Biological Resource Assessment of
TTM 60367
Lancaster, California

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Abstract

Development has been proposed for TTM 60367, Lancaster, California. The approximately 30 acre (12 ha) study area was located north of Lancaster Boulevard and west of 40th Street East, T7N, R11W, a portion of the SE1/4 of the SE1/4 of Section 17, S.B.B.M. A line transect survey was conducted on 16 and 17 July 2020 to inventory biological resources. The proposed project area was characteristic of an old agricultural field. A total of twenty-three plant species and twenty-two 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. No protection measures for desert tortoises is recommended. The proposed project site was located within the geographic range of the Mohave ground squirrel (*Xerospermophilus mohavensis*). The study site did not contain suitable habitat to support Mohave ground squirrels. No protection measures for Mohave ground squirrels is recommended. No burrowing owls (*Athene cunicularia*) were observed during the field survey. California ground squirrel burrows (*Citellus beecheyi*) and irrigation structures were present which can provide potential cover sites for burrowing owls. The trees within the study area provides potential nesting sites for smaller migratory birds. Swainson's hawk (*Buteo swainsoni*) and other raptors would not nest within the study area given the lack of nesting sites. The study site appears to have little forage value for Swainson's hawks. No protection measures for this Swainson's hawk is recommended. No 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 sensitive plants are expected to occur within the study area due to the high level of impacts and the lack of suitable habitat. No protection measures for sensitive plants is recommended. No other state or federally listed species are expected to occur within the proposed project area. No wetlands or ephemeral washes were observed within the study site.

Recommended Protection Measures:

Consistent with the "Staff Report on Burrowing Owl Mitigation" a take avoidance (pre-construction) survey should be accomplished within 14 days of ground disturbing activities (CDFG 2012). If burrowing owls or their sign are detected during the take avoidance (pre-construction) survey the Staff Report will be applied as appropriate.

If possible, removal of the trees will occur outside the breeding season for migratory birds. Breeding generally lasts from February to July but may extend beyond this time frame. If tree 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 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 would not result in a significant adverse impact to biological resources.

Development has been proposed for TTM 60367 (Figure 1). TTM 60367 includes APNs 3150-021-019, 020, 022, 025, and 026. 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 30 acre (12 ha) study area was located north of Lancaster Boulevard and west of 40th Street East, T7N, R11W, a portion of the SE1/4 of the SE1/4 of Section 17, S.B.B.M. (Figures 2 and 3). The southern boundary of the project site was formed by Lancaster Boulevard. A solar field and old abandoned agricultural fields existed south of Lancaster Boulevard. An old abandoned agricultural field existed west, northwest, and southeast of the study site. The eastern boundary of the study site was formed by 40th Street East. Abandoned agricultural fields were present east of 40th Street East. A residential home was present along the northeastern boundary of the study area. A church was present to the southeast of the study site. Topography of the site ranged from approximately 2,378 to 2384 feet (767 to 769 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). The USFWS (2010) has provided recommendations for survey methodology to determine presence/absence and abundance/distribution of desert tortoises. Line transects were walked in an east-west orientation in the northeast 10 acres (4 ha) of the study site and in a north-south orientation in the remaining portion of the study site. East-west line transects were approximately 660 feet (213 m) long and spaced approximately 75 feet (24 m) apart (U.S. Fish & Wildlife Service 2010). North-south

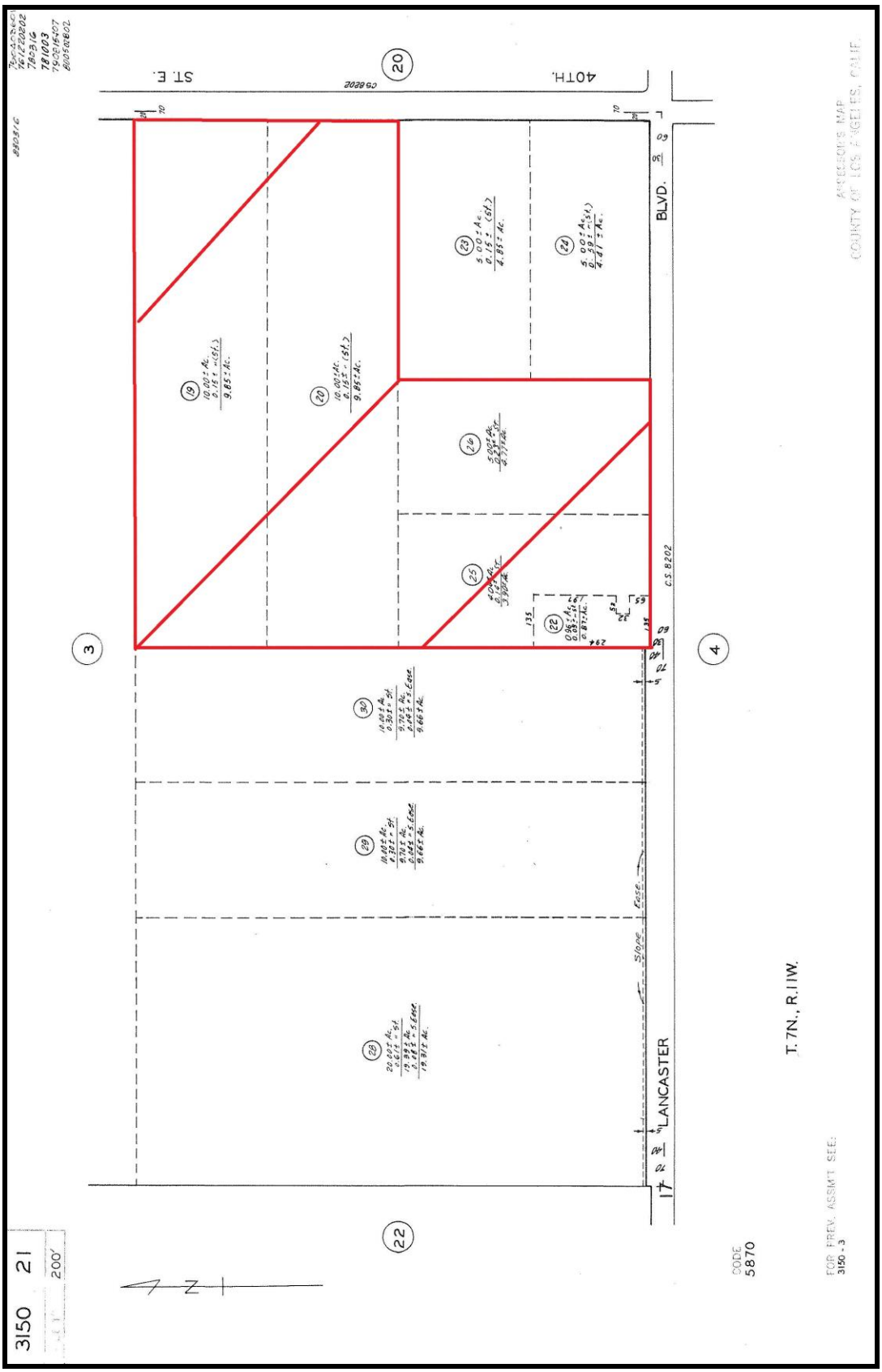

Figure 1. Location of proposed project site as depicted on APN map.

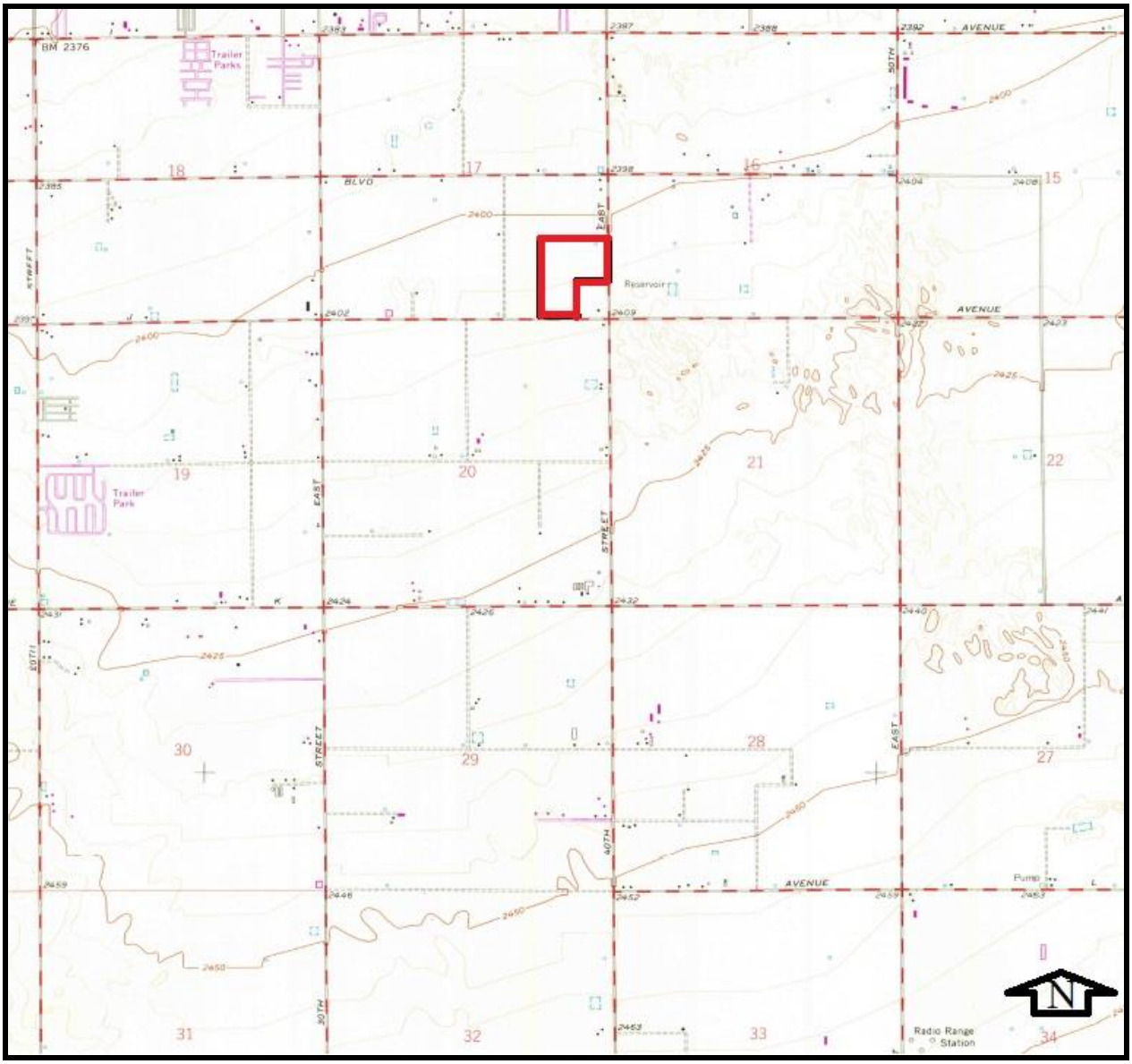

Figure 2. Approximate location of study area as depicted on U.S.G.S. Quadrangle, Lancaster East, Calif., 7.5', 1974.

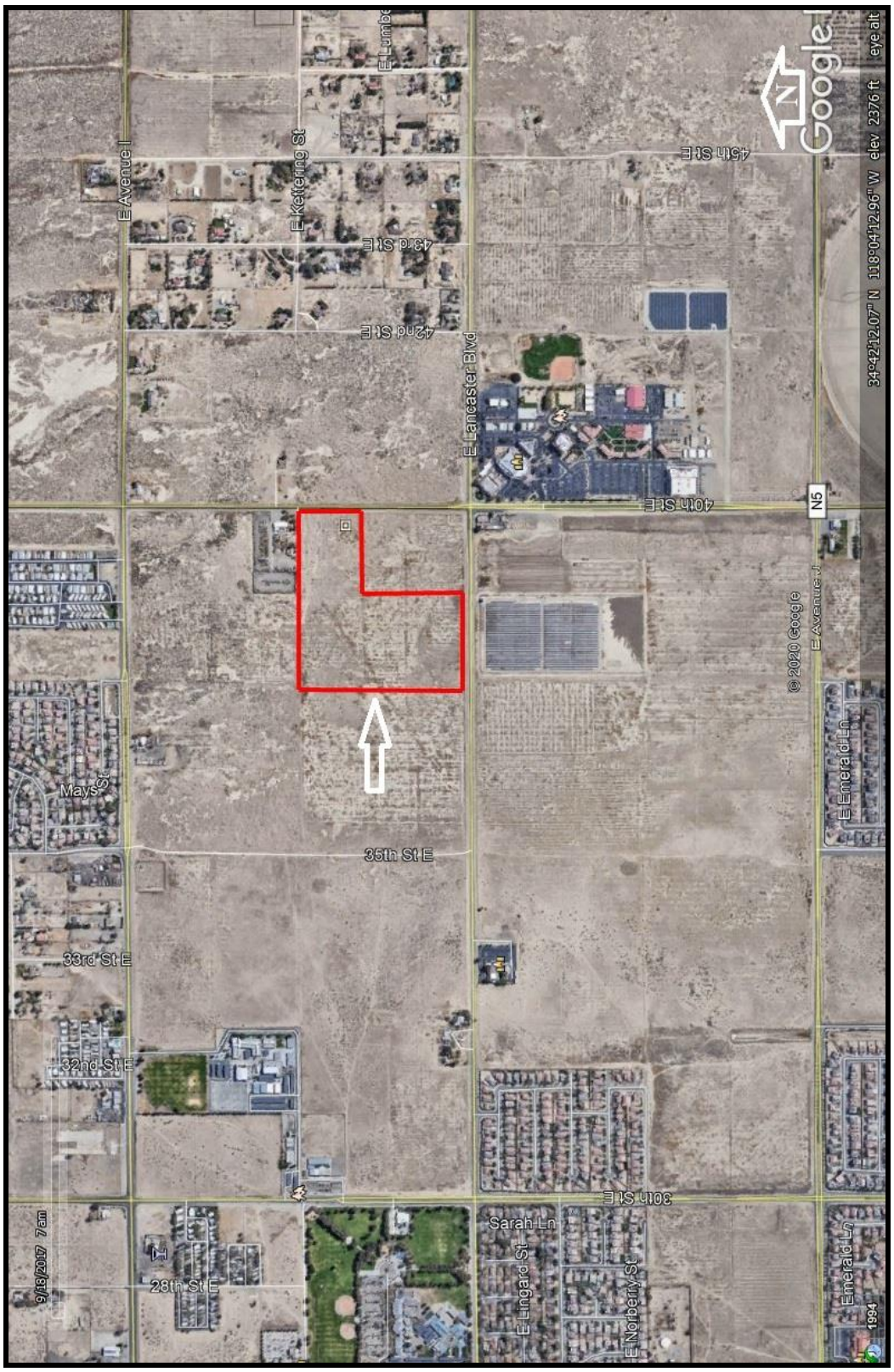

Figure 3. Approximate location of study area showing surrounding land use as depicted on excerpt from Google Earth Aerial Photography, April 2017.

line transects were approximately 1,280 feet (413 m) long and spaced approximately 75 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 (MGS) to determine whether potential habitat was present for the species (CDFW 2019, Leitner and Leitner 2017).

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). Aerial photographs, California Natural Diversity Database (CNDDB 2018), a recent report from the area (Hagan 2020), and the USGS topographic map were reviewed. Photographs of the study site were taken (Figure 4).

Results

A total of 16 line transects were walked on 16 and 17 July 2020. Weather conditions consisted of warm temperatures (estimated 75 to 80 degrees F), 0% cloud cover, and light to no winds during surveys on both days. Sandy clay and sandy loam surface soil textures were present within the study area. There were no blue line streams delineated on the USGS topographic maps within the study area. There were no washes or streams observed on the aerial photography. No washes or streams were observed during the field survey.

The proposed project area was characteristic of an old abandoned agricultural field. A total of twenty-three plant species were observed during the line transect survey (Table 1). Rabbit brush was sparse but the most commonly occurring perennial shrub species throughout the study area. Red stemmed filaree (*Erodium cicutarium*), tumble mustard (*Sisymbrium altisissiimum*), and fiddleneck (*Amsinckia tessellata*) were the dominant annual species throughout the study area. Annuals within the study site were predominately invasive, weedy species (Table 1). No alkali mariposa lilies, Barstow woolly sunflowers, desert cymopterus, or suitable habitat were observed within the study site.

A total of twenty-two 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 within the study site during the field survey. California ground squirrel (*Citellus beecheyi*) burrows and the irrigation infrastructures observed within the study area provide future potential cover sites for burrowing owls. No bird nests were observed during the field survey. No desert kit foxes or their sign were observed during the field survey. No suitable MGS habitat was present within the study site.

Small amounts of scattered litter were observed within the study site. Concrete irrigation structures were observed within the study site. Structures consisted of above ground and below ground piping systems. Some of the below ground pipes were exposed, open, or broken.

Figure 4. Representative photographs depicting general site characteristics.

Table 1. List of plant species that were observed during the line transect survey of TTM 60367, Lancaster, California.

Common Name	Scientific Name
Four-wing saltbush	*Atriplex canescens*
Allscale	*Atriplex polycarpa*
Silverscale	*Atriplex argentea*
Arrow scale	*Atriplex phyllostegia*
Rabbit brush	*Chrysothamnus nauseosis*
Turkey mullein	*Eremocarpus setigerus*
Fiddleneck	*Amsinckia tessellata*
Desert dandelion	*Malacothrix glabrata*
Gilia	*Gilia minutiflora*
Desert straw	*Stephanomeria pauciflora*
Spotted buckwheat	*Eriogonum maculatum*
Goldfields	*Lasthenia californica*
Pineapple weed	*Matricaria discoidea*
Clasping peppergrass	*Lepidium perfoliatum*
Russian thistle	*Salsola iberica*
Schismus	*Schismus* sp.
Foxtail barley	*Hordeum leporinum*
Red brome	*Bromus rubens*
Cheatgrass	*Bromus tectorum*
Red stemmed filaree	*Erodium cicutarium*
Tansy mustard	*Descurainia sophia*
Tumble mustard	*Sisymbrium altisissiimum*
Ornamental tree	

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of TTM 60367, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
Kangaroo rat	*Dipodomys* sp.
California ground squirrel	*Citellus beecheyi*
Black-tailed jackrabbit	*Lepus californicus*
Desert cottontail	*Sylvilagus auduboni*
Coyote	*Canis latrans*
Mourning dove	*Zenaida macroura*
Rock dove	*Columba livia*
Hummingbird sp.	Family: Trochilidae
Common raven	*Corvus corax*
Say's phoebe	*Sayornis saya*
House finch	*Carpodacus mexicanus*
Darkling beetle	*Coelocnemis californicus*
Grasshopper	Order: Orthoptera
Dragonfly	Order: Odonata
Bee	Order: Hymenoptera
Black widow	*Latrodectus* sp.
Spider	Order: Araneida
Ants, small, black	Order: Hymenoptera
Harvester ants	Order: Hymenoptera
Cabbage white butterfly	*Pieris rapae*
Beetle, red/black	Order Coleoptera

Discussion

It is likely that most annual species were visible during the time the field survey was performed. Greater than 75% of the annual biomass represented within the project site consisted of weedy species (Table 1). Based on the lack of habitat, no sensitive plant species are expected to exist within the study site. 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 is severely degraded and fragmented or already developed. 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 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. No desert tortoise habitat is present within, adjacent, or in close proximity to the project site. Based on field observations, desert tortoises are not present within the study area. No protection measures are recommended for desert tortoises.

The MGS is a state listed threatened species. The study area was located within the geographic range of MGS. MGS habitat is recognized to consist of a variety of desert scrub habitats, none of which occur any longer within, adjacent, or in close proximity to the project site. A table listing MGS habitats and a discussion of required shrubs and annuals can be found in the publication titled "A Conservation Strategy for the Mohave Ground Squirrel" (CDFW 2019). No suitable habitat is present to support MGS on or around this study site. No protection measures are recommended for MGS.

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. Based on this field survey desert kit foxes are not resident within this study site. 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 burrows and irrigation infrastructure within the project site could provide potential cover sites for burrowing owls. No recent observations have been documented in close proximity to the study site (CNDDB 2018, eBird 2020).

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. Swainson's hawk and other raptors would not nest within the study area given the lack of nesting sites. The few ornamental trees within the study site are too small to be suitable for Swainson's hawk or other raptors. No Swainson's hawk nests have been documented within 5 miles of the study site within the last 20 years (CNDDB 2018, eBird 2020). Swainson's

Table 3. List of wildlife species that may occur within the study area, TTM 60367 Lancaster, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Domestic cat	*Felis catus*
Domestic dog	*Canis familiaris*
Side blotched lizard	*Uta stansburiana*
Red-tailed hawk	*Buteo jamaicensis*
Northern mockingbird	*Mimus polyglottos*
Horned lark	*Eremophila alpestris*
House sparrow	*Passer domesticus*
White crowned sparrow	*Zonotrichia leucophrys*
Moth	Order: Lepidoptera
Fly	Order: Diptera
Wasp	Order: Hymenoptera

hawks have been observed flying over or perching once a year between 2016 and 2020 within 5 miles of the study site (eBird 2020). Swainson's hawk observations within east Lancaster have been strongly correlated to the active agricultural fields, away from residential tracts (eBird 2020, CNDDB 2018). The study site appears to have little forage value for Swainson's hawks. No protection measures are recommended for Swainson's hawk or other raptors.

No suitable habitat for alkali mariposa lily, Barstow woolly sunflower or desert cymopterus was observed within the study site. Based on the results of the field survey these species are not expected to 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 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:

Consistent with the "Staff Report on Burrowing Owl Mitigation" a take avoidance (pre-construction) survey should be accomplished within 14 days of ground disturbing activities (CDFG 2012). If burrowing owls or their sign are detected during the take avoidance (pre-construction) survey further surveys based on the Staff Report will be applied as appropriate.

If possible, removal of the trees will occur outside the breeding season for migratory birds. Breeding generally lasts from February to July but may extend beyond this time frame. If tree 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 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 would not result in a significant adverse impact to biological resources.

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