

Biological Resource Assessment of
APN 3176-004-004
Lancaster, California

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Abstract

Development has been proposed for APN 3176-004-004, Lancaster, California. The approximately 2.5 acre (1 ha) study site was located south of Avenue H-4 and west of Challenger Way/10th Street East, T7N, R12W, the NE1/4 of the NE1/4 of the SE1/4 of the NE1/4 of Section 11, S.B.B.M. A line transect survey was conducted on 14 February 2024 to inventory biological resources. The proposed project site was characteristic of a halophytic saltbush (*Atriplex* spp.) scrub habitat with clay pan and dune topography. A total of 25 plant species and 6 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 study site did not contain suitable habitat to support Mohave ground squirrels (*Xerospermophilus mohavensis*). No desert kit foxes (*Vulpes macrotis*) or their sign was observed within the study site. No burrowing owls (*Athene cunicularia*) or their sign were observed during the field survey. No Swainson's hawk (*Buteo swainsoni*) nests have been documented within 4.5 miles of the study site. Vegetation within the study site does not provide suitable nesting sites for migratory birds. Other than one dead and down western Joshua tree (*Yucca brevifolia*) (WJT), no live WJT occur within the study site. No desert cymopterus (*Cymopterus deserticola*), or Barstow woolly sunflower (*Eriophyllum mohanense*) occur within the study site due to lack of suitable habitat. No alkali mariposa lilies (*Calochortus striatus*) were observed within the study site, however, habitat occurs throughout the site. No other state or federally listed species are expected to occur within the proposed project site. Ephemeral washes, and clay pans were observed within the study site. Some of the water features within the study site may be considered Waters of the State.

Recommended Protection Measures:

Any activity that will divert, obstruct, change the bed, channel, bank or deposit material into any stream or wash, or clay pans require a Lake and Streambed Alteration Agreement (LSA) from the California Department of Fish and Wildlife (CDFW) prior to development activities. This project will require consultation with CDFW to apply for an LSA prior to development. A jurisdictional delineation of the wash and clay pans would be required as part of the LSA process. Mitigation would be determined through the LSA process. Consultation with Lahontan Water Quality Control Board (LWQCB) may be required to determine permitting requirements for Waters of the State under the Porter-Cologne Act.

Surveys for alkali mariposa lily should be accomplished to determine presence/absence. Alkali mariposa lily presence could be assumed and mitigation applied appropriately. Alkali mariposa lily can be part of any LSA mitigation and addressed during the LSA process.

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

Development has been proposed for APN 3176-004-004 (Figure 1). Development would include installation of access roads, parking, and utilities (water, sewer, electric, etc.). The entire project site would be graded prior to construction activities.

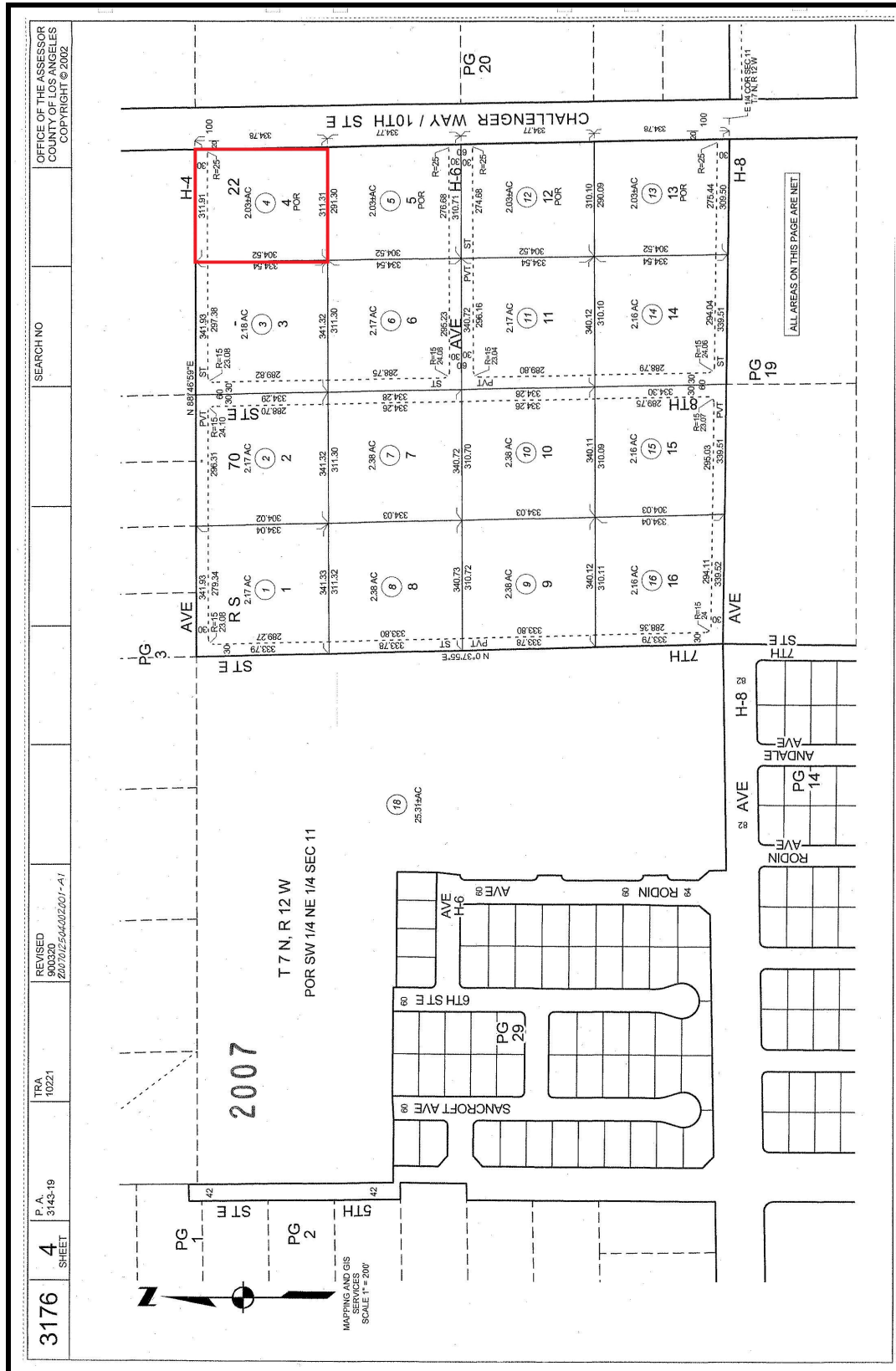


Figure 1. Location of proposed project site as depicted on APN map.

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*), western Joshua tree (*Yucca brevifolia*) (WJT), desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflower (*Eriophyllum mohanense*), and alkali mariposa lily (*Calochortus striatus*).

Study Area

The approximately 2.5 acre (1 ha) study site was located south of Avenue H-4 and west of Challenger Way/10th Street East, T7N, R12W, the NE1/4 of the NE1/4 of the SE1/4 of the NE1/4 of Section 11, S.B.B.M. (Figures 2 and 3). The eastern boundary of the study site was formed by Challenger Way/10th Street East. Saltbush (*Atriplex* spp.) habitat existed east of Challenger Way/10th Street East. The northern boundary of the project site was formed by Avenue H-4, a dirt road. Saltbush (*Atriplex* spp.) habitat existed north of Avenue H-4. Similar habitat as the study site was present to the west and south of the study site.

Methods

A line transect survey was conducted to inventory plant and wildlife species occurring within the proposed project site (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 310 feet (94 m) long and were spaced approximately 30 feet (10m) 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 site and surrounding vicinity were reviewed. Review of documented sightings was accomplished using the California Natural Diversity Database (CNDD) (Lancaster East 2020) and eBird.org. Previous surveys near the study site (Hagan 2005, 2022a-b) were reviewed for historical sightings and background information. Photographs of the study site were taken (Figures 4 and 5).

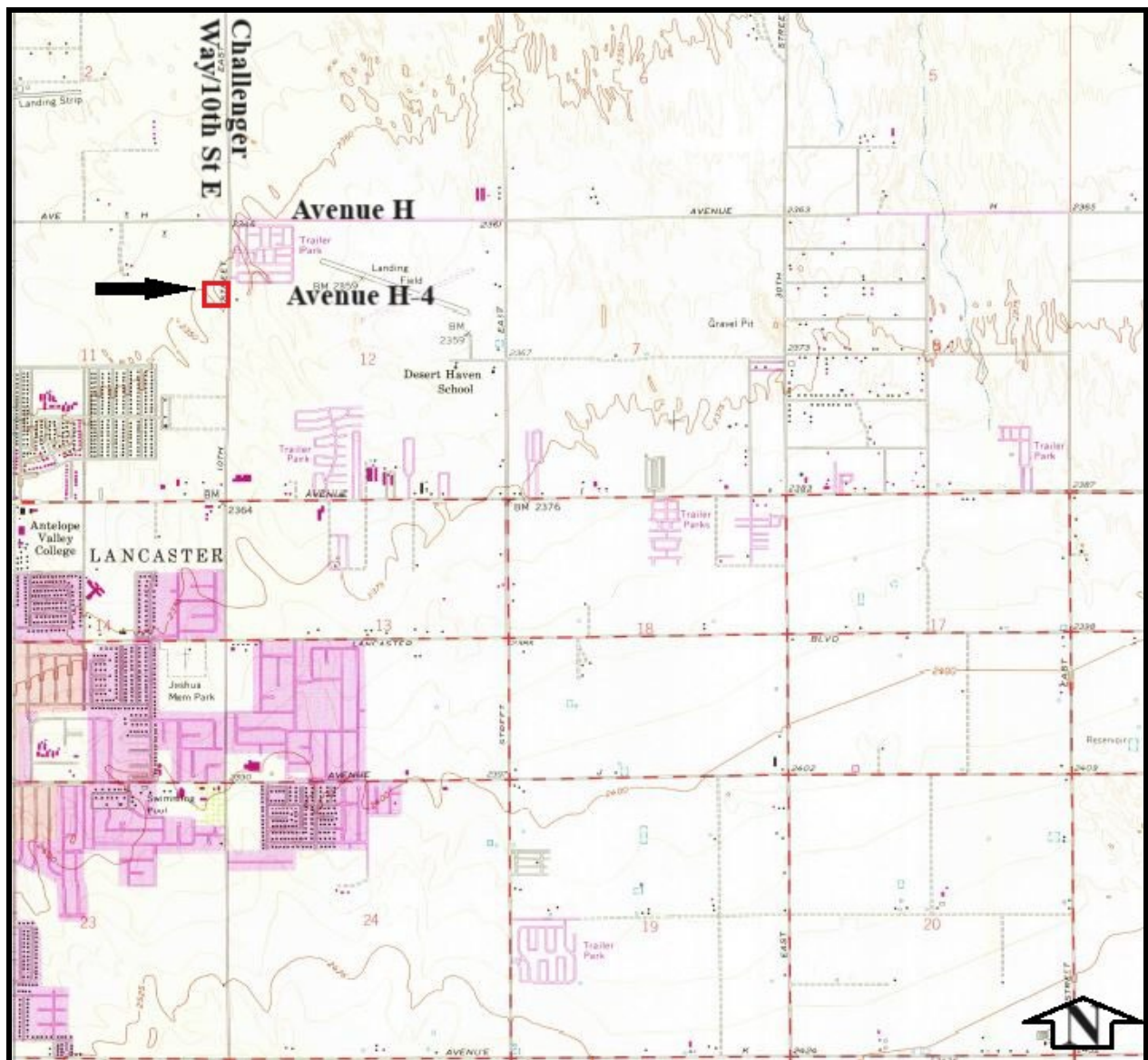


Figure 2. Approximate location of study site as depicted on U.S.G.S. Quadrangle, Lancaster East, Calif., 7.5', 1974.

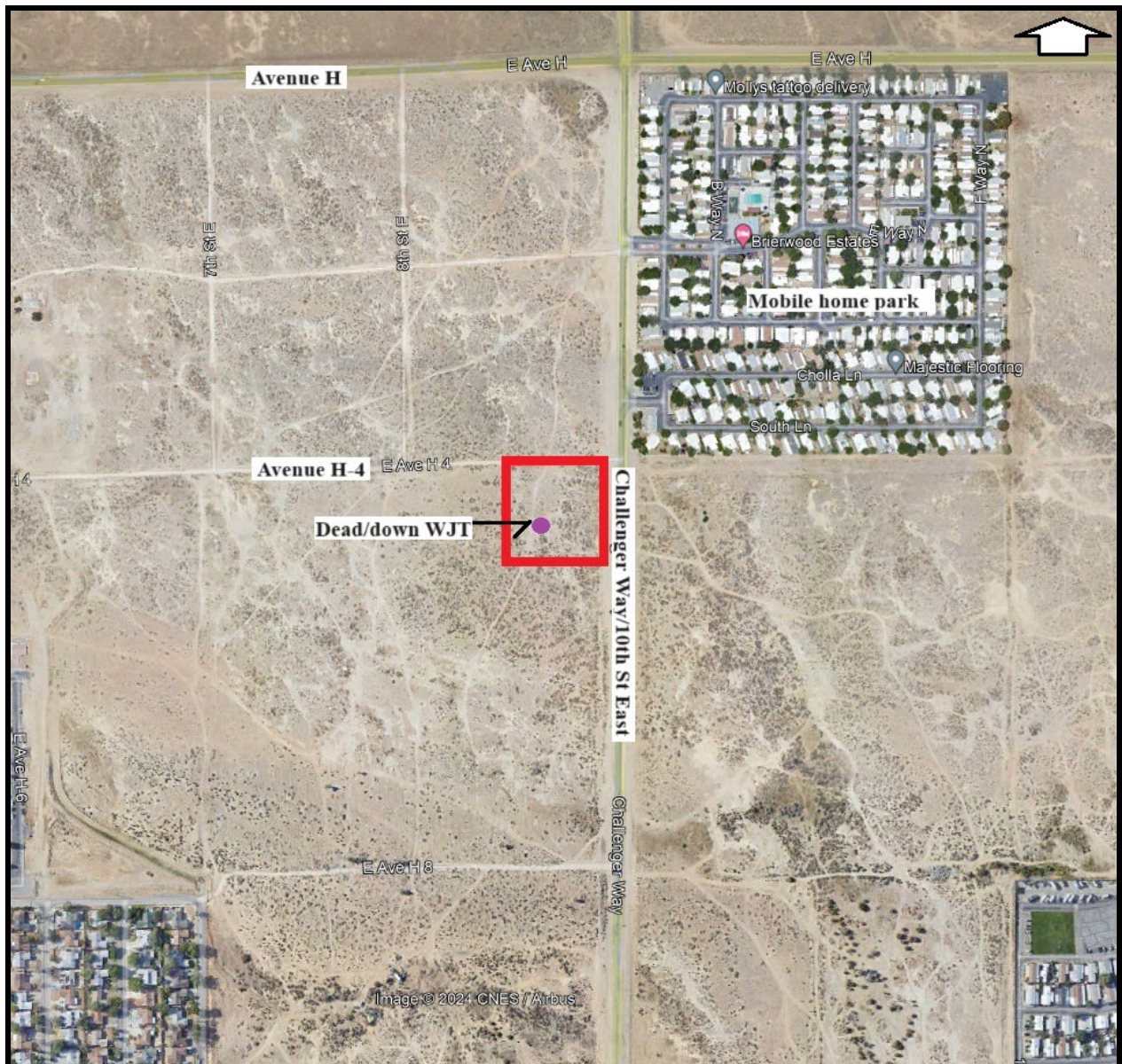


Figure 3. Approximate location of study site showing surrounding land use as depicted on excerpt from Google Earth Aerial Photography, April 2018.



Figure 4. Top photograph representative of eastern side of study site's general characteristics. Bottom photograph representative of western side's general characteristics.



Figure 5. Top photograph shows aged dead and down WJT. Bottom photograph is view of ponded water on eastern side of study site, presumably from rainfall which occurred from 1 through 7 February 2024.

Results

A total of 12 line transects were walked on 14 February 2024. Weather conditions consisted of warm temperatures (estimated 55 degrees F), 50% cloud cover, and no wind. Sandy loam surface soil and clay soil textures were observed throughout the study site. No blue line streams were indicated within the study site on the USGS topographic map. Clay pans and interconnected washes were observed within the study site. Ponded water was observed in one area of clay pans. Sink holes were observed within the study site. Cryptogamic crusts (soils) were observed within the study site. Topography of the site was approximately 2,350 feet (716 m) above sea level.

The study site was characteristic of a halophytic saltbush (*Atriplex* spp.) scrub habitat with clay pan and dune topography (Barbour et al. 2007). A total of 25 plant species were observed during the line transect survey (Table 1). Shadscale (*Atriplex confertifolia*) was the dominant perennial shrub species throughout the study site. Red stem filaree (*Erodium cicutarium*) was the dominant annual species throughout the study site. One dead and down WJT was observed within the study site. No alkali mariposa lilies were observed within the study site. Potential habitat for alkali mariposa lily was present through much of the study site. No Barstow woolly sunflowers, or desert cymopterus were observed within the study site and no habitat for these species was present.

A total of 6 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 suitable habitat for Mohave ground squirrels was present within the study site. No burrowing owls or their sign were observed within the study site during the field survey. A low number of California ground squirrel (*Citellus beecheyi*) burrows were observed within the study site. No desert kit foxes or their sign were observed within the study site. No bird nests were observed within the study site. No Swainson's hawk nests have been documented within 4.5 miles of the study site (eBird 2024)

Trash dumps were present primarily along the northern and eastern boundaries of the study site. Scattered trash and debris were present within the study site. Off-road vehicle tracks were observed within the study site.

Discussion

It is likely not all annual species were visible during the time the field survey was performed. Although not observed, several wildlife species would be expected to occur within the proposed project site (Table 3).

Human impacts are high to the north and east of the study site due primarily to homeless encampments. Additionally, impacts in the general vicinity are expected to increase as urban development continues to occur. Burrowing animals within the proposed project site 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.

Table 1. List of plant species that were observed during the line transect survey of APN 3176-004-004, Lancaster, California.

<u>Common Name</u>	<u>Scientific Name</u>
Western Joshua tree (1 – aged dead and down)	<i>Yucca brevifolia</i>
Four-wing saltbush	<i>Atriplex canescens</i>
Shadscale	<i>Atriplex confertifolia</i>
Rabbit brush	<i>Chrysothamnus nauseosis</i>
Arrow scale	<i>Atriplex phyllostegia</i>
Inkweed	<i>Suaeda torreyana</i>
Astragalus	<i>Astragalus</i> sp.
Autumn vinegar-weed	<i>Lessingia germanorum</i>
Blue mantle	<i>Eriastrum diffusum</i>
Sun cups	<i>Camiissonia campestris</i>
Goldfields	<i>Lasthenia californica</i>
Woody bottlewasher	<i>Camissonia boothii</i>
Fiddleneck	<i>Amsinckia tessellata</i>
Red stemmed filaree	<i>Erodium cicutarium</i>
Annual burweed	<i>Franseria acanthicarpa</i>
California mustard	<i>Caulanthus lasiophyllus</i>
Tumble mustard	<i>Sisymbrium altisissimum</i>
Sahara mustard	<i>Brassica tournefortii</i>
Russian thistle	<i>Salsola iberica</i>
Indian ricegrass	<i>Oryzopsis hymenoides</i>
Saltgrass	<i>Distichlis spicata</i>
Squirrel-tail grass	<i>Hordeum jubatum</i>
Cheatgrass	<i>Bromus tectorum</i>
Schismus	<i>Schismus</i> sp.
Moss	Class: Bryopsida

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of APN 3176-004-004, Lancaster, California.

<u>Common Name</u>	<u>Scientific Name</u>
Rodents	Order: Rodentia
Kangaroo rat	<i>Dipodomys</i> sp.
California ground squirrel	<i>Citellus beecheyi</i>
Desert cottontail	<i>Sylvilagus auduboni</i>
Common raven	<i>Corvus corax</i>
Leaf cutter	Order: Heteroptera

Table 3. List of wildlife species that may occur within the study site, APN 3176-004-004, Lancaster, California.

<u>Common Name</u>	<u>Scientific Name</u>
Deer mouse	<i>Peromyscus maniculatus</i>
Coyote	<i>Canis latrans</i>
Side blotched lizard	<i>Uta stansburiana</i>
Western whiptail	<i>Cnemidophorus tigris</i>
Mourning dove	<i>Zenaida macroura</i>
Rock dove	<i>Columba livia</i>
Say's phoebe	<i>Sayornis saya</i>
Northern mockingbird	<i>Mimus polyglottos</i>
European starling	<i>Sturnus vulgaris</i>
Horned lark	<i>Eremophila alpestris</i>
House finch	<i>Carpodacus mexicanus</i>
Sage sparrow	<i>Amphispiza belli</i>
White crowned sparrow	<i>Zonotrichia leucophrys</i>
Fairy Shrimp	<i>Branchinecta</i> spp.
Spider	Order: Araneida
Fly	Order: Diptera
Harvester ants	Order: Hymenoptera
Grasshopper	Order: Orthoptera
Dragonfly	Order: Odonata
Butterfly	Order: Lepidoptera

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

The Mohave ground squirrel is a state listed threatened species by CDFW. The proposed study site 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. No Mohave ground squirrels have been documented in the past 30 years within this area of Lancaster (CDFW 2019, Leitner 2021). No mitigation for this species is recommended.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. The vegetation within the study does not provide suitable habitat for migratory birds. No protection measures are recommended for nesting migratory birds.

Swainson's hawk observations noted on eBird are strongly correlated with large open fields, active agricultural fields, and areas of water (eBird 2024). No Swainson's hawk nests have been documented within 4.5 miles of the study site. An eBird entry documented a Swainson's hawk nest observed in April 2020 at Avenue L and 50th Street East adjacent to active agricultural fields (eBird 2024). Swainson's hawk and other raptors would not nest within the study site given the lack of nesting sites. No Swainson's hawk protection measures are recommended.

Burrowing owls are considered a species of special concern by the California Department of Fish and Wildlife. No burrowing owls or their sign were observed within the study area. Very limited potential for development of future burrowing owl cover sites is present within the study site. No protection measures are recommended for burrowing owls.

The alkali mariposa lily is considered a sensitive plant species by CDFW. No alkali mariposa lilies were detected within the study site during the field survey. Potential alkali mariposa lily habitat is present within the study site. No desert cymopterus or Barstow woolly sunflower habitat was present within the study site. No live WJTs are present within the study site. One aged WJT dead and down was observed within the study site. It would be highly unlikely for WJTs to revegetate within the study site in the near future. No protection measures are recommended for WJT, desert cymopterus, or Barstow woolly sunflowers.

No other state or federally listed threatened or endangered species are expected to occur within the proposed project site (California Department of Fish and Wildlife 2023a-b)

Ephemeral washes and connecting clay pans were present throughout most of the study site. Some of these water features would be expected to hold and flow water during high rainfall events. One clay pan area was still holding water within the study site 7 days after the last rainfall. Although both hard and soft clay pans occurred within the study site soft clay pans made up most of the clay pans observed. The soft clay pans and sink holes observed indicate potential underground water flow through the study site.

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:

Any activity that will divert, obstruct, change the bed, channel, bank or deposit material into any stream or wash, or clay pans require a Lake and Streambed Alteration Agreement (LSA) from the California Department of Fish and Wildlife (CDFW) prior to development activities. This project will require consultation with CDFW to apply for an LSA prior to development. A jurisdictional delineation of the wash and clay pans would be required as part of the LSA process. Mitigation would be determined through the LSA process. Consultation with Lahontan Water Quality Control Board (LWQCB) may be required to determine permitting requirements for Waters of the State under the Porter-Cologne Act.

Surveys for alkali mariposa lily should be accomplished to determine presence/absence. Alkali mariposa lily presence could be assumed and mitigation applied appropriately. Alkali mariposa lily can be part of any LSA mitigation and addressed during the LSA process.

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

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