APPENDIX D

Biological Resources Assessment

Biological Resource Assessment of Avanti Project, Lancaster, California

May 5, 2014

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Biological Resource Assessment of Avanti Project, Lancaster, California

Mark Hagan, Wildlife Biologist, 44715 17th Street East, Lancaster, CA 93535

Abstract

Residential development has been proposed for APNs 3204-008-047, 3204-008-045, and a portion of 3204-001-195 (Avanti project). The approximately 230 acre (92 ha) study area included two geographically separate locations. APNs 3204-008-047 and 045 (Site A) was located east of 70th Street West and south of Avenue K-8, T7N, R13W, a portion of the S1/2 of Section 27, S.B.B.M. A small portion of APN 3204-001-195 (Site B) was located west of 70th Street West and north of Avenue K-8, T7N, R13, a small portion of the SE1/4 of the SE1/4 of the NE1/4 of Section 28, S.B.B.M. A line transect survey was conducted on 23, 29, 30 March and 5, 6 April 2014 to inventory biological resources. The proposed project areas were characteristic of historical agricultural fields. A total of forty-seven plant species were observed during the line transect survey at Site A and seventeen plant species at Site B. A total of thirty-five wildlife species or their sign were observed during the line transect survey at Site A and eight wildlife species or their sign at Site B. No desert tortoises (*Gopherus agassizii*) or their sign were observed during the field survey and are not expected to be present within Site A or B. One inactive, potential burrowing owl (*Athene cunicularia*) cover site was observed just within the western boundary of Site A. No burrowing owl, or other burrowing owl sign was observed in association with this potential cover site or elsewhere during the field survey. No burrowing owls are expected to be currently using this project area. Open irrigation lines, and California ground squirrel burrows present on Site A provide potential future burrowing owl cover sites. If this study site is not developed prior to February 2015, a survey for burrowing owls should be accomplished within 30 days prior to ground disturbing activity. 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 required. No burrowing owl, their sign, or potential cover sites were observed within Site B. The trees within; and along the boundary of Site A provide nesting habitat for migratory birds. No trees were located within Site B. If possible, construction activities should occur outside the nesting season (spring) for birds. If construction activity will occur during the nesting season, a survey should be conducted within one week prior to removal of vegetation. If active bird nests are found, impacts should be avoided unless the proper permits are obtained. The proposed project site was located west of the geographic range of the Mohave ground squirrel (*Xerospermophilus mohavensis*). The habitat within the study area (Site A and B) was not suitable to support Mohave ground squirrels. There are no recommended mitigations for Mohave ground squirrels. No sensitive plants, or suitable habitat for them were observed on the study site (Site A and B). No other state or federally listed species are expected to occur within the proposed project area. Two drainages were observed within the study site (Site A) oriented north-south, one within the center of the project site and one along the eastern boundary. A small wetland and pond exists adjacent to Site B which may be impacted if road work is accomplished on K-8 (dirt road) which makes up the southern boundary. 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. These areas may require consultation with CDFW to determine whether a Streambed Alteration Agreement is needed if the drainages in Site A or water flow and/or wetland/pond area adjacent to Site B are impacted.

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

Residential development has been proposed for the Avanti project, APNs 3204-008-047, 3204-008-045 (Site A), and development of a fire department has been proposed for APN 3204-001-195 (Site B) (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.

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.

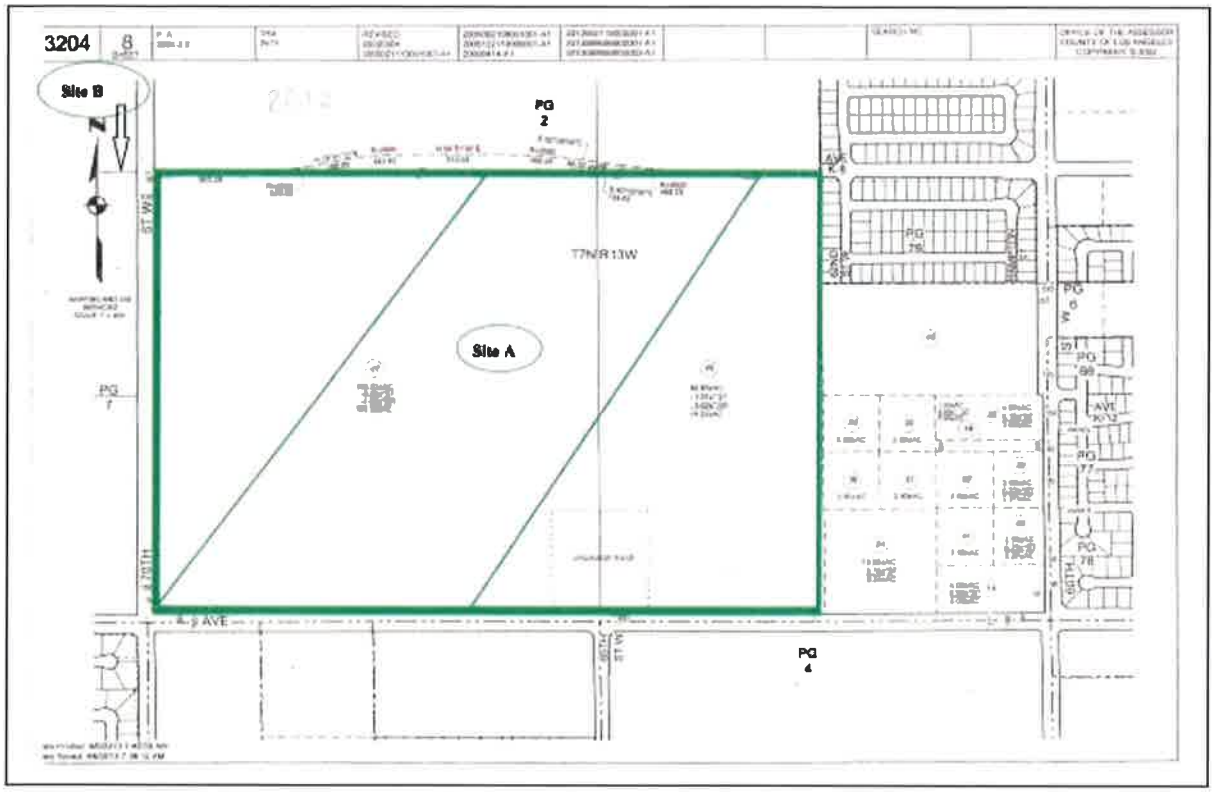
Study Area

The approximately 230 acre (92 ha) study area included two geographically separate locations (Figure 2). Site A was located east of 70th Street West and south of Avenue K-8, T7N, R13W, a portion of the S1/2 of Section 27, S.B.B.M. Site B was located west of 70th Street West and north of Avenue K-8. Single-family homes and open fields occurred along the eastern boundary of Site A. The northern boundary was formed by Avenue K-8, a dirt road. A historical agricultural field existed north of Avenue K-8. The western boundary was formed by 70th Street West. Quartz Hill High School was located southeast of Site A. A cemetery was located west of 70th Street West. The southern boundary was formed by Avenue L. Figure 3 provides an aerial view of the surrounding land uses. Historical agricultural fields existed along the northern, and western boundaries of Site B. A historical agricultural field and a small wetland/pond area existed along the eastern boundary of Site B. The southern boundary of Site B was formed by Avenue K-8 (dirt road). A cemetery existed to the south of Avenue K-8. Topography of Site A ranged from approximately 2,400 to 2,425 (774 to 782 m) above sea level. Topography of Site B was approximately 2,400 (774 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 on Site A and north-west orientation on Site B. Line transects on Site A were approximately 1,320 feet (426 m) long and spaced about 100 feet (32 m) apart (U.S. Fish & Wildlife Service 1990). Line transects on Site B were approximately 300 feet (96 m) long and spaced about 75 feet (24 m) apart.

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). Photographs of the study site were taken (Figure 4).



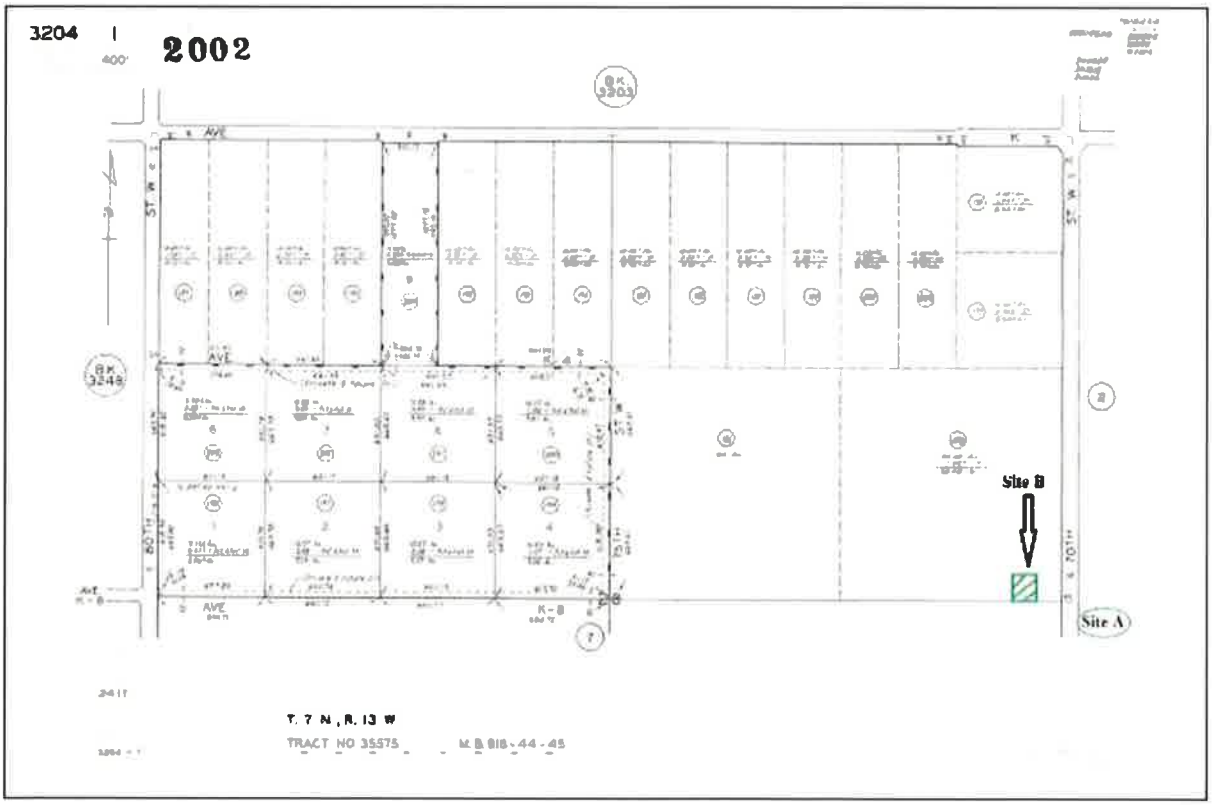


Figure 1. Approximate location of proposed project area as depicted on APN maps.

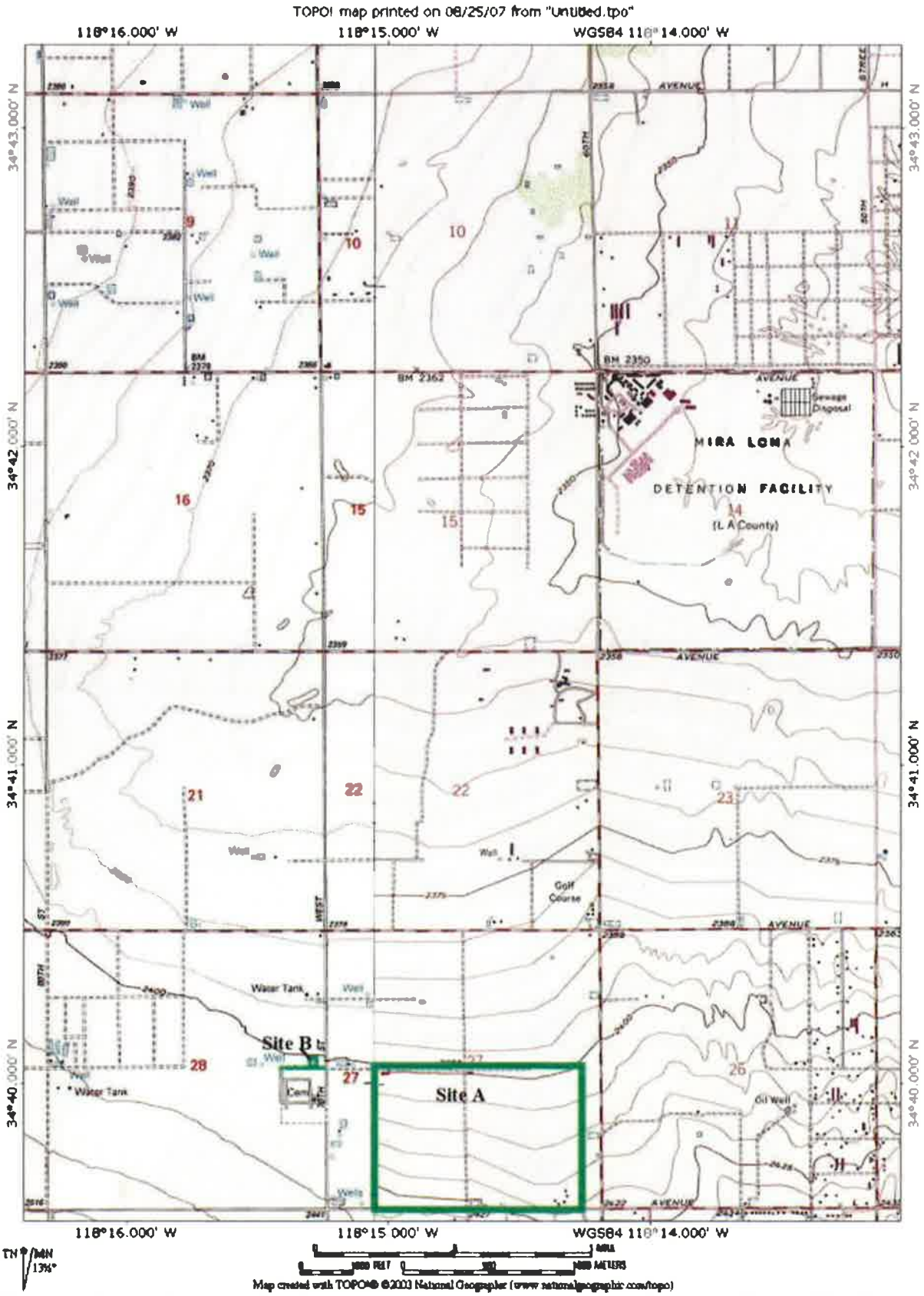


Figure 2. General location of study areas as depicted on excerpts from Lancaster West and Del Sur, U.S.G.S., Quadrangle Maps, 1974.

Figure 3. Aerial photo showing surrounding land use, 2013, Google Earth.

Site A, East Side

Site A, West Side

Site B

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

Results

A total of sixty-four line transects were walked on 23, 29, 30 March and 5, 6 April 2014. Weather conditions consisted of warm temperatures (estimated 50 to 80 degrees F), 0 to 80% cloud cover, and light to high winds. A sandy loam surface soil texture was characteristic throughout the study areas.

The proposed project areas were characteristic of historical agricultural fields. A total of forty-seven plant species were observed during the line transect survey at Site A and seventeen plant species at Site B (Table 1). The project areas were nearly devoid of any shrubs except within the SE portion of Site A which was dominated by rabbit brush (*Chrysothamnus nauseosis*) (Figure 3). Some ornamental trees were present within and along the eastern and western boundaries Site A. Native annuals were observed primarily within the southeast corner of Site A. No trees were located within Site B. Red stemmed filaree (*Erodium cicutarium*) and Russian thistle (*Salsola iberica*) were the dominant annual species throughout both sites. No sensitive plants were observed within the study sites. Two drainages were observed within Site A. Water flow was not contained within the drainage channels but flowed westerly across a portion of Site A. A wetland/pond area was observed adjacent to the south-east boundary of Site B.

A total of thirty-five wildlife species, or their sign were observed at Site A during the line transect survey (Table 2). A total of eight wildlife species, or their sign were observed at Site B (Table 2) during the line transect survey. No desert tortoises (*Gopherus agassizii*) or sign were observed during the field survey. One inactive, potential burrowing owl (*Athene cunicularia*) cover site was observed just within the western boundary of Site A. No burrowing owls were observed during the field survey.

Old construction, yard, and household debris were observed along the northern boundary of Site A. Heavy equipment tracks were observed within Site A. Off-road vehicles (OHV) were observed driving within and around Site A. A dirt road oriented north-south was observed within Site A. Dog owners exercising their dogs, hikers, and joggers were observed frequently within and around Site A. Two large holding ponds were observed within Site A; both were used by OHV riders. An irrigation system with exposed and open concrete pipes was observed within Site A. Site B had no additional disturbances other than historical agricultural and grazing uses.

Discussion

Most annual vegetation was in flower at the time the field survey was conducted. It is expected that most species occurring within the site were observed. 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.

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

Common Name	Scientific Name
Site A	
Black locust	*Robina pseudoacacia*
Alder	*Alnus* sp.
Ornamental tree - unknown	
Salt cedar	*Tamarix* sp.
Basin sagebrush	*Artemisia tridentata*
Four-wing saltbush	*Atriplex canescens*
California buckwheat	*Eriogonum fasciculatum*
Rabbit brush	*Chrysothamnus nauseosis*
Blazing star	*Mentzelia* sp.
Apricot mallow	*Sphaeralcea ambiqua*
Slender keel fruit	*Tropidocarpum gracile*
Goldfields	*Lasthenia californica*
Broadleaf gilia	*Gilia latiflora*
Dune primrose	*Oenothera deltoides*
Lupine	*Lupinus* sp.
Brown-eyed primrose	*Camissonia claviformis*
Common sunflower	*Helianthus annuus*
Turkey mullein	*Eremocarpus setigerus*
Fremont pincushion	*Chaenactis fremontii*
Comb-bur	*Pectocarya* sp.
Crested Onion	*Allium fimbriatum mohavense*
California poppy	*Eschscholtzia californica*
Fiddleneck	*Amsinckia tessellata*
Red stemmed filaree	*Erodium cicutarium*
Schismus	*Schismus* sp.
Cattails	*Typha* sp.
Horseweed	*Canyza honariensis*
Rumex	*Rumex* sp.
Willow	*Salix* sp.
Desert straw	*Stephanomeria pauciflora*
Common sandaster	*Corythrognye felaginifolia*
Manroot	*Marah fabaceus*
Annual rabbit foot grass	*Polypogon monspeliensis*
Cheatgrass	*Bromus tectorum*
Bermuda grass	*Cynodon dactylon*
Ripgut grass	*Bromus diandrus*
Squirrel-tail grass	*Hordeum jubatum*
Tumble mustard	*Sisymbrium altisissiimum*
Russian thistle	*Salsola iberica*
Jimson weed	*Datura meteloides*
Bamboo	Family: Poaceae

Table 1, continued. List of plant species that were observed during the line transect survey of Avanti Project, Lancaster, California.

Common Name	Scientific Name
Site A	
Shepards purse	*Capsella bursa-pastoris*
Rattail fescue	*Vulpia myuros*
Mule fat	*Baccharis salicifolia*
Pineapple weed	*Matricaria discoidea*
Juncus	*Juncus* sp.
Common plantain	*Plantago major*
Fungi	
Mushroom	
Site B (proposed fire station area)	
Nevada blue grass	*Poa secunda*
Common sunflower	*Helianthus annuus*
Rabbit brush	*Chrysothamnus nauseosis*
Comb-bur	*Pectocarya* sp.
Turkey mullein	*Eremocarpus setigerus*
Goldfields	*Lasthenia californica*
Fiddleneck	*Amsinckia tessellata*
Horehound	*Marrubium vulgare*
Red stemmed filaree	*Erodium cicutarium*
Squirrel-tail grass	*Hordeum jubatum*
Cheatgrass	*Bromus tectorum*
Schismus	*Schismus* sp.
Red brome	*Bromus rubens*
Horseweed	*Canyza honariensis*
Annual burweed	*Franseria acanthicarpa*
Tumble mustard	*Sisymbrium altisissiimum*
Russian thistle	*Salsola iberica*

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

Common Name	Scientific Name
Site A	
Rodents	Order: Rodentia
Pocket gopher	*Thomomys bottae*
California ground squirrel	*Citellus beecheyi*
Black-tailed jackrabbit	*Lepus californicus*
Coyote	*Canis latrans*
Domestic dog	*Canis familiaris*
Domestic cat	
Sheep	*Ovis* sp.
Domestic goat	*Capra hircus*
Side blotched lizard	*Uta stansburiana*
Mojave rattlesnake	*Crotalus scutulatus*
Mallard	*Anas platyrhynchos*
American kestrel	*Falco sparverius*
California quail	*Callipepla californica*
Killdeer	*Charadrius vociferus*
Tree swallow	*Tachycineta bicolor*
Common raven	*Corvus corax*
Cactus wren	*Campylorhynchus brunneicapillus*
Black phoebe	*Sayornis nigricans*
Western kingbird	*Tyrannus verticalis*
Horned lark	*Eremophila alpestris*
European starling	*Sturnus vulgaris*
Yellow rumped warbler	*Setophaga coronata*
Western meadowlark	*Sturnella neglecta*
Harvester ants	Order: Hymenoptera
Ants 2 spp.	Order: Hymenoptera
Black widow spider	*Latrodectus mactans*
Bees, small	Order: Hymenoptera
Honey bee	Order: Hymenoptera
Darkling beetle	*Coelocnemis californicus*
Wolf spider	Order: Araneida
Ladybird beetle	*Hippodamia convergens*
Butterfly, white	Order: Lepidoptera
Painted lady	*Vanessa cardui*

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

Common Name	Scientific Name
Site B (proposed fire station area)	
Rodents	Order: Rodentia
Black-tailed jackrabbit	*Lepus californicus*
Sheep	*Ovis* sp.
Side blotched lizard	*Uta stansburiana*
Common raven	*Corvus corax*
Harvester ants	Order: Hymenoptera
Honey bee	Order: Hymenoptera
Ladybird beetle	*Hippodamia convergens*

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

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Merriam kangaroo rat	*Dipodomys merriami*
Gopher snake	*Pituophis melanoleucus*
Western whiptail	*Cnemidophorus tigris*
Mourning dove	*Zenaida macroura*
House sparrow	*Passer domesticus*
House finch	*Carpodacus mexicanus*
Cricket	Order: Orthoptera
Fly	Order: Diptera

The proposed project areas were located within the geographic range of the desert tortoise. Desert tortoise is listed as a threatened species by the US Fish and Wildlife Service and the California Department of Fish and Wildlife (CDFW). Based on the results of this survey desert tortoises do not inhabit the study sites (Sites A and B). No mitigations for desert tortoise are recommended.

The Mohave ground squirrel (*Xerospermophilus mohavensis*) is a state listed threatened species. The proposed project sites (Sites A and B) were located west of the geographic range of the Mohave ground squirrel. The habitat within the study areas was not suitable to support Mohave ground squirrels. No mitigations for Mohave ground squirrel 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 Game 2002, Smith and Berg 1988, U.S. Fish & Wildlife Service 1990).

Burrowing owls are considered a species of special concern by CDFW. No burrowing owls are expected to be currently using this project area. Open irrigation lines, and California ground squirrel burrows present on Site A provide potential future burrowing owl cover sites. If this study site is not developed prior to February 2015, a survey for burrowing owls should be accomplished within 30 days prior to ground disturbing activity. 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 required. No burrowing owl, or other signs of burrowing owl were observed within Site B. No burrowing owl mitigations are recommended for Site B.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. The trees on and around Site A provide nesting sites for birds. If at all possible, destruction of these trees should be avoided during the breeding season (spring) of birds. If tree removal will occur during the nesting season, a survey should be conducted within one week prior to tree removal. If active bird nests are found, impacts should be avoided unless the proper permits are obtained. No vegetation exists within Site B that would provide potential nesting sites for migratory birds. No migratory bird mitigations are recommended for Site B.

Two drainages were observed within the study site (Site A) oriented north-south, one within the center of the project site and one along the eastern boundary. A small wetland and pond exists adjacent to Site B which may be impacted if road work is accomplished on K-8 (dirt road) which makes up the southern boundary. 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. These areas may require consultation with CDFW to determine whether a Streambed Alteration Agreement is needed if the drainages in Site A or water flow and/or wetland/pond area adjacent to Site B are impacted.

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).

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

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December 20, 2015

Royal Investors Group, LLC
Attn: Ms. Kris Pinero
15821 Ventura Blvd., Suite 460
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Dear Ms. Pinero:

Re: Update to "Biological Resource Assessment of Avanti Project, Lancaster, California"

Residential development has been proposed for APNs 3204-008-047, 3204-008-045, and a portion of 3204-001-195 (Avanti project). The approximately 230 acre (92 ha) study area included two geographically separate locations. APNs 3204-008-047 and 045 (Site A) were located east of 70th Street West and south of Avenue K-8, T7N, R13W, a portion of the S1/2 of Section 27, S.B.B.M. A small portion of APN 3204-001-195 (Site B) was located west of 70th Street West and north of Avenue K-8, T7N, R13, a small portion of the SE1/4 of the SE1/4 of the NE1/4 of Section 28, S.B.B.M. The purpose of this update was to verify that the original 2014 survey was still valid.

Hagan, M. 2014. Biological Resource Assessment of Avanti Project, Lancaster, California, California, 14pp.

A site visit was conducted on 9 December 2015 to update the biological report previously prepared for this property. Weather conditions consisted of cool temperatures (estimated 60 degrees F), 90% cloud cover, and no wind. Random transects were walked and driven through the study site. The site conditions remain relatively unchanged since the original survey except for the following:

Site A:

Vegetation and contouring was accomplished in association with both drainages within the study site. This drainage work resulted in a dirt road oriented north south along a portion of the southeastern boundary (Figure 1).

Concentrated, heavy sheep (*Ovis* sp.) grazing was observed in a section of the northwest portion of the study site. Light sheep sign had been observed in the original field survey across the site.

Site B:

Vegetation removal accomplished in the pond and channel present adjacent to Site B. This work further degraded Site B from grading and heavy vehicle activity while clearing this wetland/pond area (Figure 1).

The 2014 biological report is considered to still be valid. All recommendations made within the original report are still appropriate. No new mitigations are recommended.

Sincerely

Mark Hagan
Wildlife Biologist

Site A: Dirt road developed since 2014 biological assessment.

Site B: Damage created during wetland/pond cleanout.

Figure 1. Photos taken during update of Biological Resource Assessment of Avanti Project, Lancaster California,

Biological Resource Assessment of APNs 3204-001-184 and 195 Lancaster, California

March 2, 2016

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Biological Resource Assessment of APNs 3204-001-184 and 195, Lancaster, California

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Abstract

Community development has been proposed for APNs 3204-001-184 and 195. The approximately 80 acre (32 ha) study area was located west of 70th Street West and north of Avenue K-8, T7N, R13W, S1/2 of the NE1/4 of Section 28, S.B.B.M. A line transect survey was conducted on 6, 13, and 15 February 2016 to inventory biological resources. The proposed project area was characteristic of a historical agricultural field. A total of twenty-four plant species were observed during the line transect survey. A total of twenty-five 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. No burrowing owl, or burrowing owl sign, was observed during the field survey. No burrowing owls are expected to be currently using this project area. Open irrigation lines and abandoned dens present on site provide potential future burrowing owl cover sites. A survey for burrowing owls should be accomplished within 30 days prior to ground disturbing activity. 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 required. The trees within, and along the boundary of the study site provide potential nesting habitat for migratory birds. If possible, construction activities should occur outside the nesting season (spring) for birds. If construction activity will occur during the nesting season, a survey should be conducted within one week prior to removal of trees. If active bird nests are found, impacts should be avoided unless the proper permits are obtained. The proposed project site was located west of the geographic range of the Mohave ground squirrel (*Xerospermophilus mohavensis*). The habitat within the study site was not suitable to support Mohave ground squirrels. There are no recommended mitigations for Mohave ground squirrels. No sensitive plants, or suitable habitat for them were observed on the study site. No other state or federally listed species are expected to occur within the proposed project area. Two heavily impacted small drainage ponds and channel (less than 0.01 acres in total area) were observed adjacent to and just within the study site. These two features were created from water runoff from the adjacent property. Increased drainage areas using riparian features will be constructed on-site during the community development. This project is not expected to result in a significant adverse impact to biological resources.

Community development has been proposed for APNs 3204-001-184 and 195 (Figure 1). Development would include installation of access roads, utilities (water, sewer, electric, etc.), parking areas, etc. Development includes construction of a fire station. 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.

Study Area

The approximately 80 acre (32 ha) study area was located west of 70th Street West and north of Avenue K-8, T7N, R13W, S1/2 of the NE1/4 of Section 28, S.B.B.M. (Figure 2). A

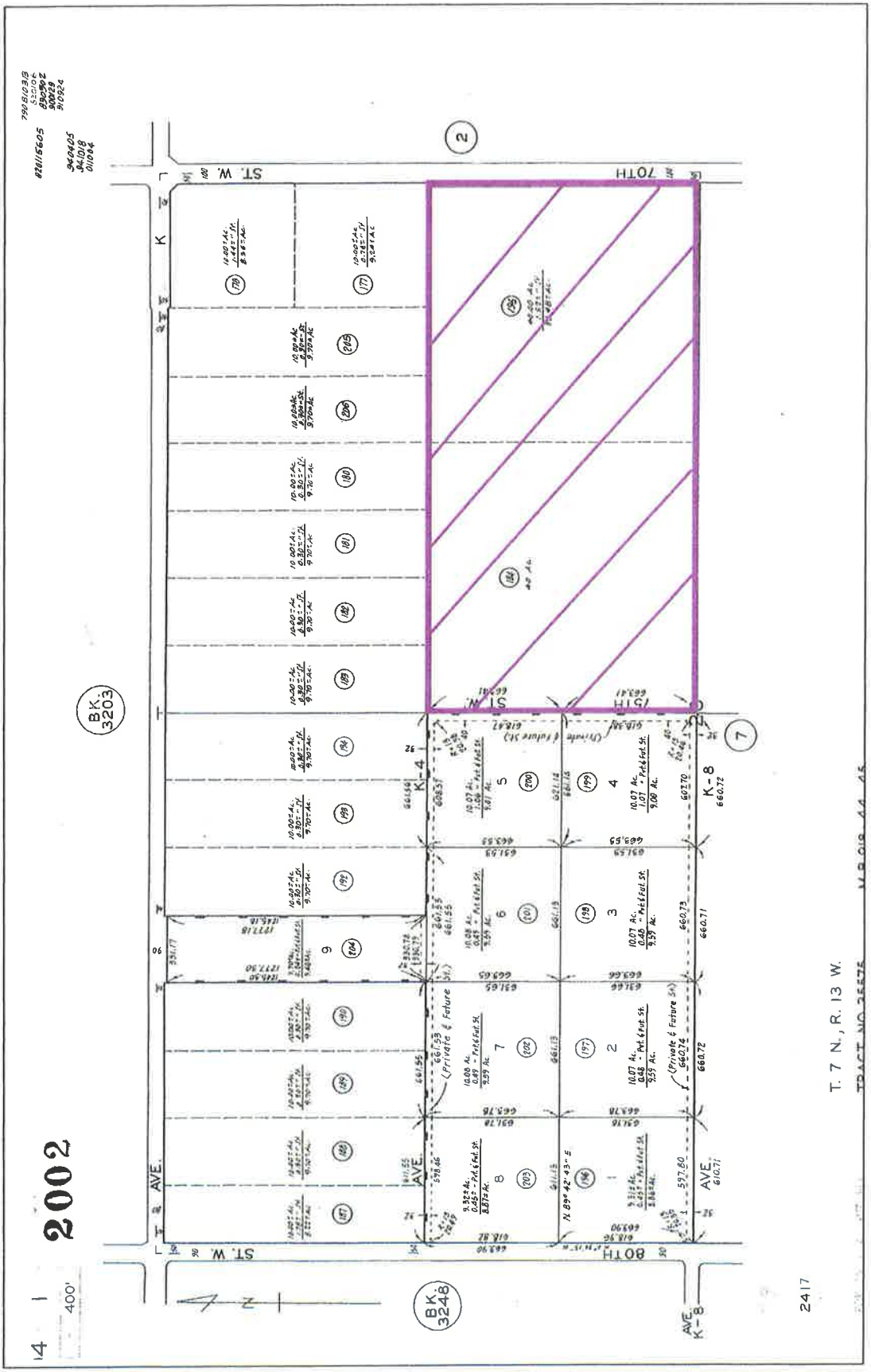

Figure 1. Approximate location of proposed project area as depicted on APN map.

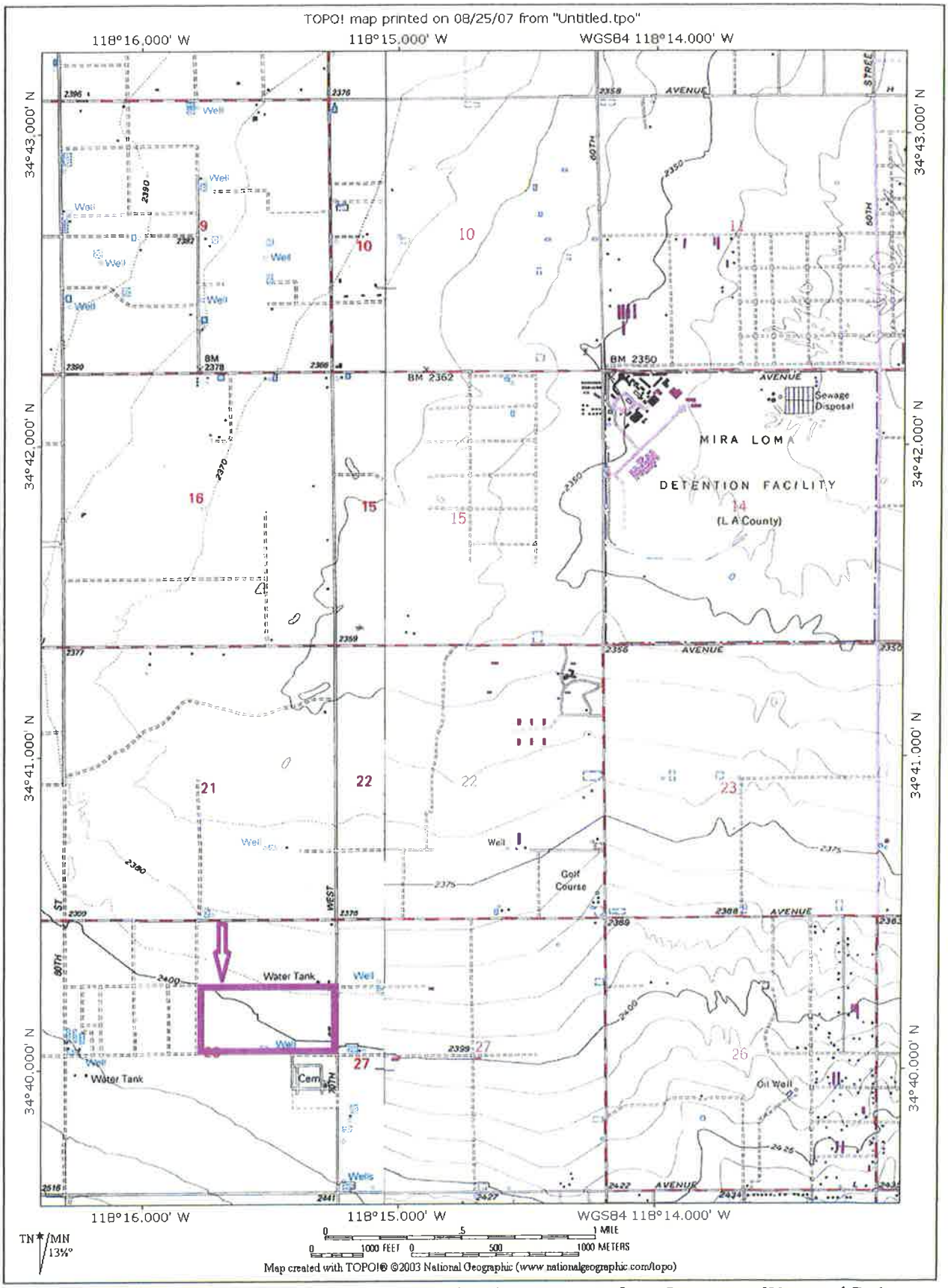

Figure 2. General location of study area as depicted on excerpts from Lancaster West and Del Sur, U.S.G.S., Quadrangle Maps, 1974.

historical agricultural field existed north and west of the study site. The eastern boundary was formed by 70th Street West. A cemetery was located south of project area. Figure 3 provides an aerial view of the surrounding land uses. Topography of the study site was approximately 2,400 (774 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. Line transects were approximately 1,320 feet (426 m) long and spaced about 100 feet (32 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). Photographs of the study site were taken (Figures 4 and 5).

Results

A total of twenty-four line transects were walked on 6, 13, and 15 February 2016. Weather conditions consisted of warm temperatures (estimated 65 degrees F), 0% cloud cover, and light to high winds. A sandy loam surface soil texture was characteristic throughout the study area.

The proposed project area was characteristic of historical agricultural fields. A total of twenty-four plant species were observed during the line transect survey. The project area was nearly devoid of shrubs. Red stemmed filaree (*Erodium cicutarium*) and Russian thistle (*Salsola iberica*) were the dominant annual species throughout the study site. No sensitive plants were observed within the study sites. Two drainage ponds and short channel were observed adjacent to and just within the southeast boundary of the study site. Associated with these drainage features were approximately 200 linear feet (64.5 m) of trees.

A total of twenty-five wildlife species, or their sign were observed during the line transect survey (Table 2). No desert tortoises (*Gopherus agassizii*) or sign were observed during the field survey. No burrowing owls (*Athene cunicularia*) or sign were observed during the field survey.

Scattered windblown litter was observed within the study site. Household debris was observed along the southern boundary of the study site. Off-road vehicle (OHV) tracks were observed within the study site. A large historical irrigation reservoir was observed within the study site which is being used as a dumping area and by OHV riders. Tires, construction and household debris were observed within this irrigation reservoir. An irrigation system with exposed and open concrete pipes were observed within the study site. Signs of historical agricultural use and sheep grazing were prevalent throughout the study site.

Figure 3. Aerial photo showing surrounding land use, 2013, Google Earth.

Figure 4. Representative photographs depicting the general habitat within study area.

Figure 5. Representative photographs depicting the east drainage pond (top) just within the study area and the west drainage pond (bottom) adjacent to the study area.

Table 1. List of plant species that were observed during the line transect survey of APNs 3204-001-184 and 195, Lancaster, California.

Common Name	Scientific Name
American elm	*Ulmus americana*
Salt cedar	*Tamarix* sp.
Willow	*Salix* sp.
Mule fat	*Baccharis salicifolia*
Rabbit brush	*Chrysothamnus nauseosis*
Turkey mullein	*Eremocarpus setigerus*
Slender keel fruit	*Tropidocarpum gracile*
Goldfields	*Lasthenia californica*
Brown-eyed susan	*Rudbeckia hirta*
Jimson weed	*Datura meteloides*
Cattails	*Typha* sp.
Horseweed	*Canyza honariensis*
Fiddleneck	*Amsinckia tessellata*
Horehound	*Marrubium vulgare*
Red stemmed filaree	*Erodium cicutarium*
Nevada blue grass	*Poa secunda*
Squirrel-tail grass	*Hordeum jubatum*
Ripgut grass	*Bromus diandrus*
Cheatgrass	*Bromus tectorum*
Schismus	*Schismus* sp.
Tumble mustard	*Sisymbrium altisissiimum*
Mustard sp.	Brassicaceae
Annual burweed	*Franseria acanthicarpa*
Russian thistle	*Salsola iberica*

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of APNs 3204-001-184 and 195, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
Pocket gopher	*Thomomys bottae*
Kangaroo rat	*Dipodomys* sp.
Desert cottontail	*Sylvilagus auduboni*
Coyote	*Canis latrans*
Desert kit fox (very old sign)	*Vulpes macrotis*
Sheep	*Ovis* sp.
Horse	*Equus* sp.
Side blotched lizard	*Uta stansburiana*
American kestrel	*Falco sparverius*
Red-tailed hawk	*Buteo jamaicensis*
Mourning dove	*Zenaida macroura*
Common raven	*Corvus corax*
Black phoebe	*Sayornis nigricans*
Say's phoebe	*Sayornis saya*
Horned lark	*Eremophila alpestris*
Song sparrow	Melospiza melodia
Red-winged blackbird	*Agelaius phoeniceus*
House finch	*Carpodacus mexicanus*
White crowned sparrow	*Zonotrichia leucophrys*
Harvester ants	Order: Hymenoptera
Ants, black, small	Order: Hymenoptera
Pgymy blue butterfly	Order: Lepidoptera
Beetle, gray/orange	Order Coleoptera
Darkling beetle	*Coelocnemis californicus*

Discussion

Annual vegetation was beginning to germinate at the time the field survey was conducted. It is possible that not all species occurring within the site were observed. However, the site is severely disturbed and very few native annuals are expected to be present within the study site. No sensitive plant species would be expected. 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 proposed project area was located within the geographic range of the desert tortoise. Desert tortoise is listed as a threatened species by the US Fish and Wildlife Service and the California Department of Fish and Wildlife (CDFW). Based on the results of this survey desert tortoises do not inhabit the study site. No mitigation for desert tortoise is recommended.

The Mohave ground squirrel (*Xerospermophilus mohavensis*) is a state listed threatened species. The proposed project site was located west of the geographic range of the Mohave ground squirrel. The habitat within the study areas was not suitable to support Mohave ground squirrels. No mitigation for Mohave ground squirrel is 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).

Burrowing owls are considered a species of special concern by CDFW. No burrowing owls are expected to be currently using this project area. Open irrigation lines and old dens present on the study site provide potential future burrowing owl cover sites. A survey for burrowing owls should be accomplished within 30 days prior to ground disturbing activity. If burrowing owls are discovered during the survey, consultation should be conducted with the CDFW to determine if mitigation for this species is required.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. The trees on the southeast boundary provide potential nesting sites for birds. If at all possible, destruction of these trees should be avoided during the breeding season (spring) of birds. If tree removal will occur during the nesting season, a survey should be conducted within one week prior to tree removal. If active bird nests are found, impacts should be avoided unless the proper permits are obtained.

Two small drainage ponds (less than 0.01 total acres), one with a short channel associated with it were observed during the field study. The eastern drainage pond had a very small portion of the pond, approximately 6 square feet, and an approximately 200 foot (64 m) channel within the southeastern boundary. The rest of the eastern drainage pond as well as the western drainage

Table 3. List of wildlife species that may occur within the study area, APNs 3204-001-184 and 195, Lancaster, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Merriam kangaroo rat	*Dipodomys merriami*
Gopher snake	*Pituophis melanoleucus*
Mojave rattlesnake	*Crotalus scutulatus*
Western whiptail	*Cnemidophorus tigris*
European starling	*Sturnus vulgaris*
Western meadowlark	*Sturnella neglecta*
House sparrow	*Passer domesticus*
Grasshopper	Order: Orthoptera
Fly	Order: Diptera
Honey bee	Order: Hymenoptera
Wolf spider	Order: Araneida
Ladybird beetle	*Hippodamia convergens*
Painted lady	*Vanessa cardui*

pond exists immediately adjacent to the study site. These drainage ponds and channel were created by irrigation drainage from the adjacent cemetery. An 84 foot (27 m) wide road will be constructed along this southern boundary. These areas will be impacted by construction of this road. These areas would not require a streambed alteration agreement (CDFW 2015). These areas are not the result of natural flow from episodic or permanent surface flow or from a flood plain. Removal of these features will not substantially adversely affect fish or wildlife resources. The project proponent will be creating irrigation holding areas and drainage swales within the community development project.

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).

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

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November 28, 2016

Royal Investors Group, LLC
Attn: Ms. Kris Pinero
15821 Ventura Blvd., Suite 460
Encino, California 91436

Dear Ms. Pinero:

Re: Biological Resource Update for Avanti Project, November 2016

This letter amends and updates the following reports and letter:

Hagan, M. 2016. Biological Resource Assessment of APNs 3204-001-184 and 195 Lancaster, California. 14pp.
Hagan, M. 2015. Update to "Biological Resource Assessment of Avanti Project, Lancaster, California. 3pp.
Hagan, M. 2014. Biological Resource Assessment of Avanti Project, Lancaster, California. 14pp.

Methods and Results

A California Natural Diversity Database (CNDDB) report was ordered and received on November 16, 2016. A review of ebird.org was also accomplished (Cornell Laboratory of Ornithology 2015, 2016). Other than prairie falcon (*Falco mexicanus*) and loggerhead shrike (*Lanius ludovicianus*) no other sensitive species were noted as occurring within 3 miles of the study site. Review and analysis of the CNDDB and ebird data resulted in no change to previous recommendations on sensitive species.

Discussion

The total 310 acre area (both sites) was highly disturbed and degraded. The surrounding area was either developed (single-family residences, high school, cemetery) or in the same highly disturbed and degraded condition as the study site. This was confirmed using both aerial photography and on the ground observation. Wildlife use on-site and in the surrounding areas would be primarily by urban adapted species. Development of this site will result in less cover and foraging opportunities for species occurring within and adjacent to the study area.

No suitable cover for desert tortoise (*Gopherus agassizii*) or Mohave ground squirrels (*Xerospermophilus mohavensis*) was present on the study site. No burrows which would indicate presence of these species was present on the study site. There was no suitable habitat for either of these species on the study site. Based on a lack of sign observed during the survey and an absence of

suitable habitat, these species are not expected to occur in the project area and no mitigations are recommended.

A checklist submitted to ebird (Cornell Laboratory of Ornithology 2016) showed both prairie falcon and loggerhead shrike was observed on the study site. Both these species can be observed throughout the Antelope Valley. Based on site conditions, it is unlikely that prairie falcons or loggerhead shrikes use the study site regularly for foraging and would not be expected to use it for nesting. Given the condition of the site and lack of native habitat components, heavy sheep grazing, and use as an area to run domestic dogs, no sensitive species are expected to regularly use the study site. In addition, this site no longer has the components of an agricultural field that would be suitable for species that depend on that type of habitat. No wildlife corridors are considered to be present on site.

A presurvey for burrowing owls should be conducted 14 days prior to ground disturbing activities (California Department of Fish and Game 2012). No burrowing owls were observed within the study site, and there are no known burrowing owl populations within the area. If a burrowing owl is located during the preconstruction survey, contact with the California Department of Fish and Wildlife (CDFW) should be made prior to continuing the project.

Given the surrounding land uses, birds using those habitat types would be habituated to disturbance in those areas. If construction will take place between 1 February and 31 July a nesting bird survey should be accomplished. During a nesting bird survey the biologist should be aware of signs of nesting behavior along the boundaries and address them as appropriate based on their observations at that time.

There were manmade drainages and two small manmade drainage basins within the study site. All of these features have been severely impacted by regular maintenance activities. The channels do not lead into any permanent or ephemeral desert washes off-site. Army Corps of Engineers (USACE) and California Water Quality Control Board (CRWQCB) documents indicated the Antelope Valley watershed has been determined to be non-jurisdictional. USACE completed a non-jurisdictional determination for the Antelope Valley watershed in 2013 which stated "...the Antelope Valley Watershed, excluding Lake Palmdale and tributaries to Lake Palmdale are nonjurisdictional waters of the United States..." The CRWQCB letter dated January 18, 2005, signed by Mr. Harold Singer indicated the Amargosa Creek was not subject to permitting requirements for National Pollutant Discharge Elimination System (NPDES) and did not intend to regulate storm sewer systems under Porter-Cologne Water Quality Control Act. Review of the Del Sur and West Lancaster USGS topographical quadrangles indicated no blue line streams were present within the study site. There were no indications that the channels on site are natural ephemeral streams, but are drainage from Quartz Hill High School and residential properties off of Avenue L. The small drainage basins are run off from the cemetery. Based on the fact that the drainage channels and basins were built specifically to channel irrigation and residential run off and not natural flow, and no substantial impacts to wildlife resources are expected to occur due to impacts to the water features present no further action is recommended.

Recommended Mitigation Measures

Conduct a presurvey for burrowing owls 14 days prior to ground disturbing activities. If a burrowing owl is located during the preconstruction survey contact CDFW.

Conduct a nesting bird survey if construction is to take place between 1 February and 31 July. If nesting birds are detected avoid disturbing nesting activities through appropriate buffers as recommended by the surveying biologist.

Literature Cited

Along with references noted in the original reports, these specific references were used in support of field surveys, assessment of biological resources, report preparation including 2015 and 2016 updates.

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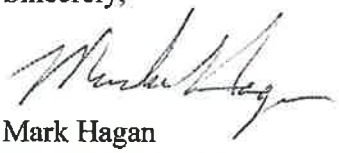
Sincerely,



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