Biological Resource Assessment of
APNs 3203-033-02, 21, and 22
Lancaster, California

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Abstract

Development of single-family homes has been proposed for APNs 3203-033-02, 21, and 22. The approximately 20 acre (8 ha) study area was located north of Avenue J-8 (dirt road) and west of 52nd Street West, T7N, R13W, the S1/2 of the SW1/4 of the NE1/4 of Section 23, S.B.B.M. A line transect survey was conducted on 29 September 2017 to inventory biological resources. The proposed project area was characteristic of a highly disturbed Joshua tree (*Yucca brevifolia*) and saltbush scrub (*Atriplex* spp.) plant community. Approximately 134 Joshua trees were documented on the study site. A total of twenty-one plant species and thirty-four 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 mitigation for this species is recommended. No burrowing owls (*Athene cunicularia*) or their sign were observed during the field survey. California ground squirrel burrows (*Citellus beecheyi*) were observed within the study site. A burrowing owl survey should be accomplished within 30 days prior to ground disturbing activities to ensure no burrowing owls have moved into the study area. The Joshua trees and shrubs within the study area offer habitat for nesting birds. If possible, removal of vegetation will occur outside the breeding season for migratory birds. Nesting 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 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 (161 m) around active raptor nests and 50 feet (16 m) around other 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. The proposed project site was located west of the geographic range of the Mohave ground squirrel (*Xerospermophilus mohavensis*). The study site did not appear to support suitable habitat for Mohave ground squirrels. There are no mitigations recommended for Mohave ground squirrels. No desert kit foxes (*Vulpes macrotis*) or their sign were observed within the study site. No other state or federally listed species are expected to occur within the proposed project area. No washes were observed within the study area.

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

Development of single-family homes has been proposed for APNs 3203-033-02, 21, and 22 (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

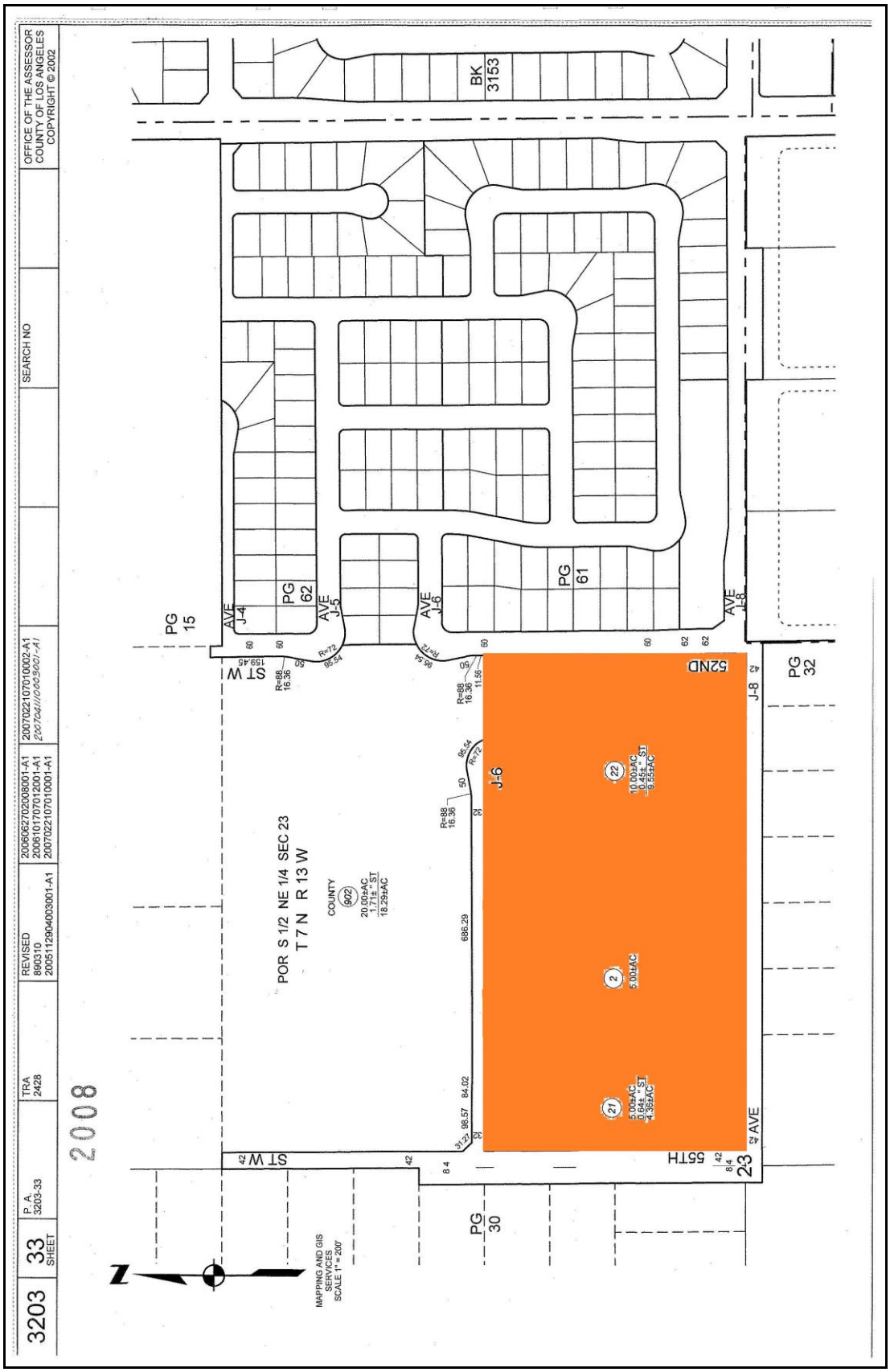

Figure 1. Location of proposed project site as depicted on APN map.

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*), prairie falcon (*Falco mexicanus*), desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflower (*Eriophyllum mohanense*), and alkali mariposa lily (*Calochortus striatus*).

Study Area

The approximately 20 acre (8 ha) study area was located north of Avenue J-8 (dirt road) and west of 52nd Street West, T7N, R13W, the S1/2 of the SW1/4 of the NE1/4 of Section 23, S.B.B.M. (Figure 2). The eastern boundary of the study area was formed by 52nd Street West. Single-family homes were present to the east of 52nd Street West (Figure 3). The southern boundary of the study site was formed by Avenue J-8 (dirt road). Disturbed Joshua tree (*Yucca brevifolia*) and saltbush scrub habitat was present south of Avenue J-8. Highly disturbed fields were present west, and north of the study area. Topography of the study site ranged from approximately 2,357 to 2,361 feet (760 to 762 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). Line transects were walked in an east-west orientation. Line transects were approximately 1,320 feet (426 m) long and spaced about 35 feet (11 m) apart (U.S. Fish & Wildlife Service 2010).

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 10x50 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 Diversity Database, Del Sur, and Lancaster West (CNDD 2017, 2015), and the USGS topographic maps were reviewed. Photographs of the study site were taken (Figures 4, and 5).

Results

A total of 18 line transects were walked on 29 September 2017. Weather conditions consisted of moderate temperatures (estimated 60 to 85 degrees F), 2% cloud cover, and light winds. A sandy loam surface soil texture was characteristic throughout the study area. No blue line streams were found on USGS topographic map. No desert washes were observed within the study area.

The proposed project area was characteristic of a highly disturbed Joshua tree (*Yucca brevifolia*) and saltbush scrub (*Atriplex* spp.) plant community (Barbour and Major 1988). A total of twenty-one plant species were observed during the transect survey (Table 1). Joshua trees were the dominant perennial species throughout the study area. Shrub species within the

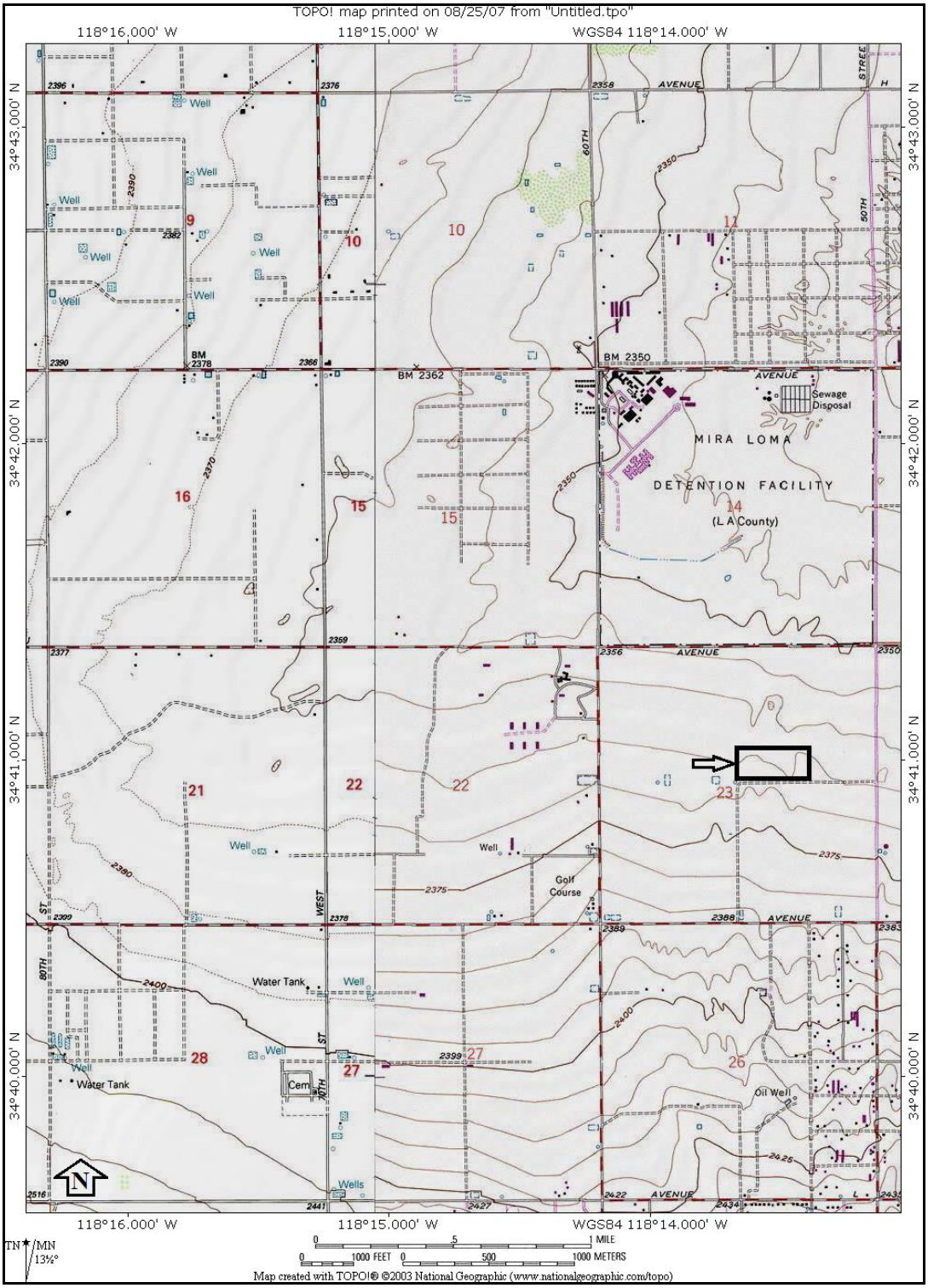

Figure 2. Approximate location of study area as depicted on excerpts from Del Sur and Lancaster West U.S.G.S., Quadrangle Maps, 7.5', 1974.

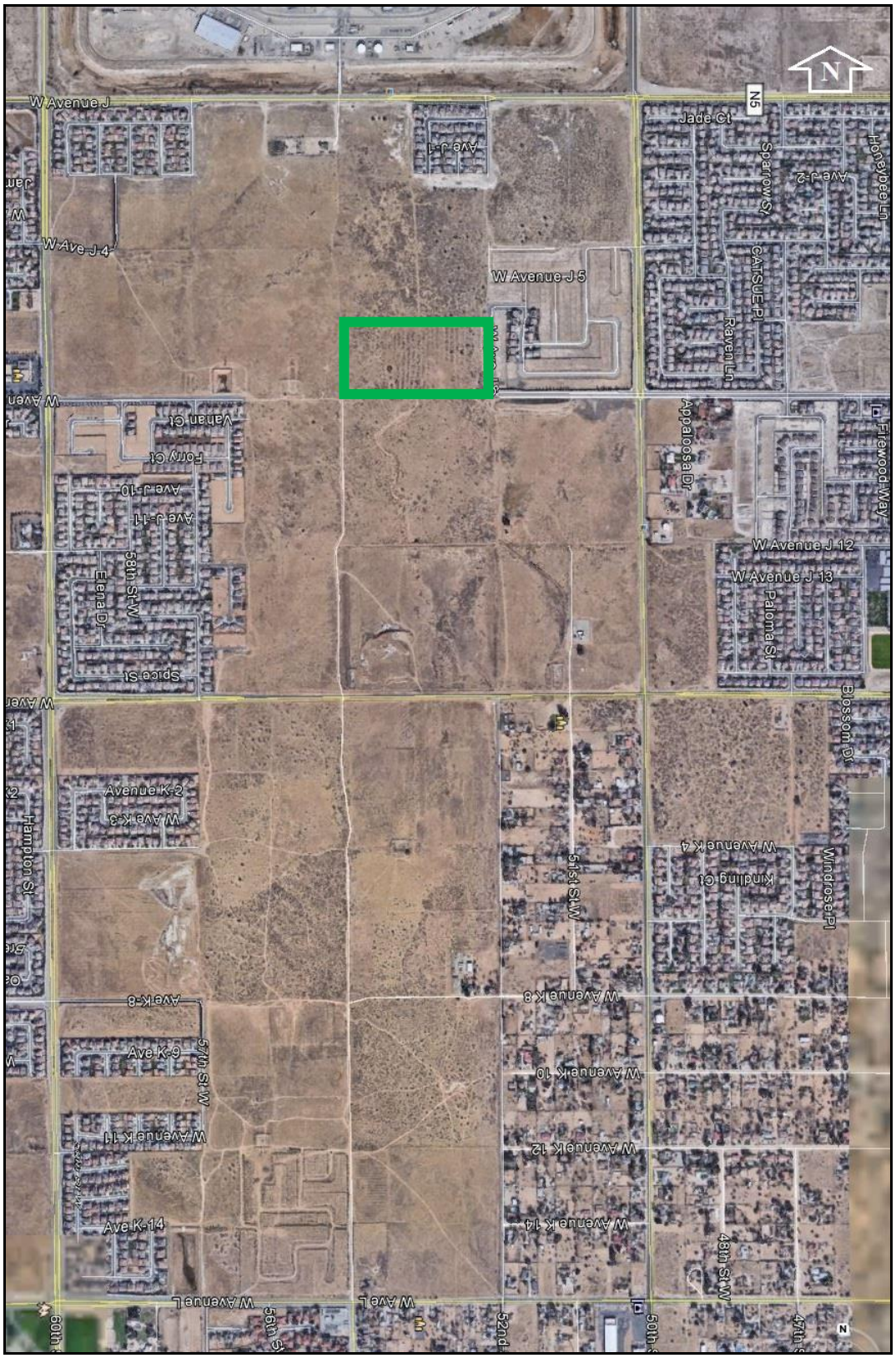

Figure 3. Approximate location of study area as depicted on excerpt from Google Earth Aerial Photography, accessed October 1, 2017, showing surrounding land use.

Center of study area looking east

Center of study area looking to the southwest.

Figure 4. Representative photographs of the study area.

Figure 5. Representative photographs of Joshua trees in the eastern portion of the study area.

Table 1. List of plant species that were observed during the line transect survey of APNs 3203-033-02, 21, and 22, Lancaster, California.

Common Name	Scientific Name
Joshua tree	*Yucca brevifolia*
California juniper	*Juniperus californica*
Nevada saltbush	*Atriplex torreyi*
Four-wing saltbush	*Atriplex canescens*
Peachthorn	*Lycium cooperi*
Mormon tea	*Ephedra nevadensis*
Rabbit brush	*Chrysothamnus nauseosis*
Desert straw	*Stephanomeria pauciflora*
Comet blazing star	*Mentzelia albicaulis*
Autumn vinegar-weed	*Lessingia germanorum*
Vinegar weed	*Trichostema lanceolatum*
Spotted buckwheat	*Eriogonum maculatum*
Fiddleneck	*Amsinckia tessellata*
Turkey mullein	*Eremocarpus setigerus*
Tumble mustard	*Sisymbrium altisissiimum*
Russian thistle	*Salsola iberica*
Schismus	*Schismus* sp.
Cheatgrass	*Bromus tectorum*
Rattlesnake weed	*Euphorbia albomarginata*
Red stemmed filaree	*Erodium cicutarium*
Annual burweed	*Franseria acanthicarpa*
Mushroom sp.	Kingdom: Fungi

study area were very sparse. The study area was estimated to contain approximately 134 Joshua trees (Table 2). Joshua tree densities were greater within the eastern portion of the study area. Fiddleneck (*Amsinckia tessellata*) was the dominant annual species throughout the study area. No sensitive plant species were observed within the study site.

A total of thirty-four wildlife species, or their sign were observed during the transect survey (Table 3). No desert tortoises or sign were observed during the field survey. No burrowing owls or their sign were observed during the field survey. California ground squirrel (*Citellus beecheyi*) burrows were observed within the study area. No Mohave ground squirrels were detected visually or audibly during the field survey. No desert kit foxes or their sign were observed within the study site. Ten inactive bird nests were observed within the Joshua trees.

Piles of dirt, asphalt, concrete, gravel, and sod were observed within the study site. Scattered litter was observed throughout the site. Household waste was commonly observed within the study area. Shotgun shells were observed within the study area. Off-road vehicle tracks were observed within the study area. A horseback rider was observed riding along Avenue J-8 on the southern boundary of the study area. An old irrigation line and irrigation standpipes were present just along the western boundary of the study area.

Discussion

It is possible 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 area. Several wildlife species would be expected to occur within the proposed project area (Table 4).

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 species occurring within and adjacent to the study area.

The proposed project area was located within the geographic range of the desert tortoise. However, the study area lacked suitable habitat to support desert tortoises. No mitigation for this species is recommended.

Burrowing owls are considered a species of special concern by the California Department of Fish and Wildlife (CDFW). No burrowing owls have been documented in this area in the CNDD. Irrigation piping and stands were present on the study site. There was no burrowing owl sign on the irrigation pipes or stands during the field survey. These offer good cover sites for burrowing owls. Due to the irrigation pipes and stands, and the presence of California ground squirrel burrows, a burrowing owl survey should be accomplished within 30 days prior to construction activities to ensure burrowing owls have not moved into the area. If burrowing owls are discovered the CDFW should be consulted prior to ground disturbing activities.

Table 2. Estimated number of Joshua trees by size class within the study area, APNs 3203-033-02, 21, and 22, Lancaster, California.

Size Class of Joshua trees (estimated height in feet)	Estimated Number of Joshua trees (20 Acres)
1-3	6
4-6	18
7-9	37
10-12	41
>12	32
Total	134

Table 3. List of wildlife species, or their sign, that were observed during the line transect survey of APNs 3203-033-02, 21, and 22, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
Pocket gopher	*Thomomys bottae*
Kangaroo rat	*Dipodomys* sp.
California ground squirrel	*Citellus beecheyi*
Desert cottontail	*Sylvilagus auduboni*
Black-tailed jackrabbit	*Lepus californicus*
Coyote	*Canis latrans*
Horse	*Equus* sp.
Desert night lizard	*Xantusia vigilis*
Desert spiny lizard	*Sceloporus magister*
Western whiptail	*Cnemidophorus tigris*
American kestrel	*Falco sparverius*
Mourning dove	*Zenaida macroura*
Rock dove	*Columba livia*
Barn owl	*Tyto alba*
Common raven	*Corvus corax*
Cactus wren	*Campylorhynchus brunneicapillus*
Black Phoebe	*Sayornis nigricans*
Say's phoebe	*Sayornis saya*
Horned lark	*Eremophila alpestris*
Western meadowlark	*Sturnella neglecta*
House finch	*Carpodacus mexicanus*
White crowned sparrow	*Zonotrichia leucophrys*
Fly	Order: Diptera
Dragonfly	Order: Odonata
Darkling beetle	*Coelocnemis californicus*
Bees, small	Order: Hymenoptera
Butterfly, white, tiny	Order: Lepidoptera
Butterfly, white, small	Order: Lepidoptera
Painted lady butterfly	Order: Lepidoptera
Spider	Order: Araneida
European honey bees	Order: Hymenoptera
Harvester ants, small	Order: Hymenoptera
Grasshopper	Order: Orthoptera

Table 4. List of wildlife species that may occur within the study area, APNs 3203-033-02, 21, and 22, Lancaster, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Merriam kangaroo rat	*Dipodomys merriami*
Domestic dog	*Canis familiaris*
Domestic cat	*Felis* sp.
Side blotched lizard	*Uta stansburiana*
Northern mockingbird	*Mimus polyglottos*
European starling	*Sturnus vulgaris*
House sparrow	*Passer domesticus*
Yucca moth	Order: Lepidoptera
Wolf spider	Order: Araneida*

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. The Joshua trees and shrubs within the study area offer habitat for nesting birds. 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 vegetation removal will occur during or close to the nesting season, a qualified biologist will survey all 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 (161 m) around active raptor nests and 50 feet (16 m) around other 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.

The Mohave ground squirrel is a state listed threatened species. The proposed project site was located west of the geographic range of the Mohave ground squirrel. The habitat within the study areas was not suitable to support Mohave ground squirrels. No mitigation for Mohave ground squirrel is 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 2015, 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).

Significance

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

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