Biological Resource Assessment of
APN 3386-007-007
Lancaster, California

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Abstract

Development has been proposed for APN 3386-007-007, Lancaster, California. The approximately 80 acre (32 ha) study area was located south of Avenue K and west of 65th Street East, T7N, R11W, the E1/2 of the NW1/4 of Section 26, S.B.B.M. A line transect survey was conducted on 5, 9, and 10 September 2020 to inventory biological resources. The proposed project area was characteristic of an agricultural field. A total of twenty-three plant species and eighteen 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 desert tortoises. No protection measures for desert tortoises are recommended. The proposed project site was located within the geographic range of the Mohave ground squirrel (*Xerospermophilus mohavensis*). The study site did not contain suitable habitat to support Mohave ground squirrels. No protection measures for Mohave ground squirrels are recommended. No burrowing owls (*Athene cunicularia*) or their sign were observed during the field survey. No potential cover sites for burrowing owls were present. Trees within the study area provide potential nesting sites for migratory birds to include Swainson's hawk (*Buteo swainsoni*) and other raptors species. The study site appears to have little forage value for Swainson's hawks. No Joshua trees (*Yucca brevifolia*), alkali mariposa lilies (*Calochortus striatus*), desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflowers (*Eriophyllum mohanense*) or other sensitive plants were observed or are expected to occur within the study area due to the high level of impacts and lack of suitable habitat. One Joshua tree was located approximately 25 feet south of the southern boundary of the study site. No other state or federally listed species are expected to occur within the proposed project area.

Recommended Protection Measures:

If possible, removal of trees within the project site will occur outside the breeding season for migratory birds. Breeding generally lasts from February to July but may extend beyond this time frame. If tree 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 500 feet around active raptor nests or 50 feet around active migratory song bird nests. The project biologist will determine if the buffer areas should be increased or decreased based on the nesting bird response to disturbances.

Impacts to the offsite Joshua tree will be avoided by delineating a 25 foot boundary from the trunk of the tree and ensuring no heavy equipment traffic within that area occurs.

Based on the condition of the habitat, surrounding land use, and lack of wildlife sign, no other protection measures are recommended.

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

Development has been proposed for APN 3386-007-007 (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)*, Joshua tree (*Yucca brevifolia*), desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflower (*Eriophyllum mohanense*), and alkali mariposa lily (*Calochortus striatus*).

Study Area

The approximately 80 acre (32 ha) study area was located south of Avenue K and west of 65th Street East, T7N, R11W, the E1/2 of the NW1/4 of Section 26 S.B.B.M. (Figures 2 and 3). The northern boundary of the project site was formed by Avenue K. Active agricultural fields existed north of Avenue K. An old abandoned agricultural field existed west, northwest, and southeast of the study site. The east boundary of the study site is formed by 65th Street East, a dirt road. A house, and inactive agricultural fields were present east of 65th Street East. Old agricultural fields and Little Rock Wash were present west of the study site. The southeastern boundary of the study site was formed by a dirt road. A homestead with several makeshift residences was present south of the dirt road. Concrete debris was located south of the southwestern boundary of the study site. Topography of the site ranged from approximately 2,448 to 2,460 feet (790 to 794 m) above sea level.

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

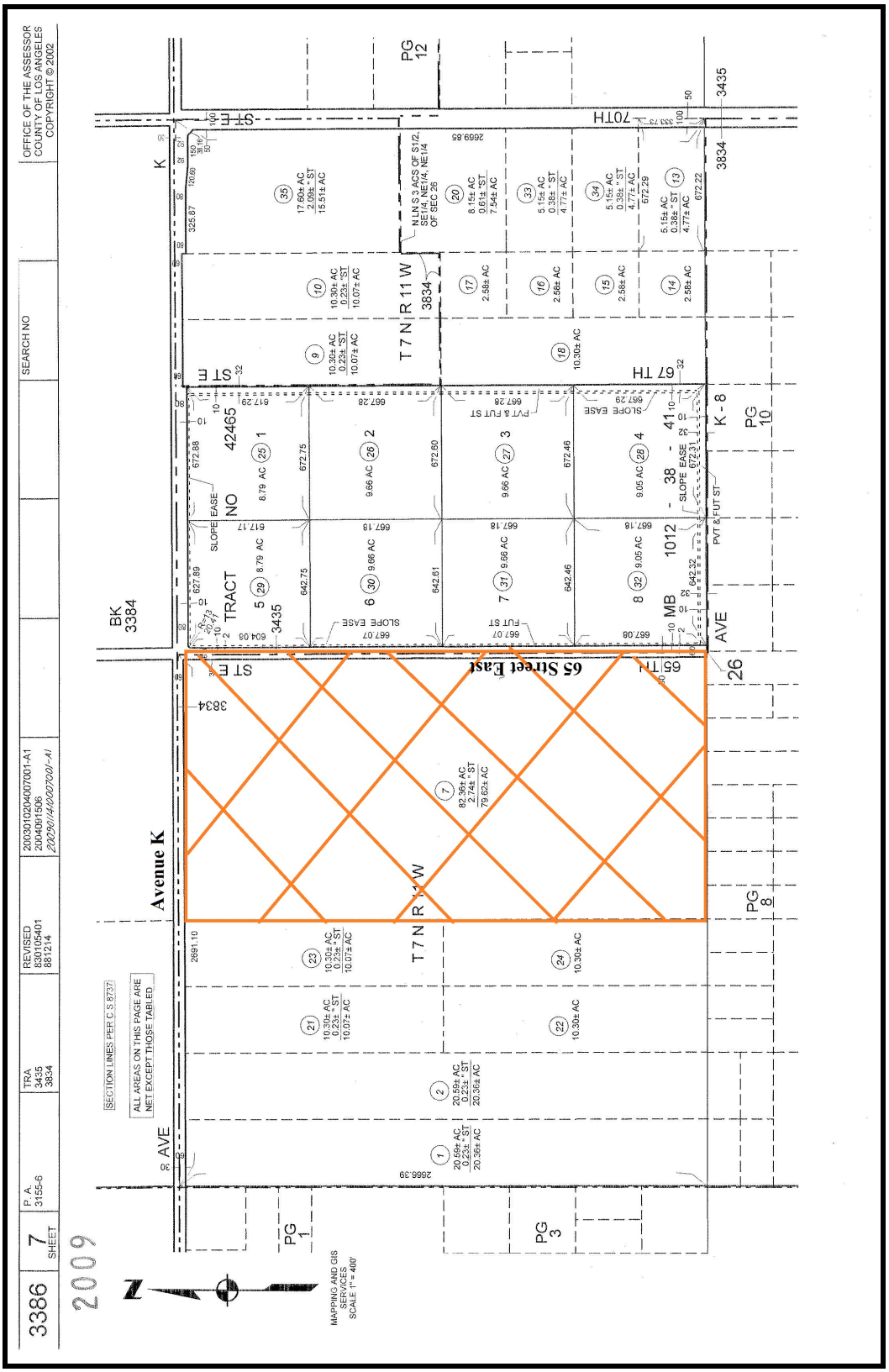

Figure 1. Location of proposed project site as depicted on APN map.

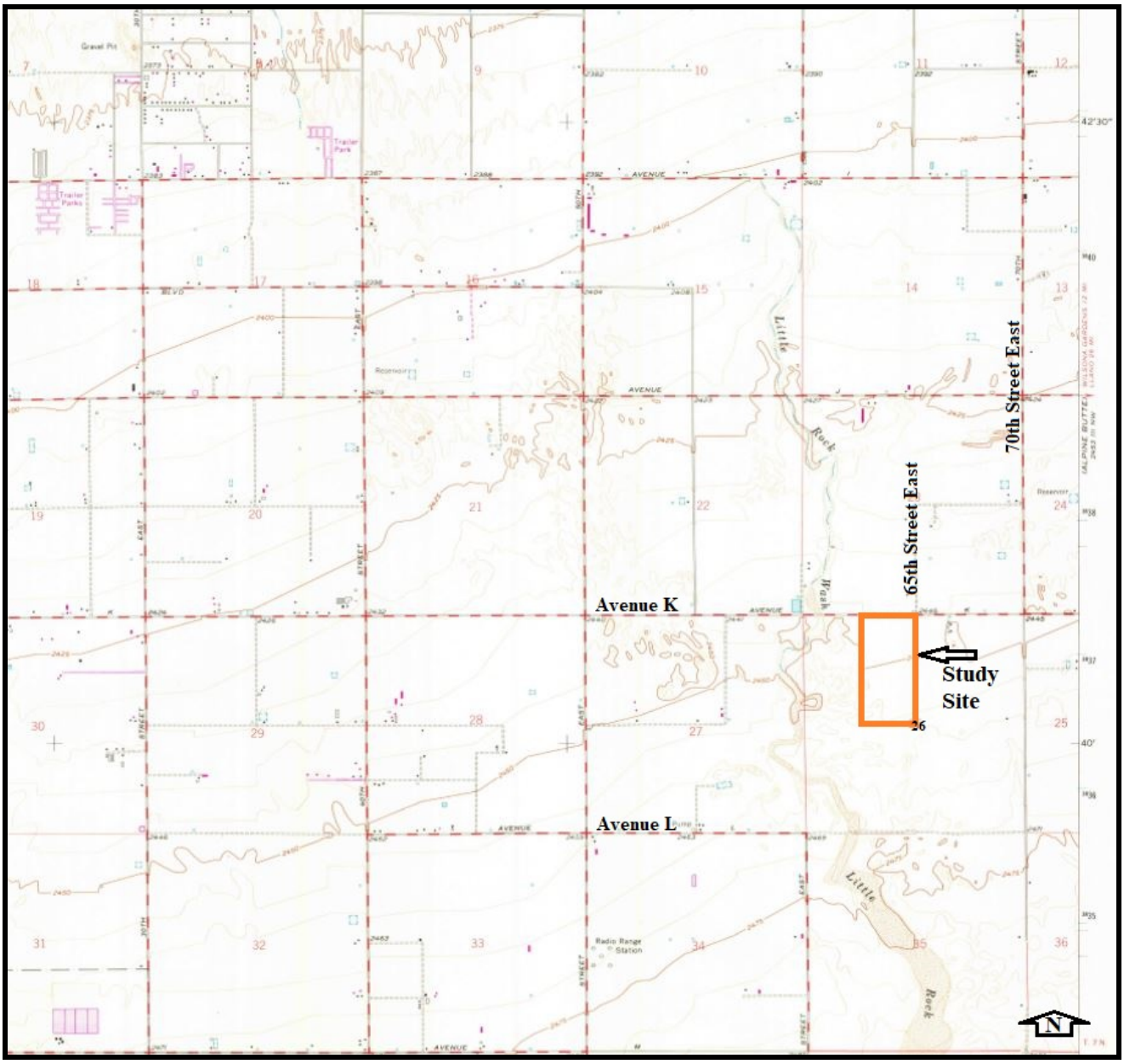

Figure 2. Approximate location of study area as depicted on U.S.G.S. Quadrangle, Lancaster East, Calif., 7.5', 1974.

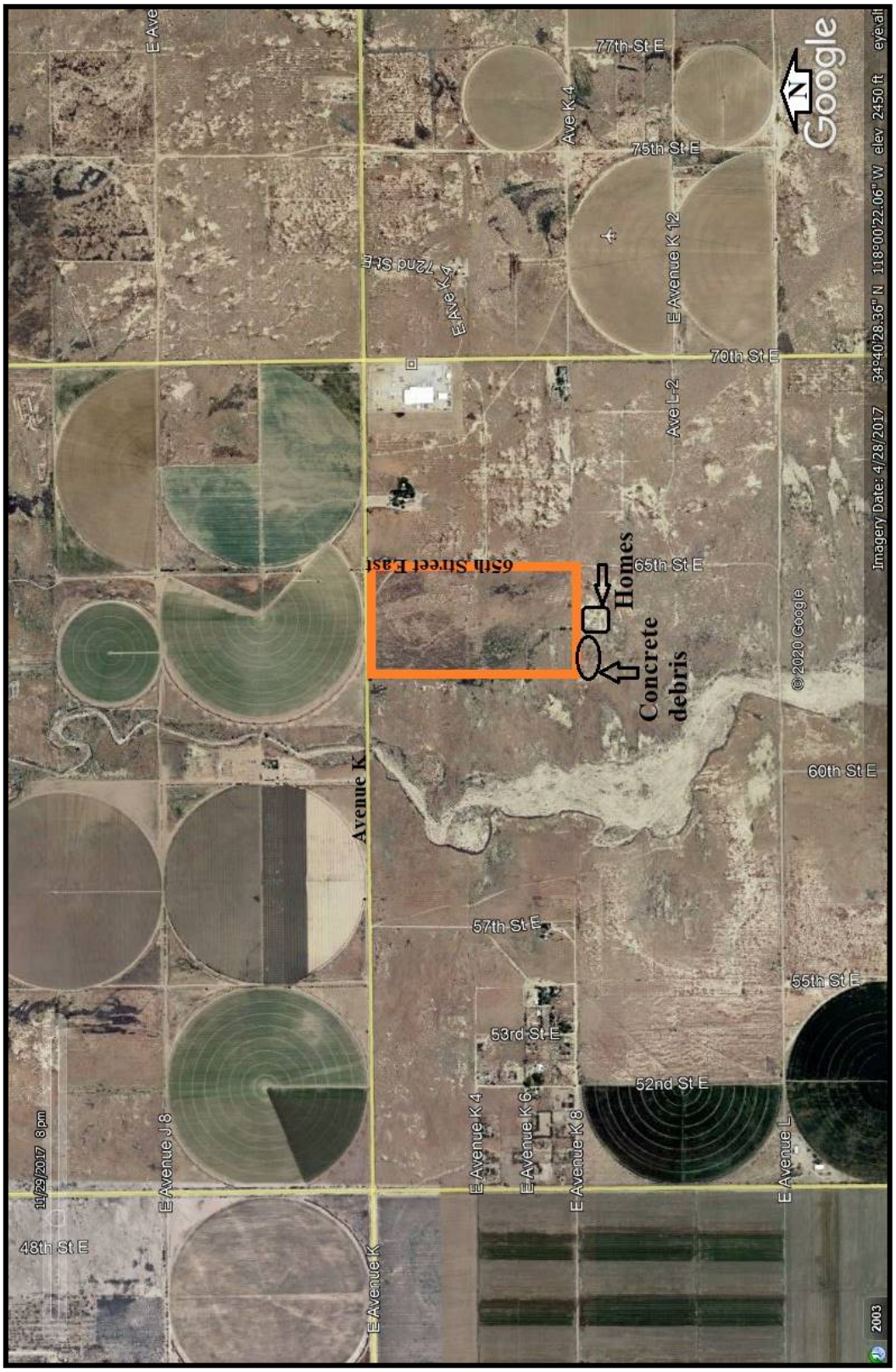

Figure 3. Approximate location of study area showing surrounding land use as depicted on excerpt from Google Earth Aerial Photography, April 2017.

within the study site. Line transects were approximately 1,320 feet (426 m) long and spaced approximately 100 feet (32 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 potential habitat was present for the species (CDFW 2019, Leitner and Leitner 2017). A habitat assessment was conducted for migratory birds to include Swainson's hawk.

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). Aerial photographs, California Natural Diversity Database (CNDDB 2018), eBird, and the USGS topographic map were reviewed. Photographs of the study site were taken (Figures 4, 5 and 6).

Results

A total of 24 line transects were walked on 5, 9, and 10 September 2020. Weather conditions on 5 September consisted of warm temperatures (estimated 70 degrees F), 2% cloud cover, and light winds. Weather conditions on 9 September consisted of cool temperatures (estimated 55 degrees F), 80% smoke cover, and moderate winds. Weather conditions on 10 September consisted of cool temperatures (estimated 55 degrees F), 80% smoke cover, and slight winds. Sandy clay and sandy loam surface soil textures were present within the study area. There were no blue line streams delineated on the USGS topographic map within the study area. Relic ephemeral washes, including a large circular clay pan area, were observed on the aerial photography within the southern portion of the study area. Washes and the clay pan area observed within the study area during the field survey have been historically farmed as part of ongoing agricultural practices and are no longer viable as a functional water habitat (Figure 7). Dune features dominated by exotic and invasive weeds were observed within the southern half of the study site (Figure 7).

The proposed project area was characteristic of an agricultural field. A total of twenty-three plant species were observed during the line transect survey (Table 1). One Joshua tree, approximately 12-foot tall, was located approximately 25 feet south of the southern boundary. Several salt cedars were present in the southern portion of the study site. American elms (*Ulmus americana*) were present along the northern boundary of the study site. Shrubs within the site were sparse with rabbit brush being the most commonly occurring perennial species throughout the study area. Red stemmed filaree (*Erodium cicutarium*), and fiddleneck (*Amsinckia tessellata*) were the dominant annual species throughout the study area. Annuals within the study site were predominately invasive, weedy species (Table 1). Tumble mustard (*Sisymbrium altisissiimum*) was prominent in the clay pan areas. Russian thistle (*Salsola iberica*) dominated the largest dune feature and most of the washes within the study site. No alkali mariposa lilies, Barstow woolly sunflowers, desert cymopterus, or suitable habitat were observed within the study site.

Habitat within the north half of study site

Photograph representative of the middle of the study site: low areas, and sandy soil texture increases toward the south southwest.

Figure 4. Representative photographs depicting general site characteristics.

South side of site, where dunes and low shallow areas are more prevalent.

Closeup of vegetation on major dune present in southwest corner.

Figure 5. Representative photographs depicting general site characteristics.

Joshua tree and debris field just south of the southern boundary in southwest corner of site.

Figure 6. Representative photograph depicting general site characteristics.

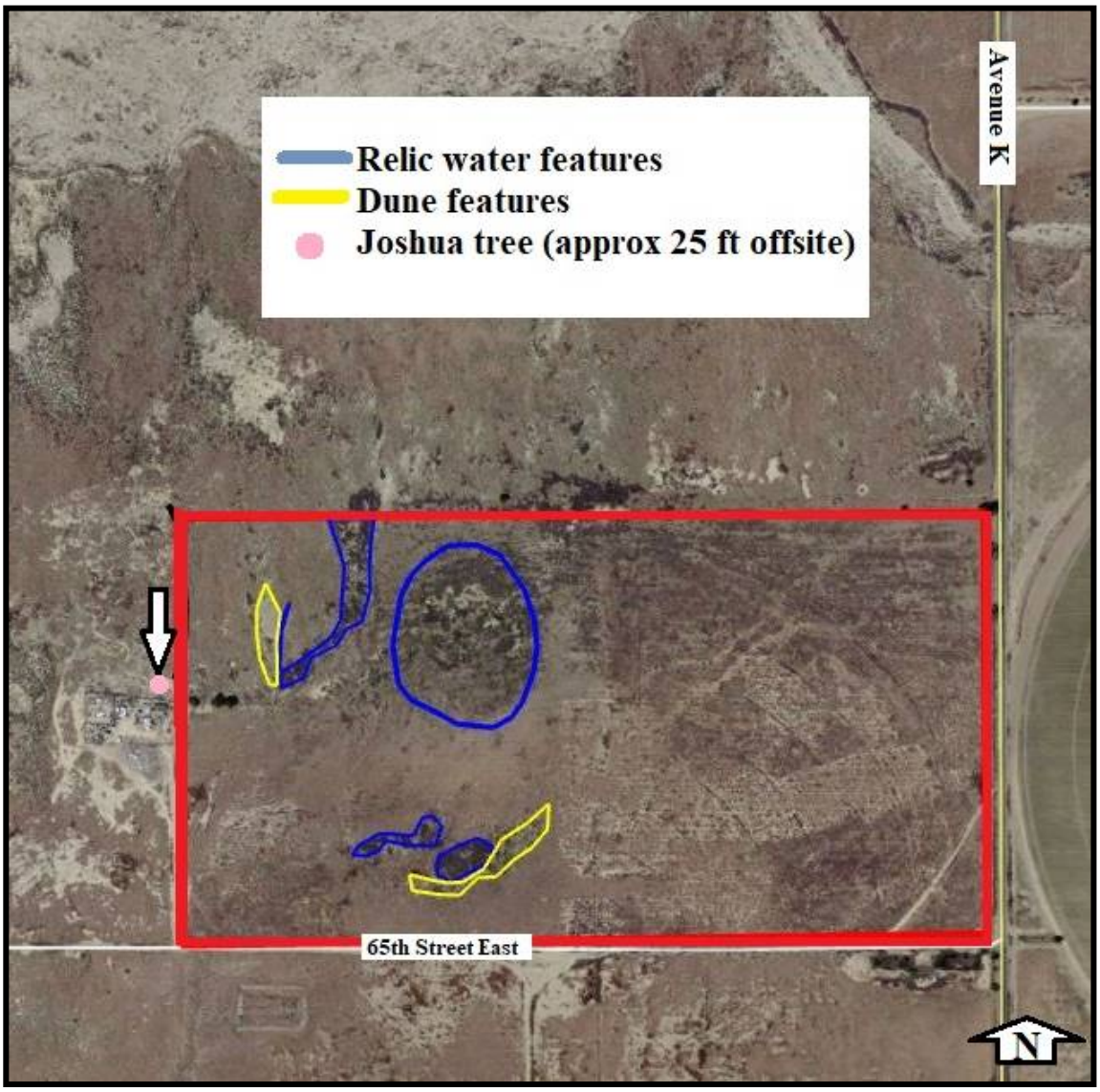

Figure 7. Aerial photograph, 2017 Google Earth depicting the relic water and dune features. These locations were based on field observations and photographic interpretation of features.

Table 1. List of plant species that were observed during the line transect survey of APN 3386-007-007, Lancaster, California.

Common Name	Scientific Name
Joshua tree (1 individual ~ 12 feet)	*Yucca brevifolia*
American elm	*Ulmus americana*
Salt cedar	*Tamarix aphylla*
Four-wing saltbush	*Atriplex canescens*
Allscale	*Atriplex polycarpa*
Peachthorn	*Lycium cooperi*
Rabbit brush	*Chrysothamnus nauseosis*
Desert straw	*Stephanomeria pauciflora*
White mallow	*Eremalche exilis*
Comet blazing star	*Mentzelia albicaulis*
Fiddleneck	*Amsinckia tessellata*
Desert dandelion	*Malacothrix glabrata*
Goldfields	*Lasthenia californica*
Russian thistle	*Salsola iberica*
Schismus	*Schismus* sp.
Foxtail barley	*Hordeum leporinum*
Red brome	*Bromus rubens*
Cheatgrass	*Bromus tectorum*
Red stemmed filaree	*Erodium cicutarium*
Annual burweed	*Franseria acanthicarpa*
Prickly lettuce	*Lactuca seriola*
Tansy mustard	*Descurainia sophia*
Tumble mustard	*Sisymbrium altisissiimum*

A total of eighteen 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. No potential burrowing owl cover sites were observed within the study site. An inactive bird nest was observed within the offsite Joshua tree during the field survey. No desert kit foxes or their sign were observed during the field survey. No suitable MGS habitat was present within the study site. Swainson's hawk nesting, roosting, and minimal foraging habitat was present within the study site. Two Great horned owls were observed within the salt cedars.

Old brick, concrete, ceramic tile, and roofing tile were observed within the southern portion of the study site. Concrete debris was observed south of the southwestern boundary of the study site. A couple small old dump sites were observed within the study site. A new dump site along 65th Street East occurred during the field study. A truck with concrete debris was observed driving to the south of the study site. Vehicle tracks were observed within the study site. Furrows from agricultural operations were observed within the study site primarily within the northern portion.

Discussion

It is likely that most annual species were visible during the time the field survey was performed. Greater than 95% of the plant cover within the project site consisted of weedy species (Table 1). Based on the lack of 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 have eliminated all native habitat within and around this study site. Habitat in the general area is severely degraded, fragmented or already developed. 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. No desert tortoise habitat was present within, adjacent, or in close proximity to the project site. Based on field observations, desert tortoises are not present within the study area. No protection measures are recommended for desert tortoises.

The MGS is a state listed threatened species. The study area was located within the geographic range of MGS. MGS habitat is recognized to consist of a variety of desert scrub habitats, none of which occur any longer within, adjacent, or in close proximity to the project site. A table listing MGS habitats and a discussion of required shrubs and annuals can be found in the publication titled "A Conservation Strategy for the Mohave Ground Squirrel" (CDFW 2019). No suitable habitat was present to support MGS on or around this study site. No protection measures are recommended for MGS.

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of APN 3386-007-007, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
Kangaroo rat	*Dipodomys* sp.
Pocket gopher	*Thomomys bottae*
Black-tailed jackrabbit	*Lepus californicus*
Desert cottontail	*Sylvilagus auduboni*
Domestic dog	*Canis familiaris*
Northern harrier	*Circus cyaneus*
California quail	*Callipepla californica*
Great horned owl	*Bubo virginianus*
Common raven	*Corvus corax*
Horned lark	*Eremophila alpestris*
House finch	*Carpodacus mexicanus*
Darkling beetle	*Coelocnemis californicus*
Fly	Order: Diptera
Honey bees	Order: Hymenoptera
Grasshopper	Order: Orthoptera
Funnel spider	Order: Araneida
Spider	Order: Araneida

Table 3. List of wildlife species that may occur within the study area, APN 3386-007-007 Lancaster, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Merriam kangaroo rat	*Dipodomys merriami*
Gopher snake	*Pituophis melanoleucus*
Side blotched lizard	*Uta stansburiana*
Red-tailed hawk	*Buteo jamaicensis*
Mourning dove	*Zenaida macroura*
Rock dove	*Columba livia*
Hummingbird sp.	Family: Trochilidae
Northern mockingbird	*Mimus polyglottos*
House sparrow	*Passer domesticus*
White crowned sparrow	*Zonotrichia leucophrys*
Moth	Order: Lepidoptera
Black widow	*Latrodectus* sp.

Burrowing owls are considered a species of special concern by the CDFW. No potential cover sites for burrowing owls were present within the study site. No observations of burrowing owls have been documented within 1,550 feet (500 m) of the project site (CNDDB 2018, eBird 2020). This is the recommended buffer from an active burrowing owl site for high impact activities (CDFG 2012). A minimum of three dogs (*Canis familiaris*) have full range of the 80 acre study site. The dogs were observed two of the three days and recent tracks were observed all three days. The presence of these dogs would be expected to discourage burrow surrogates from the project site. No protection measures are recommended for burrowing owls.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. Suitable habitat is present within the study site for migratory birds. Swainson's hawk is a state listed threatened species. Projects which contribute to a significant cumulative effect must offset its contribution to that effect in order to avoid cumulative impacts to Swainson's hawk (California Energy Commission and Department of Fish and Game (CEC and CDFG) 2010). Impacts to a Swainson's hawk, as well as impacts to suitable habitat within 5 miles of an active nest, is considered a potential take by CDFW. Swainson's hawks have been observed at 50th Street East and Avenue L and at 50th Street East and Avenue N in 2020 (eBird 2020). Swainson's hawk observations within Lancaster have been strongly correlated to active agricultural fields (eBird 2020, CNDDB 2018). The study site is adjacent to active agricultural fields. The study site appears to have potential nesting and minimal foraging habitat for Swainson's hawks. Data already exists on the recent presence of breeding Swainson's hawks within 5 miles of the study site. No additional surveys for Swainson's hawk are recommended if ground disturbing activities do not occur from 1 April through 31 August.

Desert kit foxes are a fully protected species by California Department of Fish and Wildlife (CDFW). No sign of desert kit fox activity was observed within the study site. Based on this field survey desert kit foxes are not resident within this study site. The presence of dogs within the study site would be expected to discourage desert kit foxes from becoming resident within the study site. No protection measures are recommended for desert kit foxes.

No suitable habitat for alkali mariposa lily, 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. Joshua trees became a candidate species on 22 September 2020 when it was accepted for a listing review. Once the Joshua tree becomes a candidate species, impacts to Joshua trees must be avoided unless coordination with CDFW is accomplished. The one Joshua tree observed during the field survey is approximately 25 feet south of the southern boundary. Care must be taken to not stray offsite in this area with heavy equipment to avoid impact to this Joshua tree during development of the project site. If the tree can be avoided no action would be necessary. 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 2015, 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 possible, removal of trees within the project site will occur outside the breeding season for migratory birds. Breeding generally lasts from February to July but may extend beyond this time frame. If tree 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 500 feet around active raptor nests or 50 feet around active migratory song bird nests. The project biologist will determine if the buffer areas should be increased or decreased based on the nesting bird response to disturbances.

Impacts to the offsite Joshua tree will be avoided by delineating a 25 foot boundary from the trunk of the tree and ensuring no heavy equipment traffic within that area occurs.

Based on the condition of the habitat, surrounding land use, and lack of wildlife sign, no other protection measures are recommended.

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

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