Biological Resource Assessment of
APNs 3121-034-006 and 3121-036-069
Lancaster, California

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Abstract

Development has been proposed for APNs 3121-034-006 and 3121-036-069, Lancaster, California. The approximately 12 acre (4.8 ha) study area was located south of Avenue I and west of 20th Street West, T7N, R12W, a portion of the NW1/4 of the NW1/4 of Section 16, S.B.B.M. A line transect survey was conducted on 9 July 2020 to inventory biological resources. The proposed project area was characteristic of a heavily disturbed field. A total of thirty-five plant species and twenty 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 study site did not contain suitable habitat to support desert tortoises. The study site did not contain suitable habitat to support Mohave ground squirrels (*Xerospermophilus mohavensis*). No burrowing owls (*Athene cunicularia*) or their sign were observed during the field survey. The level of human and domestic cat (*Felis catus*) use observed within the study site make for unsuitable conditions to support burrowing owls. Swainson's hawk would not be expected to nest within the study area given the lack of suitable trees within the site. The study area is not considered suitable foraging habitat given the small patch size and high level of urban disturbance. The vegetation present within the study site provides potential nesting sites for smaller migratory. Based on the habitat and level of disturbance, individual alkali mariposa lilies (*Calochortus striatus*) may persist on the study site. The study site is not suitable to support a population of alkali mariposa lilies. No desert cymopterus (*Cymopterus deserticola*), or Barstow woolly sunflower (*Eriophyllum mohanense*) are expected to occur within the study area due to lack of suitable habitat. No other state or federally listed species are expected to occur within the proposed project area. A few small clay pans were present within the study site. A manmade drainage is present within the study site.

Recommended Protection Measures:

If possible, removal of vegetation on-site 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 vegetation 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 (16 m) 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.

Based on the condition of the habitat, surrounding land use, and lack of wildlife sign, no other protection measures are recommended.

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

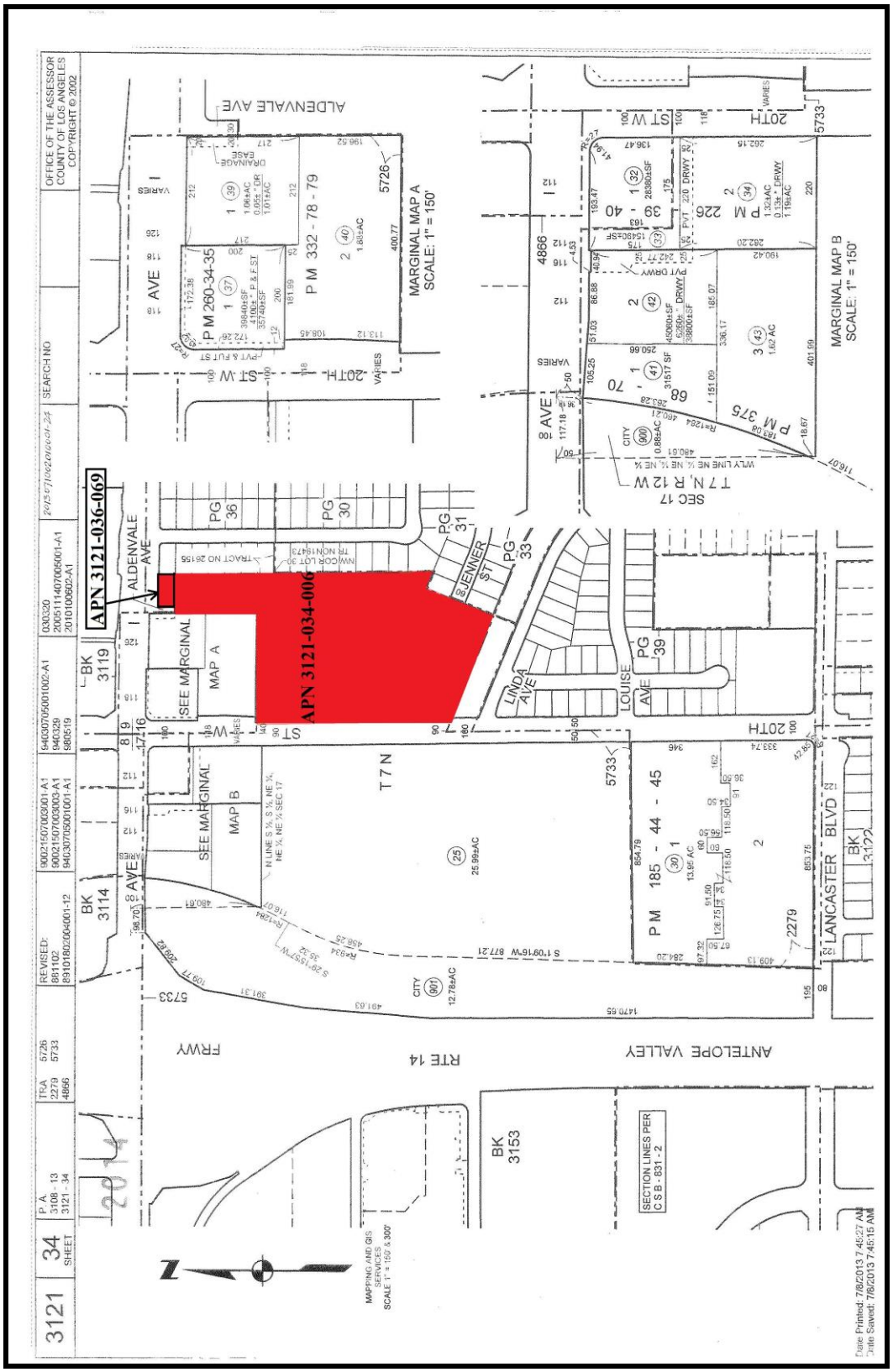

Figure 1. Location of proposed project site as depicted on APN map.

Development has been proposed for APNs 3121-034-006 and 3121-036-069 (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 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*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), desert kit fox (*Vulpes macrotis)*, desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflower (*Eriophyllum mohanense*), and alkali mariposa lily (*Calochortus striatus*).

Study Area

The approximately 12 acre (4.8 ha) study area was located south of Avenue I and east of 20th Street West, T7N, R12W, a portion of the NW1/4 of the NW1/4 of Section 16, S.B.B.M. (Figures 2 and 3). The northern boundary of the project site was formed by Avenue I. A commercial shopping center was present to the north of Avenue I. A gas station and a dirt field was present along a portion of the northwest boundary. A residential area was present along the eastern boundary. A block wall formed the southern boundary of the project site. Residential housing was present south of the project area. The western boundary was formed by 20th Street West. Dirt fields and commercial facilities were present west of 20th Street West. Topography of the site ranged from approximately 2,314 to 2,318 feet (746 to 748 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 ranged from approximately 745 to 1,280 feet (240 to 413 m) long and were spaced approximately 50 feet (16 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 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, Lowrey 2006, Murie 1974). The USGS topographic map and aerial photographs were reviewed. Representative photographs were taken of the study site (Figures 4 and 5).

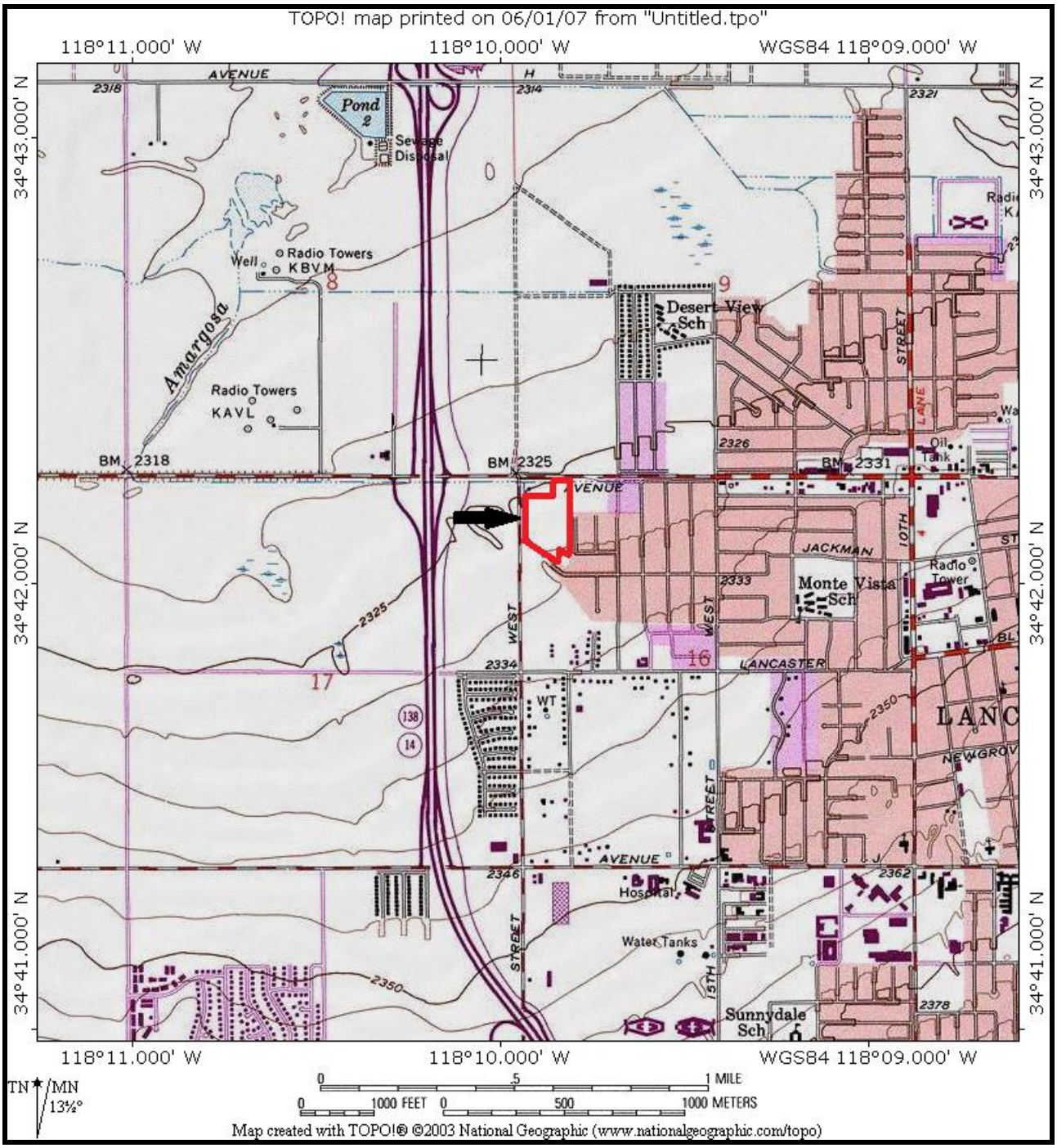

Figure 2. Approximate location of study area as depicted on excerpt from U.S.G.S. Quadrangle, Lancaster West, Calif., 7.5', 1974.

Figure 3. Approximate location of study area showing surrounding land use as depicted on excerpt from Google Earth Aerial Photography, October 2019.

Southwest corner

Northeast corner

Figure 4. Representative photographs depicting general site characteristics.

Example of few Great Basin Sage shrubs remaining on site and remnant clay drainage.

Southeast corner – one of the cats present on site.

Figure 5. Representative photographs depicting site characteristics.

Results

A total of 10 line transects were walked on 9 July 2020. Weather conditions consisted of warm temperatures (estimated 70 degrees F), 0% cloud cover and light winds. Clay sandy loam and sandy loam surface soil texture were present within the study area. A blue line stream was delineated along the southwestern and western edge of the project area and along the southern edge of Avenue I on the USGS topographic map. A manmade drainage, oriented southeast to northwest, which originated from a residential street was observed within the southern portion of the study site. A few small clay pans were observed during the field survey. Other than the manmade drainage no washes or streams were observed on the aerial photography within the study site.

The proposed project area was characteristic of a heavily disturbed field. A total of thirty-five plant species were observed during the line transect survey (Table 1). Rabbit brush (*Chrysothamnus nauseosis*) was the dominant perennial shrub species throughout the study area. Invasive grasses were the dominant annual species throughout the study area. Annuals within the study site were predominately invasive and weedy species (Table 1, Figures 4 and 5). No Barstow woolly sunflowers, or desert cymopterus, or suitable habitat were observed within the study site. No alkali mariposa lilies were observed within the study area. Habitat that would support individuals of alkali mariposa lilies was present within the southwestern portion of the study area.

A total of twenty 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 desert kit foxes or their sign were observed during the field survey. No suitable habitat for Mojave ground squirrels was present within the study site.

Trash and debris were observed throughout the study site. Dump piles were observed along the western portion of the study site. Vehicle tracks, to include motorcycle, were observed within the study site. Old rows of spoil piles were present within the study site. Broken asphalt and concrete soil piles were present within the study area. Recent soil and vegetation piles were observed within the southeastern corner of the study site. Approximately three fourths of the study site had been heavily impacted by past construction activities. Dirt paths were present within the study site. Small burned areas were observed within the study site. Individuals were observed within the study area during the field survey.

Discussion

It is likely that most annual species were visible during the time the field survey was performed. Based on the habitat and level of disturbance, individual alkali mariposa lilies may persist on the study site, but it is not conducive to a population of this plant and the site is expected to continue to degrade. No protection measures are recommended for alkali mariposa lily. Although not observed, several wildlife species would be expected to occur within the proposed project area (Table 3).

Table 1. List of plant species that were observed during the line transect survey of APNs 3121-034-006 and 3121-036-069, Lancaster, California.

Common Name	Scientific Name
Great basin sagebrush	*Artemisia tridentata*
Allscale	*Atriplex polycarpa*
Shadscale	*Atriplex confertifolia*
Silverscale	*Atriplex argentea*
Arrow scale	*Atriplex phyllostegia*
Rabbit brush	*Chrysothamnus nauseosis*
Mormon tea	*Ephedra nevadensis*
Matchweed	*Gutierrezia lucida*
Goldenhead	*Acamptopappus sphaerocephalus*
Peachthorn	*Lycium cooperi*
Desert straw	*Stephanomeria pauciflora*
Inkweed	*Suaeda torreyana*
Alkali rye	*Elymus cinereus*
Alkali sacaton	*Sporobolus airodes*
Common tarweed	*Hemizonia pungens*
Saltgrass	*Distichlis spicata*
Annual rabbit foot grass	*Polypogon monspeliensis*
Red stemmed filaree	*Erodium cicutarium*
Fiddleneck	*Amsinckia tessellata*
Russian knapweed	*Rhaponticum repens*
Annual burweed	*Franseria acanthicarpa*
Prickly lettuce	*Lactuca seriola*
Five-hook bassia	*Bassia hyssopifolia*
Clasping peppergrass	*Lepidium perfoliatum*
Tumble mustard	*Sisymbrium altisissiimum*
Russian thistle	*Salsola iberica*
Black-eyed susan	*Rudbeckia hirta*
Bermuda grass	*Cynodon dactylon*
Foxtail barley	*Hordeum leporinum*
Schismus	*Schismus* sp.
Cheatgrass	*Bromus tectorum*
Red brome	*Bromus rubens*
Ornamentals	
Desert bird of paradise	*Caesalpinia gilliesii*
American elm	*Ulmus americana*
Bamboo sp.	Family: Poaceae

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of APNs 3121-034-006 and 3121-036-069, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
Pocket gopher	*Thomomys bottae*
California ground squirrel	*Citellus beecheyi*
Desert cottontail	*Sylvilagus auduboni*
Domestic dog	*Canis familiaris*
Domestic cat	*Felis catus*
Side blotched lizard	*Uta stansburiana*
Mourning dove	*Zenaida macroura*
Rock dove	*Columba livia*
Hummingbird sp.	Family: Trochilidae
Barn swallow	*Hirundo rustica*
Common raven	*Corvus corax*
House finch	*Carpodacus mexicanus*
Harvester ants	Order: Hymenoptera
Ants, red, small	Order: Hymenoptera
Spider	Order: Araneida
Grasshopper sp.	Order: Orthoptera
Dragonfly	Order: Odonata
Darkling beetle	*Coelocnemis californicus*
Bee	Order: Hymenoptera

Table 3. List of wildlife species that may occur within the study area, APNs 3121-034-006 and 3121-036-069 Lancaster, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Black-tailed jackrabbit	*Lepus californicus*
Northern mockingbird	*Mimus polyglottos*
Horned lark	*Eremophila alpestris*
House sparrow	*Passer domesticus*
Fly	Order: Diptera

Human impacts are expected to increase as urban development continues to occur in the area. Burrowing animals within the proposed project area are not expected to survive construction activities. More mobile species, such as birds are expected to survive, but they may have less cover and foraging habitat available.

The desert tortoise is a state and federally listed 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. Based on field observations, desert tortoises are not present within the area. No protection measures are recommended for desert tortoises.

The Mohave ground squirrel is a state listed threatened species. The proposed project site was located within the geographic range of the Mohave ground squirrel. Mohave ground squirrels are not considered present within Lancaster (CDFW 2019). Habitat within the study site was not suitable for Mohave ground squirrels. Mohave ground squirrels are not present within the area. No protection measures are recommended for Mohave ground squirrels.

Desert kit foxes are a fully protected species by California Department of Fish and Wildlife (CDFW). No sign of desert kit fox activity was observed within the study site. The study site is surrounded by development. The presence of domestic dogs (*Canis familiaris*) would be expected to discourage any presence of desert kit foxes. No protection measures are recommended for desert kit foxes.

Burrowing owls are considered a species of special concern by the CDFW. The California ground squirrel (CGS)(*Citellus beecheyi*) burrows within the project site could provide potential cover sites for burrowing owls. No burrowing owl sign was observed within or around the CGS burrows or anywhere else within the study site that would indicate the presence or use by burrowing owls. This site is within a fully developed urban area. The project site has human traffic crossing the area between the retail shops and the homes and human use was observed during the field survey. Two cats were observed using the study site during the field survey. It is highly unlikely a burrowing owl would move into this site with this level of human and domestic animal presence. No protection measures are recommended for burrowing owls.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. A Swainson's hawk was observed this year at the Amargosa Creek drainage basin on Avenue H-8 (eBird 2020). Swainson's hawk would not be expected to nest within the study area given the lack of suitable trees within the site. The study area is not considered suitable foraging habitat given the small patch size and high level of disturbance. No protection measures are recommended for Swainson's hawk. Smaller migratory birds may potentially nest in the vegetation within the study site.

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, 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:

If possible, removal of vegetation on-site 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 vegetation 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 (16 m) 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.

Based on the condition of the habitat, level of human presence, surrounding land use, and lack of wildlife sign, no other protection measures are recommended.

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

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