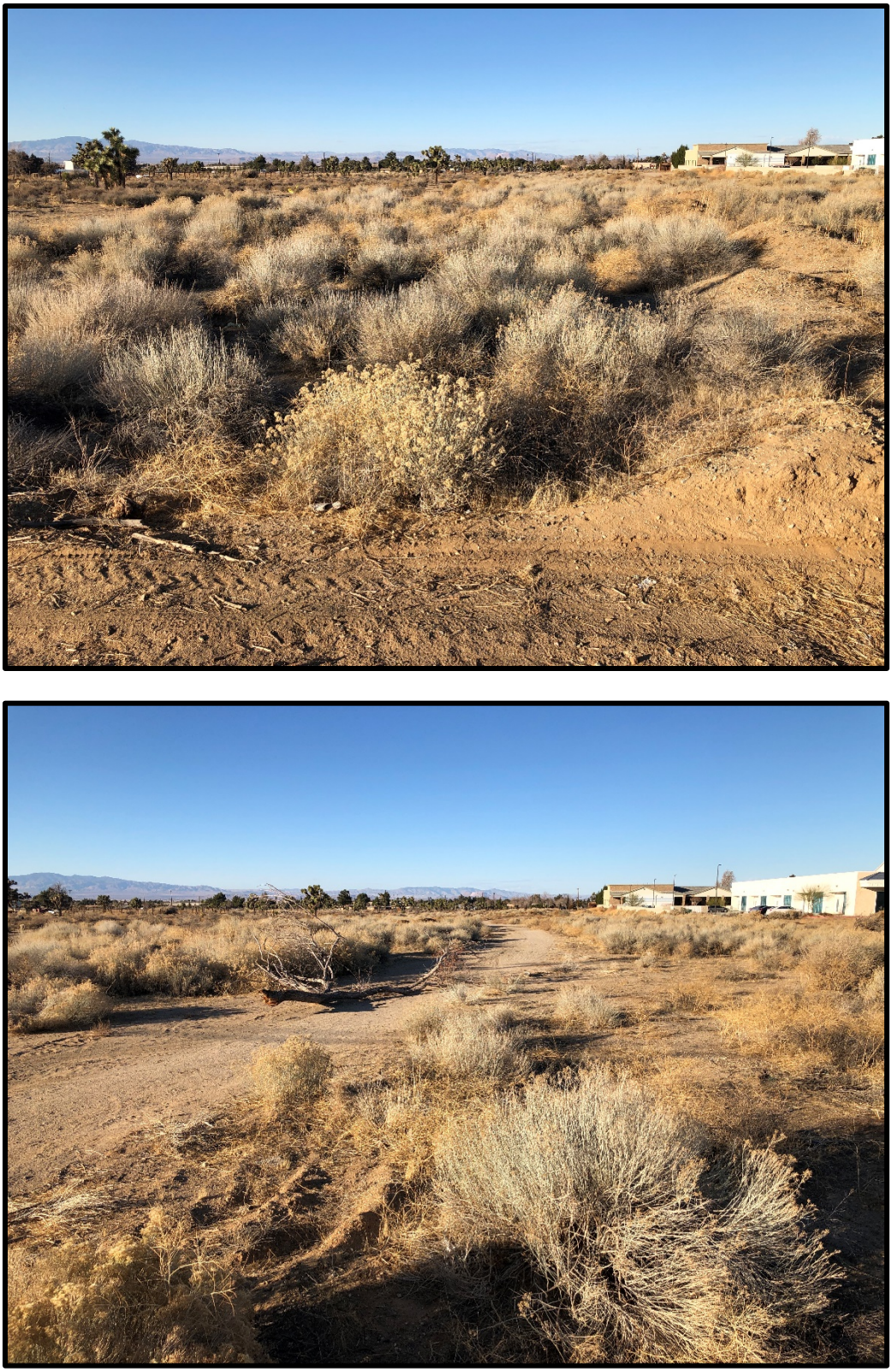

Figure 5. Representative photographs of the study area. Both photograph views are from south boundary to north.

Table 1. List of plant species that were observed during the line transect survey of APN 3109-025-051, Lancaster, California.

Common Name	Scientific Name
Joshua tree	*Yucca brevifolia*
Salt cedar (1 small individual)	*Tamarix aphylla*
Rabbit brush	*Chrysothamnus nauseosis*
Peachthorn	*Lycium cooperi*
Four-wing saltbush	*Atriplex canescens*
Cheesebush	*Hymenoclea salsola*
Mormon tea	*Ephedra nevadensis*
Silver cholla	*Opuntia echinocarpa*
Winterfat (1 small individual)	*Eurotia lanata*
Turkey mullein	*Eremocarpus setigerus*
Blue mantle	*Eriastrum diffusum*
Horseweed	*Canyza honariensis*
Annual burweed	*Franseria acanthicarpa*
Sahara mustard	*Brassica tournefortii*
Tumble mustard	*Sisymbrium altisissiimum*
Red stemmed filaree	*Erodium cicutarium*
Cheatgrass	*Bromus tectorum*
Schismus	*Schismus* sp.

Ornamental tree, small

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of APN 3109-025-051, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
California ground squirrel	*Citellus beecheyi*
Desert cottontail	*Sylvilagus auduboni*
Coyote	*Canis latrans*
Common raven	*Corvus corax*
Northern mockingbird	*Mimus polyglottos*
House finch	*Carpodacus mexicanus*
Harvester ants	Order: Hymenoptera

Discussion

It is probable that not all annual species were visible during the time the field survey was performed. Given the condition of the site annual plant species not observed would be common species. Based on the habitat, 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 within the study area are expected to continue. Habitat in the general area was degraded and fragmented. Burrowing animals within the proposed project area are not expected to survive construction activities. More mobile species, such as birds, are expected to survive construction activities. Development of this site will result in a minimal loss of cover and foraging opportunities for the common wildlife species occurring within and adjacent to the study area.

The desert tortoise is a state endangered and federal 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. Desert tortoises were not present within the study site. The habitat around the study site is small, fragmented, and impacted. No desert tortoises are expected to be present around the study site. No protection measures are recommended for desert tortoises.

The Mohave ground squirrel (MGS) is a state listed threatened species. The proposed project site was located within the geographic range of the MGS. The first step in the protocol for MGS is to determine if the requisite elements for cover and forage are present. Cover and forage for MGS appeared to be limited within and around the study site. It has been noted that MGS require a diversity of shrubs for forage and cover (Leitner 2008). Two species, winterfat (*Eurotia lanata*), and spiny hopsage (*Grayia spinosa*) are considered important forage for MGS. Dr. Leitner determined that combined densities of winterfat and spiny hopsage greater than 250 to 300 per ha (2.5 acres) are associated with occupancy of MGS (Leitner 2008, CDFW 2019). Dr. Leitner postulated based on trapping surveys in the southern portion of the MGS range that densities < 24/ha of spiny hopsage and < 100/ha of winterfat on a site was considered poor forage and may be related to the absence of MGS (Leitner 2008, CDFW 2019). No MGS have been documented within 5 miles in or near the study site (California Natural Diversity Database, 2020a-b). The farthest documented movement of MGS is 3.9 miles (Harris and Leitner 2005). The CDFW in their publication "A Conservation Strategy for the Mohave Ground Squirrel, Xerospermophilus mohavensis" on page 28 indicates the study site is outside of CDFW's accepted population area. California ground squirrels (CGS) are present on the study site. Since MGS prefer natural habitats, interactions with CGS would not occur often (CDFW 2019). CGS are larger and more aggressive than MGS which would seem to indicate they would be unlikely to coexist (CDFW 2019). Consistent with the habitat assessment results that show a lack of the necessary elements for potential habitat, CDFW information that the site is outside the population areas, no documented observations in or around the study site in the last 30 years, presence of CGS, fragmented and developed condition of the area, and small patch size; Mohave ground squirrels are not expected to be present within or adjacent to the study area. Further surveys for Mohave ground squirrels are not considered necessary. No take of MGS would be expected due to this project. No protection measures are recommended for MGS.

Table 3. List of wildlife species that may occur within the proposed study area, APN 3109-025-051, Lancaster, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
House sparrow	*Passer domesticus*
Mourning dove	*Zenaida macroura*
Side blotched lizard	*Uta stansburiana*
Spider	Order: Araneida
Fly	Order: Diptera

Burrowing owls are considered a species of special concern by the CDFW. No burrowing owls or their sign were observed within the study area. California ground squirrel (*Citellus beecheyi*) burrows were present, which could provide potential cover sites in the future for burrowing owls.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. Joshua trees within the study area provides potential nesting sites for migratory birds. No nesting Swainson's hawks have been observed within 5 miles of the study area (eBird 2021). Swainson's hawk observations noted on eBird are strongly correlated with large open fields, active agricultural fields, and areas of persistent water. No Swainson's hawk nesting is noted in eBird or in the CNDDB in the urban areas of Lancaster (eBird 2021, CNDD 2020a-b). Limited foraging habitat for Swainson's hawks is available in and around the study site. No protection measures are recommended for Swainson's hawk.

Joshua trees are considered a candidate species under the California Endangered Species Act. It is currently undergoing a 1 year review to determine its potential listing as a threatened species. Until the review is completed and a decision made the Joshua tree is treated as a threatened species. No suitable habitat for other sensitive plant species was observed within the study site. Based on the results of the field survey other than Joshua trees, sensitive plant species are not expected to occur within the study area and no protection measures are recommended. No other state or federal listed species are expected to occur within the proposed project area (CDFW 2017, CDFW 2018, 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).

Recommended Protection Measures:

If ground disturbing activities do not take place within 30 days of this survey, a burrowing owl survey should be accomplished to ensure burrowing owls have not moved into the study area. If burrowing owls are discovered the guidance outlined in the publication titled "Staff Report on Burrowing Owl Mitigation" will be used for addressing burrowing owl issues on the study site (California Department of Fish and Game 2012).

If possible, removal of vegetation will occur outside the nesting season for migratory birds. Nesting generally lasts from February to July but may extend beyond this time frame. If ground disturbing activities will occur during or close to the nesting season, a qualified biologist will survey all potential nesting areas in and adjacent to the project site 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 500 feet (161 m) around raptor nests, and 50 feet (16.1 m) around active migratory non-raptor 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 incidental take permit, Section 2081, is required to take Joshua tree until a final ruling is made on its status as a threatened species. Consultation with the City of Lancaster Planning Department and CDFW to determine Joshua tree requirements is necessary.

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 Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) prior to development activities. This project may require consultation with CDFW to determine whether a Streambed Alteration Agreement is required.

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

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