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Biological Resource Assessment of
APNs 3153-009-007, 008, 009
Lancaster, California

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Abstract

Residential development has been proposed for APNs 3153-009-007, 008, 009. The approximately 20 acre (8 ha) study area was located east of 40th Street West and south of Avenue I, T7N, R12W, a portion of the N1/2 of the NW1/4 of Section 18, S.B.B.M. A line transect survey was conducted on 24, and 25 May 2015 to inventory biological resources. The proposed project area was characteristic of a halophytic saltbush (*Atriplex* spp.) scrub habitat. A total of eighteen plant species were observed during the line transect survey. A total of sixteen 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. No burrowing owls (*Athene cunicularia*) were observed during the field survey. The presence of a historical burrowing owl burrow indicates the study site could support burrowing owls in the future. 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. If burrowing owls are discovered the California Department of Fish and Wildlife (CDFW) should be consulted prior to ground disturbing activities. No bird nests were observed within the project site. Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. The desert olive (*Forestiera pubescens*) and saltbush scrub vegetation 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. No active nesting was observed during the field survey. The proposed project site was located west of 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 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). Several distinct wash channels were observed within the study site. Soft clay pans were observed within the study area. This is suggestive of water flow below and above surface through the study area. Dark loam soil depressions were observed within the study area suggestive of the historical presence of artesian springs. Sink holes and cracking/fissuring is common within the study area. This area drains to the east northeast where it may provide water to a small potential wetland area in the southwest corner of Avenue I and 30th Street West before moving under the intersection through a culvert system and into the Amargosa Creek diversion channel which contains cattails and various other wetland species. 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. Development of this area will require consultation with CDFW to determine whether a Streambed Alteration Agreement is needed.

Residential development has been proposed for APNs 3153-009-007, 008, 009 (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 20 acre (8 ha) study area was located east of 40th Street West and south of Avenue I, T7N, R12W, a portion of the N1/2 of the NW1/4 of Section 18, S.B.B.M. (Figure 2). The northern boundary was formed by Avenue I. Desert scrub habitat existed to the west, south, and east of the study site (Figure 3). Topography of the site ranged from 2,324 to 2,327 feet (750 to 751 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 a north-south orientation. Line transects were approximately 1,320 feet (426 m) long and spaced about 80 feet (26 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 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 (Figures 4-6).

Results

A total of 16 line transects were walked on 24 and 25 May 2015 to inventory biological resources. Weather conditions consisted of warm temperatures (estimated 65 to 70 degrees F), 0% cloud cover, and calm to moderate wind conditions. 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, an ephemeral wash system, which drains to the east northeast where it may provide water to a small potential wetland area in the southwest corner of Avenue I and 30th Street West before moving under the intersection through a culvert system and into the Amargosa Creek diversion channel which contains cattails and various other wetland species.

The proposed project area was characteristic of a halophytic saltbush (*Atriplex* spp.) scrub plant community (Barbour and Major 1988). A total of eighteen plant species were observed during the line transect survey (Table 1). Shadscale (*Atriplex confertifolia*) was the dominant perennial shrub species within the study site. Foxtail barley (*Hordeum leporinum*) was

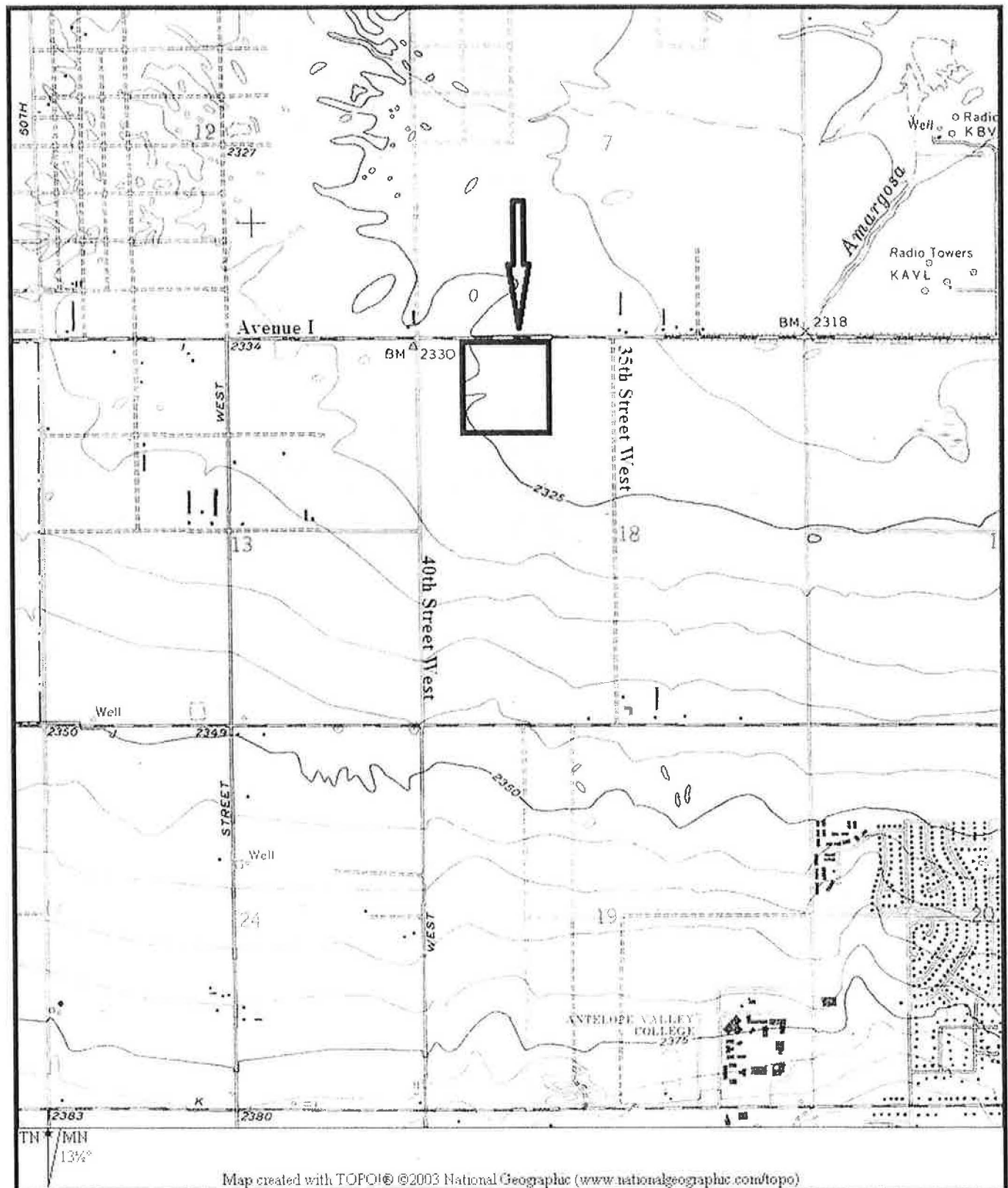


Figure 2. Location of study area as depicted on excerpt from Lancaster West, U.S.G.S., Quadrangle Map, 1974.



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



Figure 4. Photographs depicting the overall general habitat within study site.



Example of a channel within western portion of study site



Example of a sinkhole within site – clipboard for size representation

Figure 5. Hydrological features which were observed within the study site.



Figure 6. Two of the areas where desert olive trees were observed within the study site.

Table 1. List of plant species that were observed during the line transect survey of APNs 3153-009-007, 008, 009, Lancaster, California.

| <u>Common Name</u> | <u>Scientific Name</u> |
|-----------------------|---------------------------------|
| Desert olive | <i>Forestiera pubescens</i> |
| California juniper | <i>Juniperus californica</i> |
| Shadscale | <i>Atriplex confertifolia</i> |
| Allscale | <i>Atriplex polycarpa</i> |
| Rabbit brush | <i>Chrysothamnus nauseosis</i> |
| Silverscale | <i>Atriplex argentea</i> |
| Arrow scale | <i>Atriplex phyllostegia</i> |
| Desert straw | <i>Stephanomeria pauciflora</i> |
| Fiddleneck | <i>Amsinckia tessellata</i> |
| Pennyroyal | <i>Monardella exilis</i> |
| Flat topped buckwheat | <i>Eriogonum deflexum</i> |
| Saltgrass | <i>Distichlis spicata</i> |
| Foxtail barley | <i>Hordeum leporinum</i> |
| Red stemmed filaree | <i>Erodium cicutarium</i> |
| Tumble mustard | <i>Sisymbrium altissimum</i> |
| Schismus | <i>Schismus</i> sp. |
| Red brome | <i>Bromus rubens</i> |
| Cheatgrass | <i>Bromus tectorum</i> |

the dominant annual species within the study area. Desert olive (*Forestiera pubescens*), mainly present in the loam depressions, and two juniper trees (*Juniperus californica*) were observed within the southern boundary of the study site. What appears to be an ephemeral seep with olive trees was observed immediately adjacent to the southeast corner of the study site. No sensitive plant species were observed within the study site however, potential habitat for alkali mariposa lily (*Calochortus striatus*) was present within the study site.

A total of sixteen 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 recent sign were observed during the field survey. An old abandoned burrow with small bones and burrowing owl pellets was observed within the study site. No Mohave ground squirrels were observed during the field survey.

Motorcycle tracks were observed within the study site. Spent shotgun shells were observed within the study site. A mowed/graded area, approximately 60 feet (19.4 meters) wide was present along the northern boundary of the study site adjacent to Avenue I. Old rusted cans and old bricks were observed within the study site. A homeless campsite was observed in one of the juniper trees within the south boundary. A dirt road oriented north-south was observed on the western edge 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 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 its 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. The study area does not appear to be suitable to support Mohave ground squirrels. 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 3153-009-007, 008, 009, Lancaster, California.

| <u>Common Name</u> | <u>Scientific Name</u> |
|-------------------------|-----------------------------|
| Rodents | Order: Rodentia |
| Black-tailed jackrabbit | <i>Lepus californicus</i> |
| Desert cottontail | <i>Sylvilagus auduboni</i> |
| Kangaroo rat | <i>Dipodomys</i> sp. |
| Coyote | <i>Canis latrans</i> |
| Pocket gopher | <i>Thomomys bottae</i> |
| Common raven | <i>Corvus corax</i> |
| Northern mockingbird | <i>Mimus polyglottos</i> |
| Wilson's warbler | <i>Wilsonia pusilla</i> |
| House finch | <i>Carpodacus mexicanus</i> |
| Bees | Order: Hymenoptera |
| European honey bees | Order: Hymenoptera |
| Funnel spider | Order: Araneida |
| Dragonfly | Order: Odonata |
| Grasshopper | Order: Orthoptera |
| Walkingstick | Order: Orthoptera |

Table 3. List of wildlife species that may occur within the study area, APNs 3153-009-007, 008, 009, Lancaster, California.

| <u>Common Name</u> | <u>Scientific Name</u> |
|----------------------|-------------------------------|
| Deer mouse | <i>Peromyscus maniculatus</i> |
| Merriam kangaroo rat | <i>Dipodomys merriami</i> |
| Red-tailed hawk | <i>Buteo jamaicensis</i> |
| American kestrel | <i>Falco sparverius</i> |
| Mourning dove | <i>Zenaida macroura</i> |
| Great horned owl | <i>Bubo virginianus</i> |
| Say's phoebe | <i>Sayornis saya</i> |
| Gopher snake | <i>Pituophis melanoleucus</i> |
| Mojave rattlesnake | <i>Crotalus scutulatus</i> |
| Western whiptail | <i>Cnemidophorus tigris</i> |
| Side blotched lizard | <i>Uta stansburiana</i> |
| Ladybird beetle | <i>Hippodamia convergens</i> |
| Cricket | Order: Orthoptera |
| Fly | Order: Diptera |
| Harvester ants | Order: Hymenoptera |
| Wolf spider | Order: Araneida |

Burrowing owls are considered a species of special concern by the California Department of Fish and Wildlife (CDFW). Although currently there are no burrowing owls expected within this study site, the presence of a historical burrow indicates the study site could support burrowing owl in the future. 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. If burrowing owls are discovered the CDFW should be consulted prior to ground disturbing activities.

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 within the Amargosa Creek Drainage. Most of the water flow from rainfall has been diverted from the Amargosa Creek. However, enough surface flow remains to support a unique ephemeral wash habitat within and around the study site. Several distinct wash channels were observed within the study site. In addition, unlike most areas where clay pan and dune geomorphology is present the clay pans here are soft instead of hard. Soft clay pans may indicate potential water flow below and above the surface. There are many areas within the clay pan and dune areas consisting of depressions with a dark loam soil, and fissuring. There were sink holes commonly observed within the study site (Figure 5). An area that has any of the following characteristics and 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. Development of this area will require consultation with CDFW to determine whether a Streambed Alteration Agreement is needed.

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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