

Biological Resource Assessment of
APNs 3203-016-035, 036, and 037,
Lancaster, California

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Abstract

Residential development has been proposed for APNs 3203-016-035, 036, and 037. The approximately 39-acre (16 ha) study area was located north of Avenue K and west of 52nd Street West, T7N, R13W, the SW1/4 of the SE1/4 of Section 23, S.B.B.M. A line transect survey was conducted on 21 August and 2 September 2021 to inventory biological resources. The proposed project area was characteristic of a highly disturbed desert field. A total of 21 plant species and 21 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 habitat within the study area did not appear suitable to support desert tortoises. No Mohave ground squirrels (*Xerospermophilus mohavensis*) were observed or audibly detected during the field survey. There was no suitable habitat for Mohave ground squirrels within the study area. No desert kit foxes (*Vulpes macrotis*) or their sign were observed during the field surveys. No burrowing owls (*Athene cunicularia*), or their sign were observed during the field survey. The concrete water pipes and irrigation structures are potential cover sites for burrowing owls within the study area. Vegetation within the study area provides potential nesting sites for migratory birds. No nesting sites for Swainson's hawk (*Buteo swainsoni*) have been documented within 5 miles of the project site. No sensitive plants, specifically, Joshua tree (*Yucca brevifolia*) alkali mariposa lily (*Calochortus striatus*), desert cymopterus (*Cymopterus deserticola*), and Barstow woolly sunflower (*Eriophyllum mohanense*) were observed within the study site. No suitable habitat was present for alkali mariposal lily, desert cymopterus, or Barstow woolly sunflower. No other state or federally listed species are expected to occur within the proposed project area. No wetlands or natural desert washes were observed within the study area. A relic manmade drainage was observed within the study site.

Recommended Protection Measures:

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.

Significance:

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

Development of a residential area has been proposed for APNs 3203-016-035, 036, and 037 (Figure 1). Development would include installation of access roads 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*), desert kit fox (*Vulpes macrotis*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), Joshua tree (*Yucca brevifolia*), desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflower (*Eriophyllum mohanense*), and alkali mariposa lily (*Calochortus striatus*).

Study Area

The approximately 39-acre (16 ha) study area was located north of Avenue K and west of 52nd Street West, T7N, R13W, the SW1/4 of the SE1/4 of Section 23, S.B.B.M. (Figure 2). Avenue K formed the southern boundary of the study area. Residential development existed southeast of Avenue K and in proximity of the study area to the west, southwest, east, and northeast (Figure 3). Dirt roads were present along the western, northern, and eastern boundaries of the study site. Highly disturbed desert fields existed east and west of the study site. Joshua tree woodland and desert scrub habitat existed north of the study area. Topography of the site was approximately 2,375 to 2,385 feet (724-727 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. To maintain transect integrity the study area was divided in half with north-south temporary markings. Line transects in both sections were walked in an east-west orientation. Consistent with survey protocol line transects were approximately 660 feet (201 m) long and spaced about 75 feet (23 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

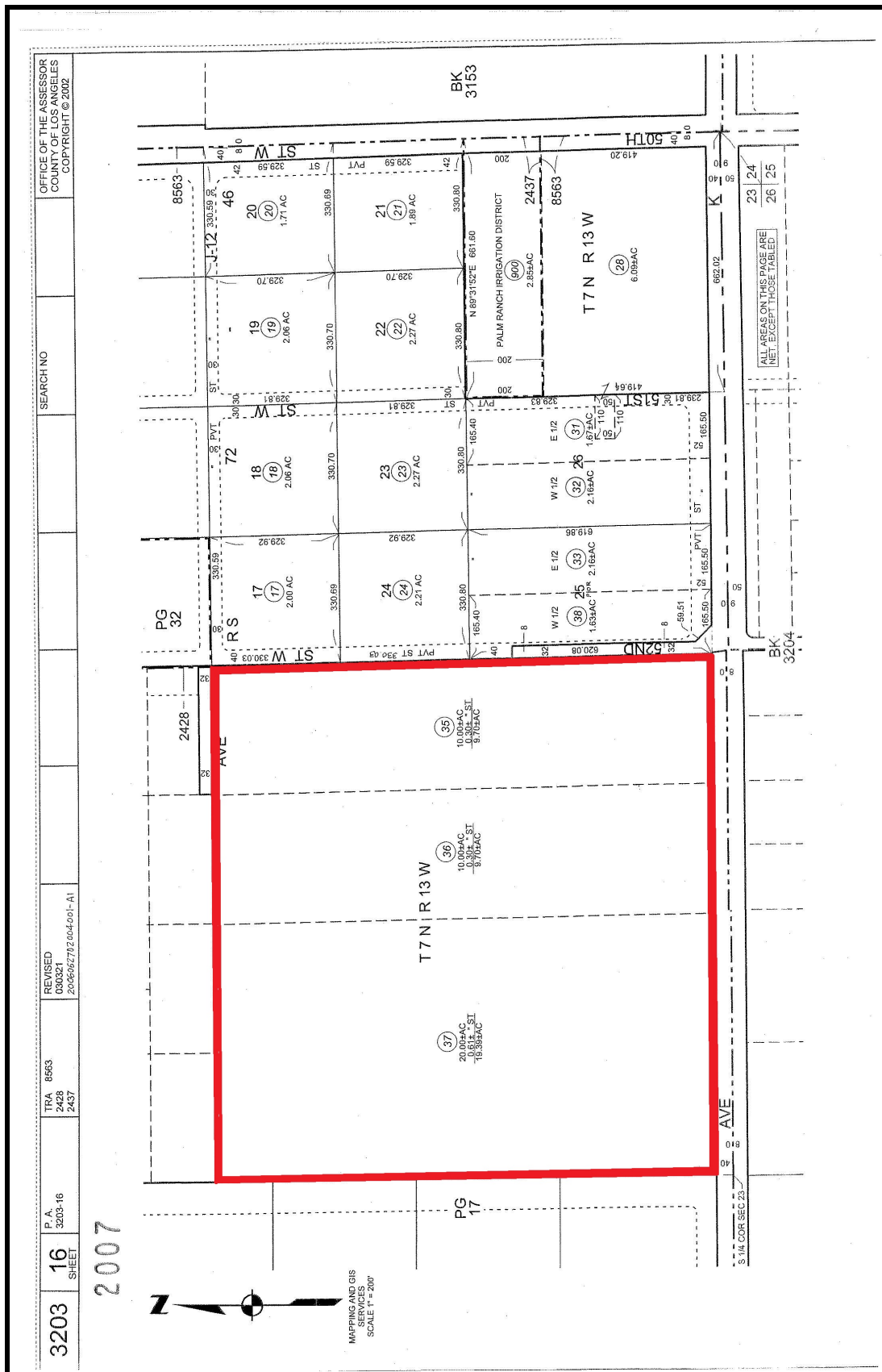




Figure 3. Approximate location of study area as depicted on excerpt from Google Earth Aerial Photography, dated July 2017, showing surrounding land use.

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, Blatt 2019, Borror and White 1970, Burt and Grossenheider 1976, eBird 2021, 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, Murie 1974, Lowrey 2006). Historical aerial photographs and the USGS topographic maps of the study area and surrounding vicinity were reviewed. Review of documented sightings of sensitive plant and wildlife species was accomplished using the California Natural Diversity Database (CNDD) (Lancaster West 2020, Del Sur 2016) and eBird.org. Previous surveys in the area (Hagan 2013, 2014, 2016, 2018, 2019, 2020, 2021), Aspen Group 2015) were reviewed for historical sightings and background information. Photographs were taken of the study site (Figures 4 and 5).

Results

A total of sixteen line transects were walked on 21 August 2021. Weather conditions consisted of warm temperatures (estimated 72 degrees F), 50% hazy cloud cover, and moderate to high winds. A total of 13 line transects were walked on 2 September 2021. Weather conditions consisted of warm temperatures (estimated 50-75 degrees F), 0% cloud cover, and slight winds. Sandy, sandy loam, and sandy clay loam surface soil textures were characteristic throughout the study area. No blue line streams were noted within the study site on the USGS topographic maps. No wetlands or natural desert washes were observed within the study area. A drainage feature, oriented southeast-northwest, was observed within the study area. This feature appeared to be a relic from a manmade drainage south of Avenue K (Figure 5). An old, water retention basin was situated within the southwestern corner of the study area (Figure 5).

The proposed project area was characteristic of a highly disturbed desert field. A total of 21 plant species were observed during the line transect survey (Table 1). Rabbit brush (*Chrysothamnus nauseosus*) and four-winged saltbush (*Atriplex canescens*) were present in small patches within the eastern portion of the study area. The western portion of the study area was all but devoid of perennial shrubs. Invasive grasses (*Bromus* spp.) and mustard spp. were the dominant annual species throughout the study area.

A total of 21 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 during the field survey. No bird nests were observed within the study site. No Mohave ground squirrels were detected visually or audibly during the field survey. No desert kit foxes, or their sign were observed during the field survey.



Figure 4. Representative photographs of the study site. Top photograph: View from southeast boundary looking north. Bottom photograph: View from northwest boundary looking south. Dirt hill in background is part of the study area.



Figure 5. Top photograph is view of the manmade drainage on the east side of the study site which appears to be abandoned. Bottom photograph is relic retention basin associated with an old homestead. Giant reed was persisting along the west bank. OHV trail now goes through the middle.

Table 1. List of plant species that were observed during the line transect survey of APNs APNs 3203-016-035, 036, and 037, Lancaster, California.

<u>Common Name</u>	<u>Scientific Name</u>
Rabbit brush	<i>Chrysothamnus nauseosis</i>
Four-wing saltbush	<i>Atriplex canescens</i>
Mormon tea	<i>Ephedra nevadensis</i>
Fiddleneck	<i>Amsinckia tessellata</i>
Desert straw	<i>Stephanomeria pauciflora</i>
Blue mantle	<i>Eriastrum diffusum</i>
Turkey mullein	<i>Eremocarpus setigerus</i>
Flat-topped buckwheat	<i>Eriogonum deflexum</i>
Autumn vinegar-weed	<i>Lessingia germanorum</i>
Vinegar weed	<i>Trichostema lanceolatum</i>
Russian thistle	<i>Salsola iberica</i>
Red stemmed filaree	<i>Erodium cicutarium</i>
Annual burweed	<i>Franseria acanthicarpa</i>
Jimson weed	<i>Datura meteloides</i>
Prickly lettuce	<i>Lactuca seriola</i>
Tumble mustard	<i>Sisymbrium altissimum</i>
Nevada blue grass	<i>Poa secunda</i>
Cheatgrass	<i>Bromus tectorum</i>
Red brome	<i>Bromus rubens</i>
Schismus	<i>Schismus</i> sp.
Giant reed	<i>Arundo donax</i>

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of APNs 3203-016-035, 036, and 037, Lancaster, California.

<u>Common Name</u>	<u>Scientific Name</u>
Rodents	Order: Rodentia
Kangaroo rat	<i>Dipodomys</i> sp.
Desert cottontail	<i>Sylvilagus auduboni</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>
Coyote	<i>Canis latrans</i>
Domestic dog	<i>Canis familiaris</i>
Domestic cat	<i>Felis</i> sp.
Horse	<i>Equus</i> sp.
Northern harrier	<i>Circus cyaneus</i>
Barn owl	<i>Tyto alba</i>
California quail	<i>Callipepla californica</i>
Rock dove	<i>Columba livia</i>
Mourning dove	<i>Zenaida macroura</i>
Common raven	<i>Corvus corax</i>
House finch	<i>Carpodacus mexicanus</i>
Harvester ants	Order: Hymenoptera
Grasshopper	Order: Orthoptera
Dragonfly	Order: Odonata
Spider	Order: Araneida
Darkling beetle	<i>Coelocnemis californicus</i>
Fly	Order: Diptera

Table 3. List of wildlife species that may occur within the study area, APNs 3203-016-035, 036, and 037, Lancaster, California.

<u>Common Name</u>	<u>Scientific Name</u>
Deer mouse	<i>Peromyscus maniculatus</i>
Merriam kangaroo rat	<i>Dipodomys merriami</i>
Panamint kangaroo rat	<i>Dipodomys panamintinus</i>
Ring-neck dove	<i>Streptopelia capicola</i>
Hummingbird sp.	Family: Trochilidae
Horned lark	<i>Eremophila alpestris</i>
White crowned sparrow	<i>Zonotrichia leucophrys</i>
Side blotched lizard	<i>Uta stansburiana</i>
Western whiptail	<i>Cnemidophorus tigris</i>
Gopher snake	<i>Pituophis melanoleucus</i>
European honey bee	Order: Hymenoptera
Cabbage white butterfly	<i>Pieris rapae</i>
Painted lady	Order: Lepidoptera

Much of the study area appeared to have been graded or disced in the past. Evidence within the study area appeared to indicate old agricultural use. Remnants of a homestead were observed in the southwestern corner in association with the abandoned retention basin. Open concrete water pipes and structures were observed within the study area. Scattered litter was present throughout the study area, with a greater density observed along Avenue K. Off highway vehicle (OHV) tracks and a trail were observed within the study area. A homeless encampment was observed just off the northern boundary of the study area. A large hill of soil, from past dumping was observed in the southern portion of the study area. Large dump piles of household waste, yard and construction debris were observed near the large hill of soil. Horse (*Equus* sp.) tracks were observed within the study area.

Discussion

It is likely that some annual species were not visible during the time the field survey was performed. Based on the habitat and level of disturbance no sensitive plants species are expected to exist within the study site. 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. Habitat in the general area will continue to become degraded and fragmented. 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 construction activities. Development of this site will result in less cover and foraging opportunities for the species occurring within and adjacent to the study area.

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 project 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 area. Suitable habitat for desert tortoises was not present within or adjacent to the study area. Desert tortoises are not expected to inhabit the study area. No protection measures are recommended for desert tortoises.

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. The concrete water pipes and irrigation structures are potential cover sites for burrowing owls within the study area.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. Vegetation within the study area provides potential nesting sites for migratory birds. No Swainson's hawk have been documented nesting within 5 miles of the study site (eBird 2021). The study area is not considered suitable foraging habitat given the small patch size, adjacent urban uses, and high level of use by domestic pets. No protection measures are recommended for Swainson's hawks.

The Mohave ground squirrel (MGS) is a state listed threatened species. The proposed project area was not located within the geographic range of the MGS. The western limit of the geographic range of the MGS is State Highway 14. In addition, the study area lacked suitable habitat to support MGS (CDFW 2019). No protection measures are recommended for MGS.

No Joshua trees, alkali mariposa lily, Barstow woolly sunflower or desert cymopterus were observed within the study site. 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. 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).

Recommended Protection Measures:

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.

Significance:

Given the small size of the study area, the adjacent land uses, 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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