CUP15-15
ITM 70181

Biological Resource Assessment of APNs 3153-007-011, 012, 014, 018, 019, 020, 022 Lancaster, California

June 21, 2015

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Abstract

Residential development has been proposed for APNs 3153-007-011, 012, 014, 018, 019, 020, 022. The approximately 25 acre (10 ha) study area was located west of 40th Street West and north of Lancaster Boulevard, T7N, R13W, a portion of the SE1/4 of the NE1/4 of Section 13, S.B.B.M. A line transect survey was conducted on 30 May 2015 to inventory biological resources. The proposed project area was characteristic of a historical agricultural field in the south and halophytic saltbush (*Atriplex* spp.) scrub habitat in the northwest. A total of twenty-one plant species were observed during the line transect survey. A total of seventeen 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 and are not expected to be present within the study site. A burrowing owl (*Athene cunicularia*) was observed within the study site during the field survey. No other burrowing owl sign was 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 taken up residence in the project site. If burrowing owls are discovered during the survey, consultation should be conducted with the California Department of Fish and Wildlife (CDFW) to determine if mitigation for this species is recommended. Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. The saltbush scrub and desert olive (*Forestiera pubescens*) within the study area provides potential nesting sites for birds. If at all possible, removal of vegetation should occur outside the breeding season (spring) for birds. If removal will occur during the nesting season, a survey should be conducted just prior to removal of the vegetation. If active bird nests are found, impacts should be avoided unless the proper permits are obtained. The proposed project site was not located within the geographic range of the Mohave ground squirrel (*Xerospermophilus mohavensis*). The habitat within the study area did not appear suitable to support Mohave ground squirrels. The alkali mariposa lily (*Calochortus striatus*) is considered a sensitive plant species by CDFW. Potential alkali mariposa lily habitat occurs within the northwest portion of the study site. Unless mitigated, alkali mariposa lily surveys should be conducted during the appropriate season (late Apr to early May) and prior to development activities. Mitigation for alkali mariposa lily, if required, may be combined with mitigation that may be required for washes in the area. No other state or federally listed species are expected to occur within the proposed project area. The study site is located within the Amargosa Creek Drainage (ephemeral wash system). Loamy washes, loamy depressions, and clay pans were observed within the study site. An area that has any of the following characteristics which will be impacted by development: distinct bed, bank, channel, signs of scouring, evidence of water flow, may require a Streambed Alteration Agreement from the CDFW prior to development activities. This project will require consultation with CDFW to determine whether a Streambed Alteration Agreement is needed.

Residential development has been proposed for APNs 3153-007-011, 012, 014, 018, 019, 020, 022 (Figure 1). Development would include installation of access roads, utilities (water, sewer, electric, etc.), parking areas, etc. The entire project area would be graded prior to construction activities.

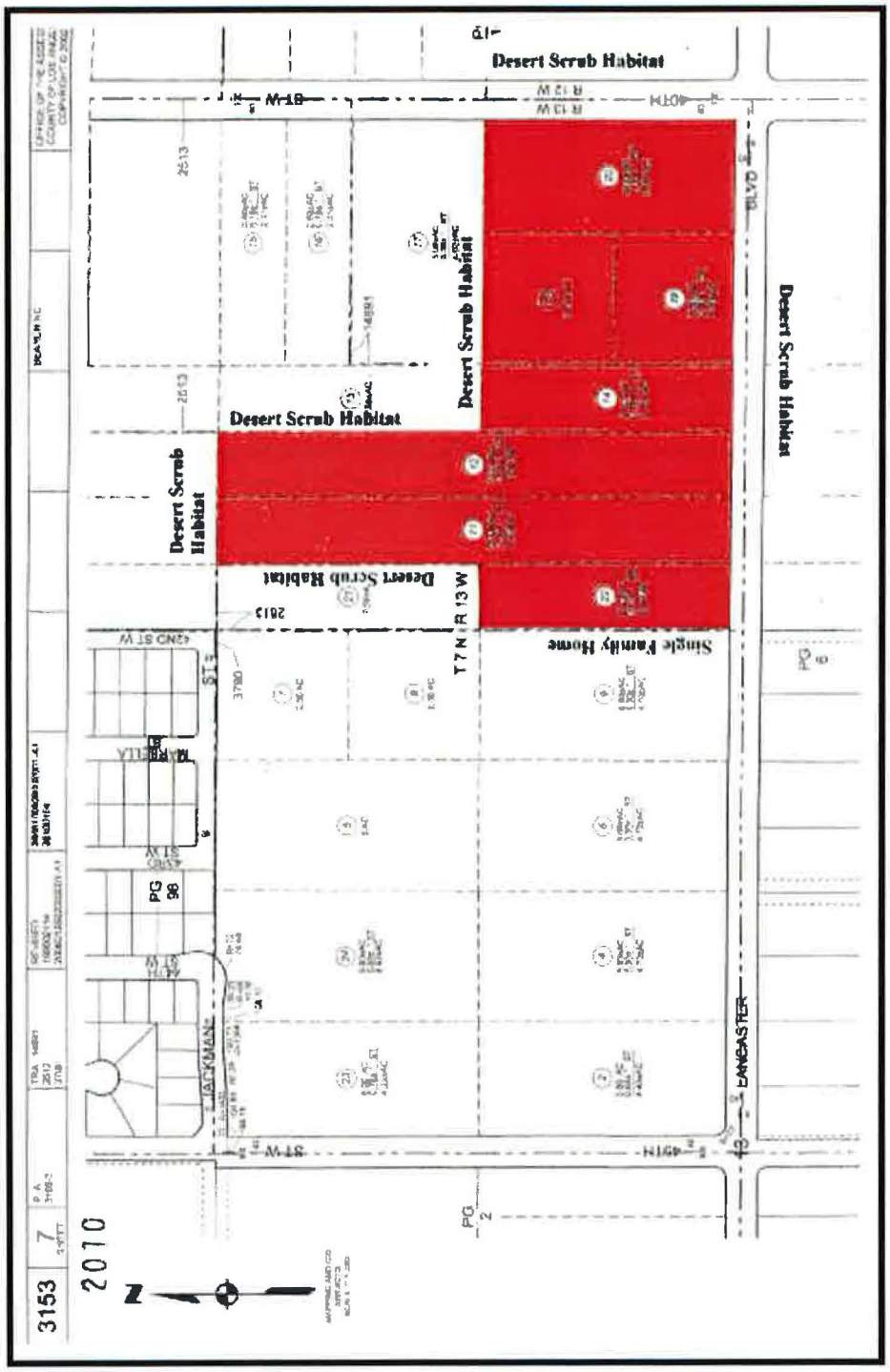

Figure 1. Approximate location of proposed project area as depicted on APN map.

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.

Study Area

The approximately 25 acre (10 ha) study area was located west of 40th Street West and north of Lancaster Boulevard, T7N, R13W, a portion of the SE1/4 of the NE1/4 of Section 13, S.B.B.M. (Figure 2). An abandoned residential construction site existed north of the study site. A single-family residence existed to the west. Lancaster Boulevard (dirt road) formed the southern boundary of the study site. Desert scrub habitat existed south of Lancaster Boulevard. The eastern boundary of the study site was formed by 40th Street West along the southern portion of the study site and halophytic scrub habitat existed along the east boundary of the northwestern portion of the study site (Figure 3). Topography of the site ranged from 2,331 to 2,338 feet (752 to 754 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 in the south and north-south orientation in the northwest. Line transects were approximately 1,320 feet (426 m) long and spaced about 100 feet (32 m) apart in the southern portion and approximately 650 feet (210 m) long and spaced about 30 feet (10 m) apart in the northwest portion of the study site (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 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). An aerial photograph of the study site was obtained from Google Earth (Figure 3). Representative photographs were taken of the study site (Figure 4).

Results

A total of 4 line transects were walked east-west and a total of 10 line transects were walked north-south on 25 May 2015 to inventory biological resources. Weather conditions consisted of warm temperatures (estimated 65 degrees F), 30% hazy cloud cover, and no wind. A loam surface soil texture and sandy clay loam surface texture were characteristic throughout the study area. The study site is within the Amargosa Creek Drainage (ephemeral wash system). Loamy washes, loamy depressions, and clay pans were observed within the study site.

The proposed project area was characteristic of a historical agricultural field in the south and halophytic saltbush (*Atriplex* spp.) scrub habitat in the northwest. (Barbour and Major 1988). A total of twenty-one plant species were observed during the line transect survey (Table 1).

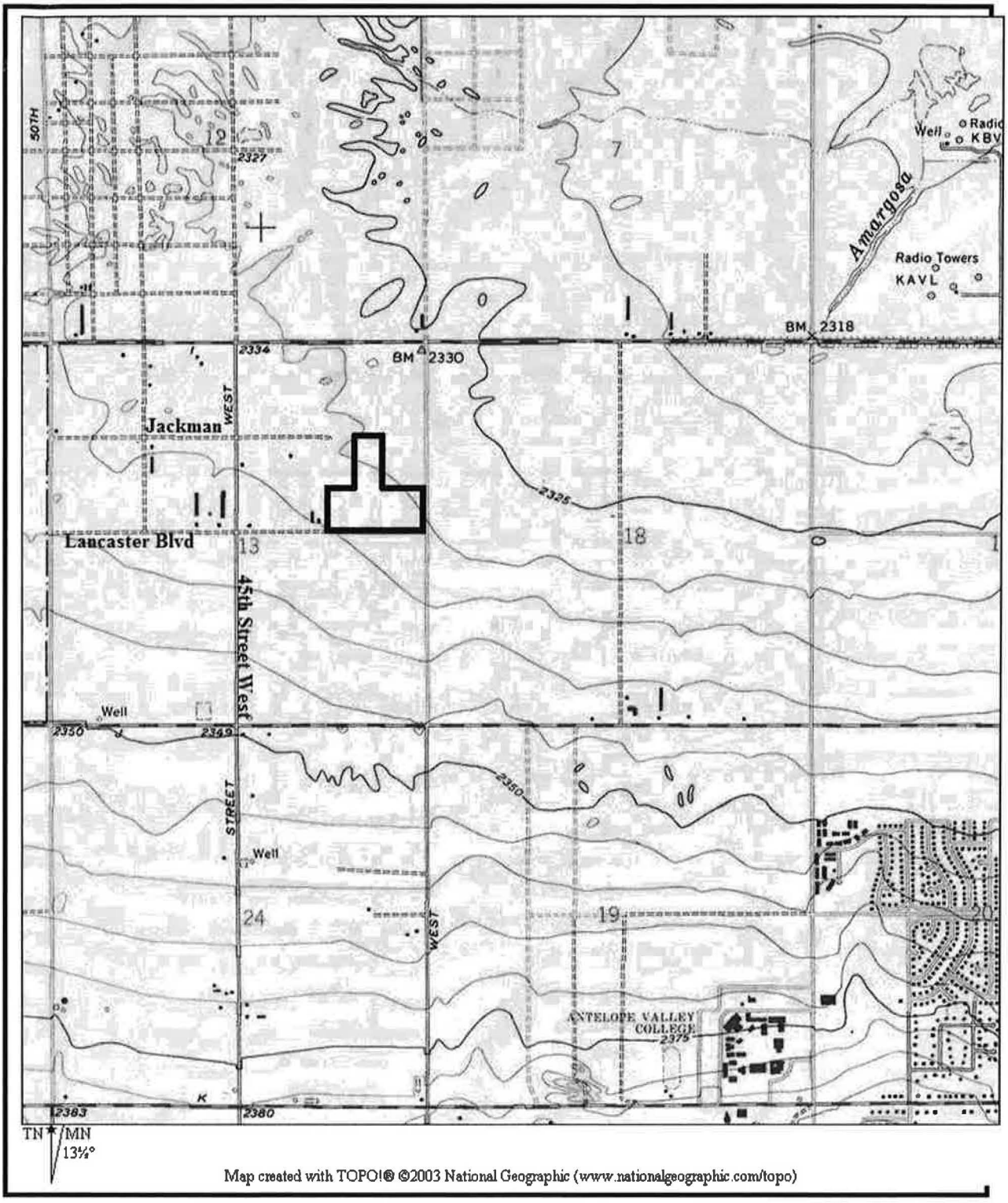

Figure 2. General location of study area as depicted on excerpt from Lancaster West, U.S.G.S., Quadrangle Map, 1974.

Figure 3. Aerial photo showing surrounding land use, 2015, Google Earth.

Southern 20 acres of study site

Northwest 5 acres of the study site

Figure 4. Photographs depicting the overall habitat within study area.

Table 1. List of plant species that were observed during the line transect survey of APNs 3153-007-011, 012, 014, 018, 019, 020, 022, Lancaster, California.

Common Name	Scientific Name
Desert olive	*Forestiera pubescens*
Shadscale	*Atriplex confertifolia*
Allscale	*Atriplex polycarpa*
Mormon tea	*Ephedra nevadensis*
Desert alyssum	*Lepidium fremontii*
Silverscale	*Atriplex argentea*
Desert straw	*Stephanomeria pauciflora*
Alkali pink	*Nitrophila occidentalis*
Flat topped buckwheat	*Eriogonum plumatella*
Fiddleneck	*Amsinckia tessellata*
Comet blazing star	*Mentzelia albicaulis*
Foxtail barley	*Hordeum leporinum*
Saltgrass	*Distichlis spicata*
Alkali rye	*Elymus cinereus*
Red stemmed filaree	*Erodium cicutarium*
Russian thistle	*Salsola iberica*
Tumble mustard	*Sisymbrium altisissiimum*
Five-hook bassia	*Bassia hyssopifolia*
Schismus	*Schismus* sp.
Cheatgrass	*Bromus tectorum*
Red brome	*Bromus rubens*

Shadscale (*Atriplex confertifolia*) was the dominant perennial shrub species within the study site, located primarily in the northwest portion of the study site. A few shrubs and desert olives were observed in the southeast portion of the study site. Foxtail barley (*Hordeum leporinum*) was the dominant annual species within the study area. No sensitive plant species were observed within the study site. However, potential habitat for alkali mariposa lily (*Calochortus striatus*) was observed within the northwest and southeast portion of the study site.

A total of seventeen 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. A burrowing owl (*Athene cunicularia*) was observed within the northwestern portion of the study site during the field survey. No other burrowing owl sign was observed within the study site. California ground squirrel (*Citellus beecheyi)* and their burrows were observed within the study site. No Mohave ground squirrels were observed during the field survey.

The southern 20 acres of the study site appeared to have been graded in the past. Scattered litter and debris were observed within the study site. Tire tracks were observed within the study site. Scattered wood was observed within the south-eastern portion of the study site. Dumped concrete was observed within the northwest portion of the study site.

Discussion

Most annual vegetation was desiccated at the time the field survey was conducted. It is probable that some annual species were not visible during the time the field survey was performed. Although not observed, 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, but they will have less cover and foraging habitat available.

The desert vegetation within the study site provides many roosting and nesting sites for birds. Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. If at all possible, destruction of vegetation should be avoided during the breeding season (spring) of birds. If vegetation removal will occur during the nesting season, a survey should be conducted within one week prior to removal. If active bird nests are found, impacts should be avoided unless the proper permits are obtained.

The desert tortoise is a state and federally listed threatened species. No desert tortoises or their sign were observed during the field survey. Based on field observations desert tortoises are not expected to occur within the study area. No mitigation for this species is recommended.

The Mohave ground squirrel is a state listed threatened species. The proposed project area was not located within the geographic range of the Mohave ground squirrel. No mitigation for this species is recommended.

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of APNs 3153-007-011, 012, 014, 018, 019, 020, 022, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
California ground squirrel	*Citellus beecheyi*
Kangaroo rat	*Dipodomys* sp.
Black-tailed jackrabbit	*Lepus californicus*
Desert cottontail	*Sylvilagus auduboni*
Coyote	*Canis latrans*
Great horned owl	*Bubo virginianus*
Burrowing owl	*Athene cunicularia*
Common raven	*Corvus corax*
Say's phoebe	*Sayornis saya*
Horned lark	*Eremophila alpestris*
Western meadowlark	*Sturnella neglecta*
Sage sparrow	*Amphispiza belli*
Mojave rattlesnake	*Crotalus scutulatus*
Butterfly (white)	Order: Lepidoptera
Wolf spider	Order: Araneida
Grasshopper	Order: Orthoptera

Table 3. List of wildlife species that may occur within the study area, APNs 3153-007-011, 012, 014, 018, 019, 020, 022, Lancaster, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Merriam kangaroo rat	*Dipodomys merriami*
Pocket gopher	*Thomomys bottae*
Domestic dog	*Canis familiaris*
Horse	*Equus* sp.
Sheep	*Ovis* sp.
Domestic goat	*Capra hircus*
Rock dove	*Columba livia*
Red-tailed hawk	*Buteo jamaicensis*
American kestrel	*Falco sparverius*
Northern mockingbird	*Mimus polyglottos*
Mourning dove	*Zenaida macroura*
House finch	*Carpodacus mexicanus*
Gopher snake	*Pituophis melanoleucus*
Side blotched lizard	*Uta stansburiana*
Western whiptail	*Cnemidophorus tigris*
Bees	Order: Hymenoptera
Ladybird beetle	*Hippodamia convergens*
Fly	Order: Diptera
Harvester ants	Order: Hymenoptera
Dragonfly	Order: Odonata
Cricket	Order: Orthoptera
Walking stick	Order: Orthoptera

Burrowing owls are considered a species of special concern by the CDFW. A burrowing owl was observed within the northwest portion of the study site. No other burrowing owl sign was observed during the survey. The California ground squirrel burrows within the project site provide potential cover sites for burrowing owls. A burrowing owl survey should be accomplished within 30 days prior to ground disturbing activities to ensure no burrowing owls have taken up residence in the project site. If burrowing owls are discovered the CDFW should be consulted prior to construction.

The alkali mariposa lily is considered a sensitive plant species by CDFW. Potential alkali mariposa lily habitat occurs within the study site. Unless mitigated for, alkali mariposa lily surveys should be conducted during the appropriate season (late Apr to early May) and prior to development activities. Mitigation for alkali mariposa lily, if required, may be combined with mitigation that may be required for washes in the area.

No other state or federally listed threatened or endangered species are expected to occur within the proposed project area (California Department of Fish and Game 2002, Smith and Berg 1988, U.S. Fish & Wildlife Service 1990).

The study site is located within the Amargosa Creek Drainage (ephemeral wash system). Loamy washes, loamy depressions, and clay pans were observed within the primarily within the northwest and southeastern portion of the study site. An area that has any of the following characteristics which will be impacted by development: distinct bed, bank, channel, signs of scouring, evidence of water flow, may require a Streambed Alteration Agreement from the CDFW prior to development activities. This project will require consultation with CDFW to determine whether a Streambed Alteration Agreement is needed. Design of naturally vegetated swales to provide water flow to off-site areas may obviate the need for streambed mitigation.

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).

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