Biological Resource Assessment of
APNs 3153-017-022, 023, 024
Lancaster, California

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Abstract

Development has been proposed for APNs 3153-017-022, 023, 024. The approximately 7 acre (2.8 ha) study area was located south of Avenue J and west of 32nd Street West, T7N, R12W, a portion of the NE1/4 of the NE1/4 of the NE1/4 of Section 19**,** S.B.B.M. A line transect survey was conducted on 29 August 2022 to inventory biological resources. The proposed project area was characteristic of a highly disturbed field. Aerial photography indicates the parcel burned in 2005. A total of 36 plant species and 13 wildlife species or their sign were observed during the line transect survey. Over 50% of the plant species consisted of invasive weed species. The remaining were sparsely distributed individuals of native plant species, remnants of the historical habitat. No desert tortoises (*Gopherus agassizii*) or their sign were observed during the field survey. 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. California ground squirrel (*Citellus beecheyi*) burrows were abundant throughout the study site. California ground squirrel burrows can provide future potential cover sites for burrowing owls. Vegetation within the study area provided limited nesting sites for migratory birds. No Swainson's hawk nests have been sighted within 5 miles of the project site. There was a total of 3 live Joshua trees and 7 dead Joshua trees observed within the study area. No other sensitive plants, specifically, alkali mariposa lily (*Calochortus striatus*), desert cymopterus (*Cymopterus deserticola*), and Barstow woolly sunflower (*Eriophyllum mohanense*) were observed during the field survey. No other state or federally listed species are expected to occur within the proposed project area. No natural wetlands or ephemeral desert washes were observed within the study area. A few small, isolated clay pans were observed within the study site. A storm drain channel was observed along the western boundary, oriented north-south, within the study site.

Recommended Protection Measures:

Joshua trees are currently being considered for listing under the California Endangered Species Act. A hearing by the state Fish and Game Commission is expected to officially list the Joshua tree in October 2022. Compensation and mitigation for impacts to Joshua trees will be determined through the Section 2081 permit process and development of a California Endangered Species Act Incidental Take Permit.

Consistent with the "Staff Report on Burrowing Owl Mitigation" a take avoidance (preconstruction) burrowing owl survey will be accomplished no more 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 (California Department of Fish and Wildlife 2012).

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 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 condition of the study area, the adjacent land uses, isolated and fragmented location, and lack of sensitive wildlife species sign this project is not expected to result in a significant adverse impact to biological resources.

Development has been proposed for APNs 3153-017-022, 023, 024. 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 7 acre (2.8 ha) study area was located south of Avenue J and west of 32nd Street West, T7N, R12W, a portion of the NE1/4 of the NE1/4 of the NE1/4 of Section 19**,** S.B.B.M. (Figures 2 and 3). Block walls and single-family homes were present along the southern and western boundaries of the study site. Avenue J formed the northern boundary of the study site. A single-family home was present north of Avenue J. Similar habitat conditions were present east of the study site. A major road, 32nd Street West, and single-family homes were located nearby to the east of the study site.

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 within the study site. Consistent with survey protocol line transects were

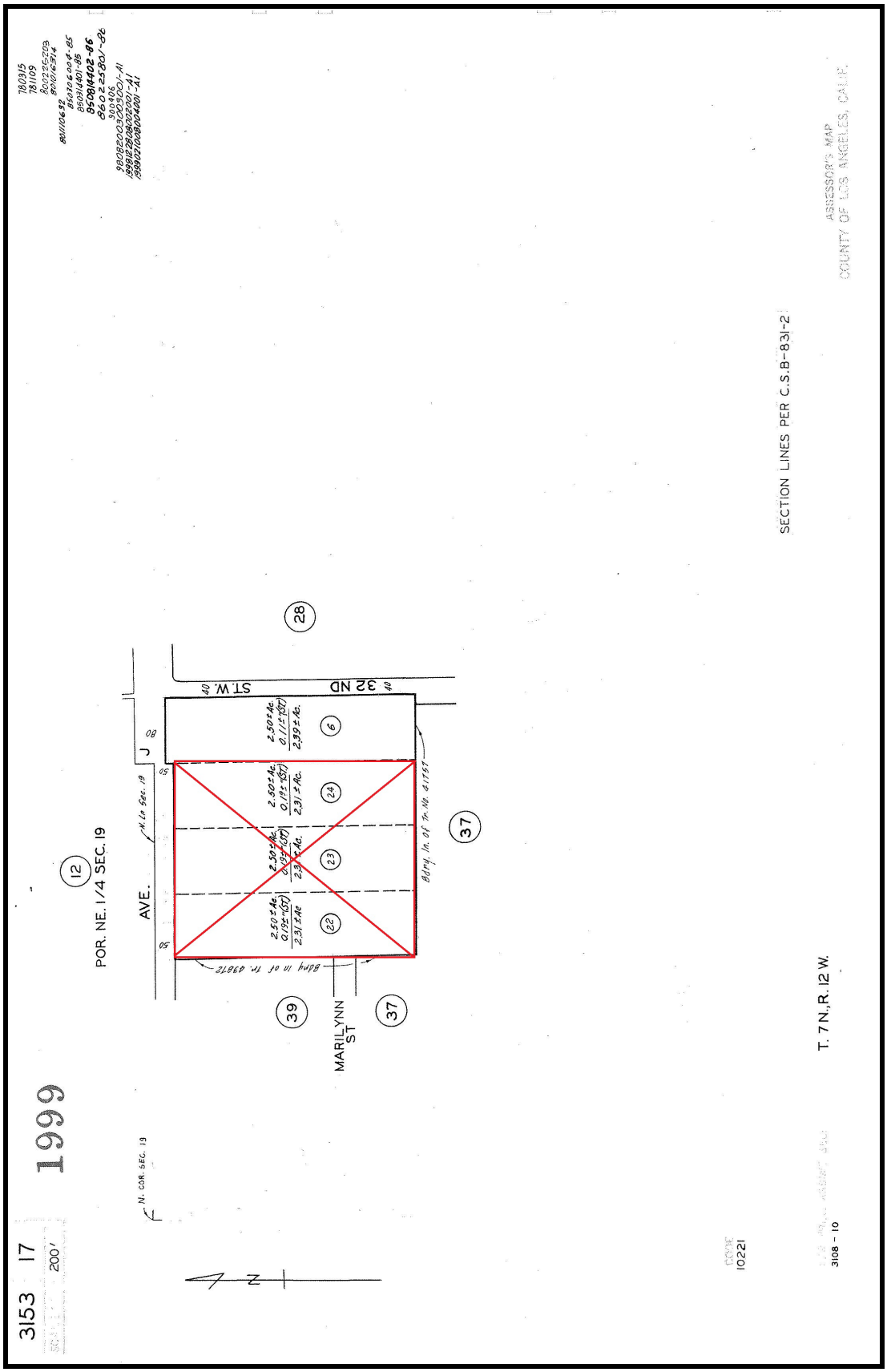

Figure 1. Location of proposed project site as depicted on APN map.

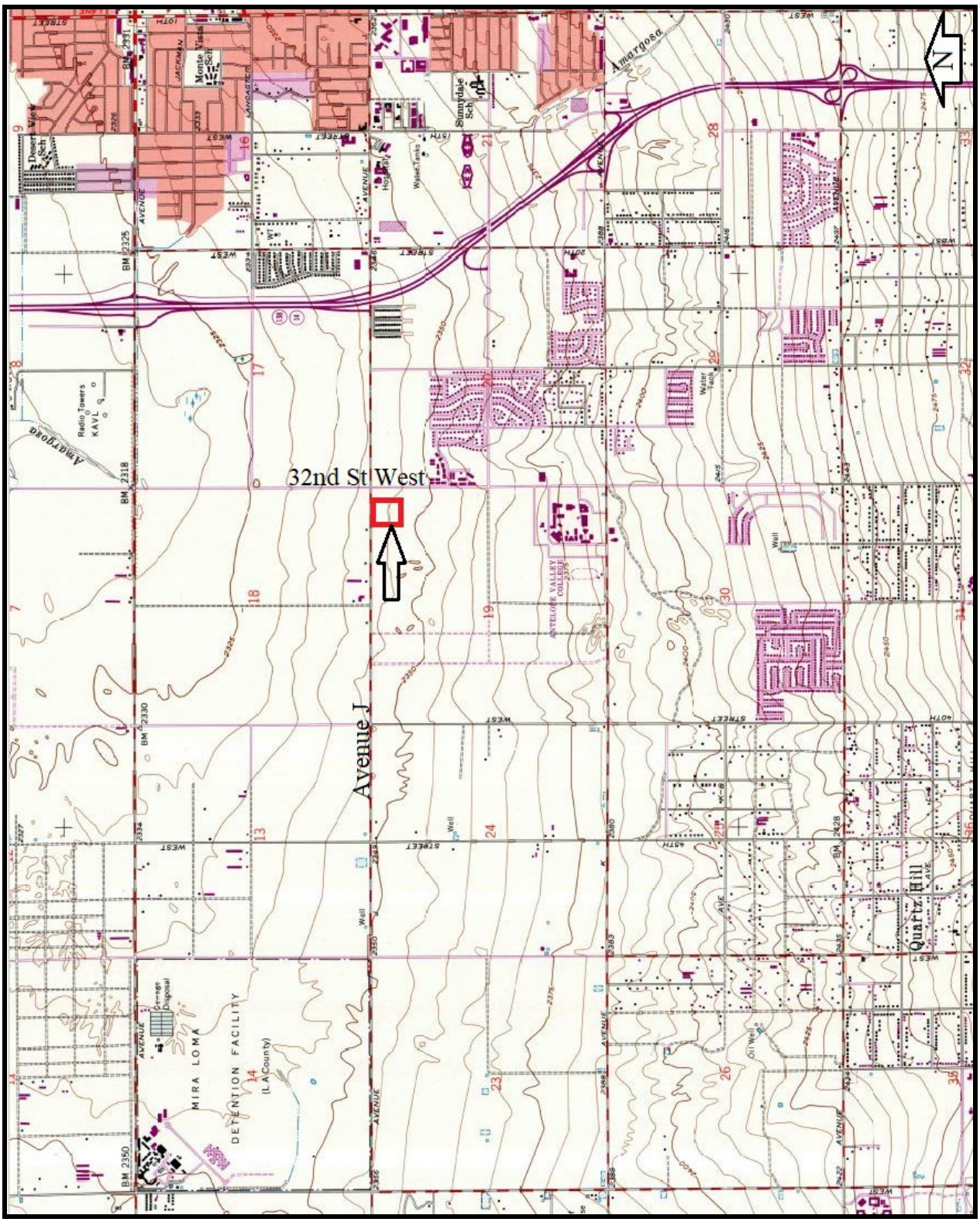

Figure 2. Approximate location of study area as depicted on excerpt from Lancaster West, 1974, 7.5" USGS Topographical Map.

Figure 3. Approximate location of study area as depicted aerial (Google Earth 2017).

approximately 600 feet (183 m) long and spaced about 80 feet (24 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 to determine shrub species diversity, cover, and forage potential on the study site. Joshua trees were counted and characteristics including height, phenological stage, and general health were recorded.

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 2022, 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). Review of documented sightings of sensitive plant and wildlife species was accomplished using the California Natural Diversity Database (CNDD 2020) , and eBird (eBird 2022). Previous surveys in the area (Hagan 2018, 2019, 2020, 2021, 2022a-c) were reviewed for historical sightings and background information. Photographs were taken of the study site (Appendix A).

Results

A total of 4 line transects were walked within the study site on 29 August 2022. Weather conditions consisted of warm temperatures (estimated 70 degrees F), 0% cloud cover, and no winds. A sandy loam surface soil texture was characteristic throughout the study area with small areas of clay pans. No blue line streams were noted within the study site on the USGS topographic map. No streams or washes were noted within the study site on Google Earth aerial photography of the area. No natural wetlands or ephemeral desert washes were observed within the study area. A storm drain channel was observed along the western boundary, oriented north-south, within the study site. An abandoned storm drain channel was observed oriented southwest to southeast within the study site.

The proposed project area was characteristic of a highly disturbed field. Before the area burned in 2005 it was most likely a Joshua tree, California Juniper (*Juniperus californica*), saltbush (*Atriplex* spp.) scrub plant community (Barbour and Major 1988, Barbour et.al. 2007). A total of 36 plant species were observed within the study site. Of the 36 plant species over 50% were invasive species. The remaining were most likely remnant individuals of the original habitat. Perennial shrub species were sparse within the study site. Five-hook bassia (*Bassia hyssopifolia*) was the dominant annual species within the study site. Three live Joshua trees, 7 dead Joshua trees, along with scattered remnants of Joshua trees were observed within the study site (Table 2, Figure 4).

A total of 13 wildlife species, or their sign were observed during the line transect survey (Table 3). No desert tortoises or their sign were observed during the field survey. Suitable desert tortoise habitat was not present within the study site. No Mohave ground squirrels

Table 1. List of plant species that were observed during the line transect survey of APNs 3153-017-022, 023, 024, Lancaster, California.

Common Name	Scientific Name
Ornamental tree	
American elm	*Ulmus americana*
Rose	Family: Rosaceae
Joshua tree	*Yucca brevifolia*
California juniper (3 individuals)	*Juniperus californica*
Mormon tea	*Ephedra nevadensis*
Shadscale	*Atriplex confertifolia*
Arrow scale	*Atriplex phyllostegia*
Silverscale	*Atriplex argentea*
Rabbit brush	*Chrysothamnus nauseosis*
Desert straw	*Stephanomeria pauciflora*
Inkweed	*Suaeda torreyana*
Alkali sacaton	*Sporobolus airodes*
Indian ricegrass	*Oryzopsis hymenoides*
Saltgrass	*Distichlis spicata*
Clasping peppergrass	*Lepidium perfoliatum*
Five-hook bassia	*Bassia hyssopifolia*
Annual burweed	*Franseria acanthicarpa*
Puncture vine	*Tribulus terrestris*
Red stemmed filaree	*Erodium cicutarium*
Tumble mustard	*Sisymbrium altisissiimum*
Mustard	Family: Brassicaceae
Sahara mustard	*Brassica tournefortii*
Russian thistle	*Salsola iberica*
Schismus	*Schismus* sp.
Foxtail barley	*Hordeum leporinum*
Cheatgrass	*Bromus tectorum*
Ripgut grass	*Bromus diandrus*
Red brome	*Bromus rubens*
Drainage	
Black-eyed susan	*Rudbeckia hirta*
White sweet clover	*Melilotus alba*
Prickly lettuce	*Lactuca seriola*
Horseweed	*Canyza honariensis*
Rush	*Juncus* sp.
Cattail	*Typha* sp.
Annual rabbit foot grass	*Polypogon monspeliensis*

Table 2. Breakdown of size class, condition, and current phenology of Joshua trees within the study site.

Size	Conditions	Current Phenology
3 foot (clone)	good	vegetative
8 foot	poor	vegetative
8 foot	fair	vegetative/2 old panicles

Other: One 8 foot dead and standing and six dead and down Joshua trees

Figure 4. Aerial photograph showing approximate locations of the Joshua trees on site (Google Earth 2017).

Table 3. List of wildlife species, or their sign, that were observed during the line transect survey of APNs 3153-017-022, 023, 024, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
California ground squirrel	*Citellus beecheyi*
Desert cottontail	*Sylvilagus auduboni*
Coyote	*Canis latrans*
Domestic dog	*Canis familiaris*
Mourning dove	*Zenaida macroura*
Rock dove	*Columba livia*
Common raven	*Corvus corax*
Northern mockingbird	*Mimus polyglottos*
Horned lark	*Eremophila alpestris*
Spider	Order: Araneida
Ants, small	Order: Hymenoptera
Harvester ants	Order: Hymenoptera

(*Xerospermophilus mohavensis*) were observed or audibly detected during the field survey. Suitable habitat for Mohave ground squirrels was not present within or adjacent to the study site (CDFW 2019, Lietner and Leitner 2017). No desert kit foxes, or their sign were observed during the field survey. No burrowing owls or their sign were observed during the field survey. California ground squirrel burrows (*Citellus beecheyi*) were present within the study site. California ground squirrel burrows can provide future potential cover sites for burrowing owls. Vegetation within the study area provided limited potential nesting sites for migratory birds. No Swainson's hawk nests have been sighted within 5 miles of the project site (eBird 20220).

Scattered litter, debris, and small dump sites were present within the study area. Off-highway vehicle (OHV) tracks were observed within the study site. Evidence of a large historical fire was evident throughout the study site.

Discussion

It is probable that most annual species were visible during the time the field survey was performed. Based on historical Google aerial photography from 2005 a large fire occurred within the study site covering most of the area. This area still reflects the effects of fire on the soils and vegetation within the study site. Several wildlife species would be expected to occur within the proposed project area (Table 4).

Human impacts have already degraded the study site and severely fragmented the general area. These impacts are expected to increase as urban development continues to occur near and adjacent to the study area. This development has effectively removed any potential wildlife corridors to all but birds and urbanized wildlife. 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 a minor loss of 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 the study area. No desert tortoises are considered present within 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 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, Leitner and Leitner 2017). No protection measures are recommended for MGS.

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. California ground squirrel burrows could become cover sites for burrowing owls within the study site in the future.

Table 4. List of wildlife species that may occur within APNs 3153-017-022, 023, 024, Lancaster, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Merriam kangaroo rat	*Dipodomys merriami*
Cactus wren	*Campylorhynchus brunneicapillus*
European starling	*Sturnus vulgaris*
House sparrow	*Passer domesticus*
House finch	*Carpodacus mexicanus*
Side blotched lizard	*Uta stansburiana*
Fly	Order: Diptera
Darkling beetle	*Coelocnemis californicus*

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. Vegetation within the study area provides limited nesting sites for migratory birds. Swainson's hawk is a state listed threatened species. Swainson's hawks appear to be tied most often to active agricultural fields, parks, and large retention basins within the Antelope Valley. This is based on an assessment of the pattern of Swainson's hawk sightings documented over time within eBird.org (eBird 2022). There are none of these features near the study site. No Swainson's hawk nest sightings have been documented within 5 miles of the study site (eBird 2022). No potential nesting sights for Swainson's hawks are present within the study site. No mitigation measures for Swainson's hawks are recommended.

Joshua trees are currently being considered for listing under the California Endangered Species Act. A hearing by the state Fish and Game Commission is expected in October 2022 to officially list the Joshua tree. During this interim period Joshua trees are treated as if listed as threatened or endangered.

No suitable habitat for alkali mariposa lilies, Barstow woolly sunflowers, or desert cymopterus was observed within the study site. Based on the results of the field survey these species do not 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, 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:

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Consistent with the "Staff Report on Burrowing Owl Mitigation" a take avoidance (preconstruction) burrowing owl survey will be accomplished no more 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 (California Department of Fish and Wildlife 2012).

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 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 condition of the study area, the adjacent land uses, isolated and fragmented location, and lack of sensitive wildlife species sign this project is not expected to result in a significant adverse impact to biological resources.

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Appendix A. Photographs

Representative photographs of study site.

Representative photograph showing Joshua trees in southeast portion of study site. Right side of photograph shows the dead but still standing Joshua tree.

Photograph of 3 foot clone, in good condition.

Photograph of Joshua tree, 8 foot, fair condition, with 2 old panicles. Small seedling Joshua trees are beginning to sprout from the root system.

Photograph of Joshua tree, 8 foot, in poor condition.

Representative photograph of dead and down Joshua trees.

Abandoned drainage, oriented southwest to northeast across study site.

Storm drain, oriented north-south inside western boundary. Top photograph is north side looking south. Bottom photograph is view of the last southern 100 feet of the storm drain.