Garber Street Recycled Water Tank Project
CEQA Initial Study Appendices

Appendix B
Biological Resources Technical Report

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Garber Street Recycled Water Tank Project

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Sign-off Sheet

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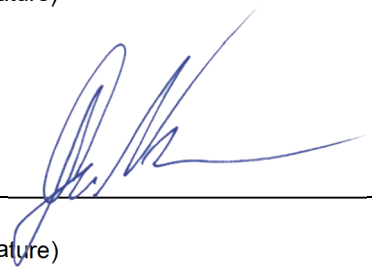

Prepared and Approved by _____

(signature)

Jared Varonin, Principal Biologist

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Abbreviations

Cal-IPC	California Invasive Plant Council
CCH	Consortium of California Herbaria
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
FAA	Federal Aviation Administration
FEIR	Final Environmental Impact Report
gpm	gallons per minute
LADWP	Los Angeles Department of Water and Power
LACDPW	Los Angeles County Department of Public Works
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NPPA	Native Plant Protection Act
RWQCB	Regional Water Quality Control Board
USACE	United States Army Corps of Engineers
USFWS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Survey
WDR	Waste Discharge Requirements
WEEP	Worker Environmental Education Program

1.0 INTRODUCTION

This report is intended to document the biological resources that currently occur at the Los Angeles Department of Water and Power's (LADWP) proposed Garber Street Recycled Water Tank Project Site (Project Site) in Pacoima, California (refer to Appendix A, Figure 1). The surveys and discussions presented in this report were conducted/prepared to support California Environmental Quality Act (CEQA) analysis and documentation. The Project Site is located approximately 0.10 mile northeast of Whiteman Airport in Los Angeles County, just west of the Garber Street cul-de-sac. Access to the Project Site is currently provided via an unpaved trail originating adjacent to the back yard of a single-family residential property, owned by the LADWP, at 12655 Garber Street.

1.1 PROJECT DESCRIPTION

The proposed water tank will enable the existing recycled water system to operate a 1,310-foot service zone and end the closed system operation of an existing pumping station which supplies flow to Hansen Dam Golf Course. System capacity will be increased to a maximum of 5,600 gallons per minute (gpm). With the Garber Street tank, the recycled water system will be more efficient since the new tank will be able to sustain the system demand during low flow (50 to 200 gpm), thereby reducing pumping at the Hansen Dam Golf Course pumping station. Pump operation will occur during the night time. The connection to the existing recycled water distribution system will be near the west meter located inside Hansen Dam Golf Course. Once installed, the tank will serve the following customers within the new service zone:

- Hansen Dam Golf Course, owned and operated by the City of Los Angeles Department of Recreation and Parks
- Two 2-inch fill stations for water trucks at Glenoaks Boulevard, to be used by Los Angeles County Department of Public Works (LACDPW), City of Los Angeles, and independent contractors
- A 3-inch connection across Tujunga Wash at Glenoaks Boulevard to be used by LACDPW

The Garber Street Recycled Water Tank Project includes the following elements:

- **One-million-gallon-capacity recycled water tank** – The new tank will be cylindrical, welded steel (approximately 50 feet above finished ground and 66 feet in diameter), with approximately 20 feet of the tank exposed above existing grade nearest the Garber Street cul-de-sac. The tank will be painted in accordance with the Federal Aviation Administration (FAA) Advisory Circular for Obstruction Marking and Lighting (FAA, 2015). The tank color will be neutral on the side of the tank facing residences with orange and white checkerboard on the side facing the airport to comply with obstruction marking and lighting requirements in support of aviation safety. One red light will be installed on top of the tank; the light will be illuminated from dusk to dawn. Three feet of freeboard will be maintained in the tank. Once installed, the tank will be inspected annually and cleaned approximately every five years.

- **Demolition of one single-family detached residence** – LADWP has purchased the house located adjacent (to the northeast) of the tank site at 12655 Garber Street. The house will be demolished to allow construction of the tank access road.
- **15-foot-wide access road** – A paved access road will be constructed from the Garber Street entry point to and around the tank.
- **700 feet of eight-inch potable water backup line** – To provide potable water backup to the tank, a new pipeline will be installed from the existing intersection of two six-inch potable water mains (intersection of Garber Street and Bernadette Street). An air gap separation of two times the pipe diameter will be maintained between the potable water inlet and the new tank when not affected by side walls. The new line will supply 1,000 gpm to the tank during peak demand periods, and 1,500 gpm during non-peak hours.
- **8,400 feet of 20-inch pipe (recycled water distribution line) from the tank to the Hansen Dam Golf Course** – The distribution line will supply 3,600 gpm to the golf course during winter peak demand and 5,600 gpm during the summer peak hours. Pipeline installation will require a three- to four-foot-wide trench, approximately four to five feet deep.
- **Perimeter security fence** – The Project Site will be secured with a perimeter eight-foot chain link fence with a gate at the Project Site entrance and a separate fence with barbed or razor wire surrounding the mechanical equipment enclosure.

2.0 METHODOLOGIES

Stantec biologist conducted a survey for biological resources and habitat assessment within the Project Site on 13 June 2018. Surveys were conducted by Stantec Principal Biologist Jared Varonin, Associate Biologist Rocky Brown, and Senior Botanist Saudamini Sindhar. This included, but was not limited to, a literature review, reconnaissance-level surveys, focused non-protocol surveys for special-status plant and wildlife species, and non-protocol focused surveys for listed song birds and burrowing owls. Surveys were conducted on foot within the Project Site and a 300-foot buffer (Survey Area) (refer to Appendix A, Figure 2), where accessible based on terrain and vegetative cover.

2.1 LITERATURE REVIEW

A literature search was performed in conjunction with field surveys conducted for the Survey Area. The Survey Area is located within the U.S. Geological Survey's (USGS) San Fernando, California, 7.5-minute topographic quadrangle. A search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) was conducted for this quadrangle to determine special-status plants, wildlife, and vegetation communities that have been documented within the vicinity of the Survey Area (CDFW, 2018a). The following eight adjacent quadrangles were also included in the database search due to their proximity to the Survey Area:

- Newhall
- Mint Canyon
- Agua Dulce
- Sunland
- Burbank
- Van Nuys
- Canoga Park
- Oat Mountain

Additional data regarding the potential occurrence of special-status species and policies relating to these special-status natural resources were gathered from the following sources:

- State and federally listed endangered and threatened animals of California (CDFW, 2018b);
- Special Animals List (CDFW, 2018c);
- Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2018); and
- Consortium of California Herbaria (CCH, 2018).

2.2 BIOLOGICAL SURVEYS AND HABITAT ASSESSMENTS

In order to document the existing biological resources that are present in the Survey Area, on 13 June 2018, Stantec conducted a habitat assessment and reconnaissance-level survey, focused non-protocol surveys for special-status plant and wildlife species, and a non-protocol focused survey for listed song birds and burrowing owls. The primary goals of wildlife surveys were to identify and assess habitat capable of supporting special-status wildlife species and/or to document the presence/absence of special-status wildlife species. To the extent possible surveys were conducted when special-status plant species would be in bloom or identifiable, migratory birds were passing through and returning to the Project Site, resident bird species were nesting and fledging, small mammals were out and active, and above-ground amphibian and reptile movement would be detectable. However, it is acknowledged that some wildlife species and/or individuals may have been difficult to detect due to their elusive nature, cryptic morphology, or nocturnal behavior.

The Survey Area was surveyed on foot by experienced field biologists. Species observed were identified and recorded by sight, sound, or their sign. Where necessary, portions of selected plant species were taken to the laboratory and identified microscopically or in consultation with Rancho Santa Ana Botanical Garden. Species identifications conform to the most up-to-date field guides and technical literature.

2.2.1 Wildlife

A reconnaissance-level survey was performed by methodically walking meandering transects through the entirety of the Survey Area at an average pace of approximately 1.5 km/hr while visually searching for and listening to wildlife songs and calls and observing for animal signs (e.g., scat, footprints, fur, burrows, etc.). The walking survey was halted approximately every 50 meters to listen for wildlife or whenever necessary to identify, record, or enumerate any other detected species. Table 4 (Section 5.4) lists special-status wildlife species that have the potential to occur in the Survey Area.

Terrestrial insects and other invertebrates were searched for on flowers and leaves, under loose bark, and under stones and logs on the ground throughout the Survey Area. Randomly selected areas within appropriate micro habitats (e.g., leaf litter, underneath felled logs, etc.) were hand raked or visually inspected to determine the presence/absence of gastropods.

Surveys were conducted during daylight hours when temperatures were such that reptiles would be active (i.e., between 75 – 95° Fahrenheit). Visual observations were made to locate basking reptiles, and potential refuge areas, such as debris piles (e.g., woody debris, trash, etc.), were searched. All refugia sites search were returned to their original state upon survey completion.

2.2.2 Special-Status Plants

Before the field survey, Stantec reviewed available literature to identify special-status plants or natural communities known from the Survey Area and vicinity. Database queries included a CNDDB search (CDFW 2018a) of the San Fernando and eight surrounding USGS topographic quadrangles and the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2018) for the same nine quadrangles. Table 3 (Section 5.3) lists special-status plant species that have a potential to occur in the Survey Area.

The entire Survey Area was surveyed by walking “meandering transects” (Nelson, 1987) throughout all accessible portions, with particular attention given to areas of suitable habitat for special-status plant species. All plant species observed were identified in the field or collected for later identification. Plants were identified using keys, descriptions, and illustrations in Baldwin et al. (2012), applicable volumes of the Flora of North America (1993+), and other regional references. All species identified during the survey are listed in Section 4.3.2. In conformance with CDFW protocols (2009), surveys were (a) floristic in nature, (b) consistent with conservation ethics, (c) systematically covered all habitat types on the sites, and (d) well documented by this report and by voucher specimens to be deposited at Rancho Santa Ana Botanic Garden.

2.2.3 Vegetation Mapping

Vegetation descriptions and names are based on Sawyer et al. (2009) and have been defined at least to the alliance level. Vegetation maps were prepared by drawing tentative vegetation type boundaries onto high-resolution aerial images while in the field, then digitizing these polygons into GIS. Mapping was done electronically using ArcGIS (version 10.4) with aerial photos with an accuracy of one foot. Most boundaries shown on the maps are accurate within approximately three feet; however, boundaries between some vegetation types are less precise due to difficulties interpreting aerial imagery and accessing stands of vegetation.

Vegetation communities can overlap in many characteristics and over time may shift from one community type to another. Note also that all vegetation maps and descriptions are subject to variability for the following reasons:

- In some cases, vegetation boundaries result from distinct events, such as wildfire or flooding, but vegetation types usually tend to intergrade on the landscape, without precise boundaries between them. Even distinct boundaries caused by fire or flood can be disguised after years of post-disturbance succession. Mapped boundaries represent best professional judgment, but usually should not be interpreted as literal delineations between sharply defined vegetation types.
- Natural vegetation tends to exist in generally recognizable types, but also may vary over time and geographic region. Written descriptions cannot reflect all local or regional variation. Many (perhaps most) stands of natural vegetation do not strictly fit into any named type. Therefore, a mapped unit is given the best name available in the classification system being used, but this name does not imply that the vegetation unambiguously matches written descriptions.
- Vegetation tends to be patchy. Small patches of one named type are often included within larger stands mapped as units of another type. For this Study Area, the minimum mapping unit was approximately three feet, and smaller inclusions are described in the text but are not visible on the maps.

3.0 REGULATORY ENVIRONMENT

3.1 FEDERAL REGULATIONS

3.1.1 Federal Endangered Species Act

Federal Endangered Species Act provisions protect federally listed threatened and endangered species and their habitats from unlawful take and ensure that federal actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Under the ESA, "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The U.S. Fish & Wildlife Service's (USFWS) regulations define harm to mean "an act which actually kills or injures wild-life." Such an act "may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR § 17.3). Critical habitat is defined in Section 3(5)(A) of the ESA as "(i) the specific areas within the geographical area occupied by the species on which are found those physical or biological features (I) essential to the conservation of the species, and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species upon a determination by the Secretary of Commerce or the Secretary of the Interior (Secretary) that such areas are essential for the conservation of the species." The effects analyses for designated critical habitat must consider the role of the critical habitat in both the continued survival and the eventual recovery (i.e., the conservation) of the species in question, consistent with the recent Ninth Circuit judicial opinion, Gifford Pinchot Task Force v. USFWS. Activities that may result in "take" of individuals are regulated by the USFWS. The USFWS produced an updated list of candidate species December 6, 2007 (72 FR 69034). Candidate species are not afforded any legal protection under ESA; however, candidate species typically receive special attention from Federal and State agencies during the environmental review process.

3.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or "take" any migratory bird listed in Title 50 of the Code of Federal Regulations Part 10. "Take" is defined as possession or destruction of migratory birds, their nests or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. The MBTA prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary. This act encompasses whole birds, parts of birds, and bird nests and eggs.

3.1.3 Bald and Golden Eagle Protection Act of 1940 (16 USC 668)

The Bald Eagle Protection Act of 1940 (16 U.S.C. 668, enacted by 54 Stat. 250) protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. Take of bald and golden eagles is defined as follows: "disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior'' (72 FR 31132; 50 CFR 22.3).

The USFWS is the primary federal authority charged with the management of golden eagles in the United States. A permit for take of golden eagles, including take from disturbance such as loss of foraging habitat, may be required for this project. USFWS guidance on the applicability of current Eagle Act statutes and mitigation is currently under review. On November 10, 2009, the USFWS implemented new rules (74 FR 46835) governing the "take" of golden and bald eagles. The new rules were released under the existing Bald and Golden Eagle Act which has been the primary regulation protection unlisted eagle populations since 1940. All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this act. The definition of disturb (72 FR 31132) includes interfering with normal breeding, feeding, or sheltering behavior to the degree that it causes or is likely to cause decreased productivity or nest abandonment. If a permit is required, due to the current uncertainty on the status of golden eagle populations in western United States, it is expected permits would only be issued for safety emergencies or if conservation measures implemented in accordance with a permit would result in a reduction of ongoing take or a net take of zero.

3.1.4 Federally Regulated Habitats

Areas meeting the regulatory definition of "Waters of the U.S." (Jurisdictional Waters) are subject to the jurisdiction of the United States Army Corps of Engineers (USACE) under provisions of Section 404 of the Clean Water Act (CWA) (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as "Waters of the U.S.," tributaries of waters otherwise defined as "Waters of the U.S.," the territorial seas, and wetlands (termed Special Aquatic Sites) adjacent to "Waters of the U.S." (33 CFR, Part 328, Section 328.3). Wetlands on non-agricultural lands are identified using the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987). The Survey Area falls within the South Pacific Division of the USACE and is under the jurisdiction of the Los Angeles District.

Construction activities within jurisdictional waters are regulated by the USACE. The placement of fill into such waters must comply with permit requirements of the USACE. No USACE permit would be effective in the absence of State water quality certification pursuant to Section 401 of the CWA. As a part of the permit process the USACE works directly with the USFWS to assess potential project impacts on biological resources.

3.1.5 National Environmental Policy Act

The National Environmental Policy Act of 1969 (NEPA) requires all Federal agencies to examine the environmental impacts of their actions, incorporate environmental information, and utilize public participation in the planning and implementation of all actions. Federal agencies must integrate NEPA with other planning requirements and prepare appropriate NEPA documents to facilitate better environmental decision making. NEPA requires Federal agencies to review and comment on Federal agency environmental plans/documents when the agency has jurisdiction by law or special expertise with respect to any environmental impacts involved (42 U.S.C. 4321- 4327) (40 CFR 1500-1508).

3.2 STATE REGULATIONS

3.2.1 California Environmental Quality Act

CEQA establishes State policy to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures. CEQA applies to actions directly undertaken, financed, or permitted by State lead agencies. Regulations for implementation are found in the State CEQA Guidelines published by the Resources Agency. These guidelines establish an overall process for the environmental evaluation of projects.

3.2.2 California Endangered Species Act

Provisions of California Endangered Species Act protect State-listed Threatened and Endangered species. The CDFW regulates activities that may result in "take" of individuals ("take" means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the California Fish and Game Code. Additionally, the California Fish and Game Code contains lists of vertebrate species designated as "fully protected" (California Fish & Game Code §§ 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], 5515 [fish]). Such species may not be taken or possessed.

In addition to Federal and State-listed species, the CDFW also has produced a list of Species of Special Concern to serve as a "watch list." Species on this list are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Species of Special Concern may receive special attention during environmental review, but they do not have statutory protection.

Birds of prey are protected in California under the State Fish and Game Code. Section 3503.5 states it is "unlawful to take, possess, or destroy any birds of prey (in the order Falconiformes or Strigiformes) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFW. Under Sections 3503 and 3503.5 of the State Fish and Game Code, activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory nongame bird as designated in the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to Fish and Game Code Section 3800 are prohibited.

3.2.3 Native Plant Protection Act (Fish & Game Code 1900-1913)

California's Native Plant Protection Act (NPPA) requires all State agencies to utilize their authority to carry out programs to conserve endangered and rare native plants. Provisions of NPPA prohibit the taking of listed plants from the wild and require notification of the CDFW at least 10 days in advance of any change in land use. This allows CDFW to salvage listed plant species that would otherwise be destroyed. The Applicant is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

3.2.4 Section 3503 & 3503.5 of the Fish and Game Code

Under these sections of the Fish and Game Code, the Applicant is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory non-game bird as designated in the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to Fish and Game Code Section 3800.

3.2.5 Porter-Cologne Water Quality Control Act

Regional water quality control boards regulate the "discharge of waste" to "waters of the State." All projects proposing to discharge waste that could affect waters of the State must file a waste discharge report with the appropriate regional board. The board responds to the report by issuing waste discharge requirements (WDR) or by waiving WDRs for that project discharge. Both of the terms "discharge of waste" and "waters of the State" are broadly defined such that discharges of waste include fill, any material resulting from human activity, or any other "discharge." Isolated wetlands within California, which are no longer considered "waters of the United States" as defined by Section 404 of the CWA, are addressed under the Porter-Cologne Act.

3.2.6 State-Regulated Habitats

The State Water Resources Control Board is the State agency (together with the Regional Water Quality Control Boards [RWQCB]) charged with implementing water quality certification in California. The Survey Area falls under the jurisdiction of the Los Angeles RWQCB.

The CDFW extends the definition of stream to include "intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams (USGS-defined), and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife" (CDFW, 1994).

Activities that result in the diversion or obstruction of the natural flow of a stream; or which substantially change its bed, channel, or bank; or which utilize any materials (including vegetation) from the streambed, may require that the project applicant enter into a Streambed Alteration Agreement with the CDFW.

3.3 OTHER APPLICABLE REGULATIONS, PLANS, AND STANDARDS

3.3.1 California Native Plant Society Rare Plant Program

The mission of the CNPS Rare Plant Program is to develop current, accurate information on the distribution, ecology, and conservation status of California's rare and endangered plants, and to use this information to promote science-based plant conservation in California. Once a species has been identified as being of potential conservation concern, it is put through an extensive review process. Once a species has gone through the review process, information on all aspects of the species (e.g., listing status, habitat, distribution, threats, etc.) are entered into the online CNPS Inventory and given a California Rare Plant Rank (CRPR). In 2011, the CNPS officially changed the name "CNPS List" to "CRPR." The Program currently recognizes more than 1,600 plant taxa (species, subspecies and varieties) as rare or endangered in California.

Vascular plants listed as rare or endangered by the CNPS, but which might not have a designated status under State endangered species legislation, are defined by the following CRPR:

- CRPR 1A - Plants considered by the CNPS to be extinct in California
- CRPR 1B - Plants rare, threatened, or endangered in California and elsewhere
- CRPR 2 - Plants rare, threatened, or endangered in California, but more numerous elsewhere
- CRPR 3 - Plants about which we need more information – a review list
- CRPR 4 - Plants of limited distribution – a watch list

In addition to the CRPR designations above, the CNPS adds a Threat Rank as an extension added onto the CRPR and designates the level of endangerment by a 1 to 3 ranking, with 1 being the most endangered and 3 being the least endangered and are described as follows:

- 0.1 – Seriously threatened in California (high degree/immediacy of threat)
- 0.2 – Fairly threatened in California (moderate degree/immediacy of threat)
- 0.3 – Not very threatened in California (low degree/immediacy of threats or no current threats known.

4.0 EXISTING CONDITIONS

4.1 SETTING

The Survey Area is located in the City of Los Angeles in northeastern San Fernando Valley (refer to Appendix A, Figure 1). It is situated south of the intersection of State Route-210 (Foothill Freeway) and State Route-118 (Ronald Reagan Freeway). The proposed tank location is set on top of an undeveloped hill, between a residential community and Whiteman Airport. Land use surrounding the undeveloped hill includes a small local airport (Whiteman Airport), a golf course, and a residential neighborhood to the northeast. Hansen Dam reservoir and the associated golf course (Hansen Dam Municipal Golf Course) is located immediately northeast of the Survey Area. The underground pipe installation portion of the project runs through a residential neighborhood, a golf course access road, and a small portion of the golf course itself.

4.2 GENERAL VEGETATION AND LAND COVERS

Within the non-developed portions of the Survey Area, biological resources consist primarily of common plant species and vegetation communities characteristic of the coastal ranges and valleys of southern California. Habitat conditions in the Survey Area vary from poor to moderate, with well-established monocultures of native shrub species dominating some areas. The Survey Area currently supports three plant communities defined by Sawyer et al. (2009) and one additional land cover type. These are described further in Section 4.2.1 below.

4.2.1 Vegetation Communities

Using names and descriptions of vegetation in Sawyer et al. (2009), Stantec identified three vegetation communities and one land cover type within the Survey Area. Full descriptions of each of these vegetation and cover types are described below. Figure 2 (Appendix A) illustrates the vegetation communities occurring in the Survey Area.

4.2.1.1 Vegetation Communities

Wild Oats Grasslands

Wild oats grasslands, populated by a near monoculture of wild oats (*Avena fatua*), occurs throughout much of the Project Site and was the dominant community mapped within the Survey Area. Shrubs and perennials such as laurel sumac (*Malosma laurina*), coyote brush (*Baccharis pilularis*), and California buckwheat (*Eriogonum fasciculatum*) were present but much less common. Annual herbaceous species such as summer mustard (*Hirschfeldia incana*), arroyo lupine (*Lupinus succulentus*), and western tansy mustard (*Descurainia pinnata*) were also present.

Laurel Sumac Scrub

Portions of the Survey Area dominated by laurel sumac were mapped as laurel sumac scrub. This community occurs throughout the Survey Area. Shrubs such as coyote brush and lemonade berry (*Rhus integrifolia*) were also present but much less common. The understory was comprised of annual herbaceous species and non-native grasses such as summer mustard, wild oats, and cliff aster (*Malacothrix saxatilis*).

California Sagebrush-California Buckwheat Scrub

Two distinct locations within the western half of the Survey Area were mapped as California sagebrush-California buckwheat scrub. California sagebrush (*Artemisia californica*) and California buckwheat were co-dominant species within this community. Shrubs such as laurel sumac were also present but at much lower levels. Annual herbaceous species and non-native grasses such as summer mustard, wild oats, and horehound (*Marrubium vulgare*) occurred in the understory and in open areas between shrubs.

4.2.1.2 Land Cover Types

Disturbed/Developed

This classification was used to map areas within the Survey Area that are developed, including residential areas and existing roads. This cover type occurs in two distinct locations within the eastern portion of the Survey Area. Where vegetated, these areas are generally composed of sparse ruderal pioneer plant species that readily colonize open disturbed soil and thrive as a result of anthropogenic impacts. Some of the plants present within this cover type included red-stem filaree (*Erodium cicutarium*), tocalote (*Centaurea melitensis*), wild oats, and other various non-native grasses.

4.2.2 Common Plant Species Observed

The Survey Area was assessed for common and rare vascular plants during the June 2018 survey. The survey resulted in the documentation of 31 species of native and non-native plants within the Survey Area. Table 1, below, presents a list of all plants observed within the Survey Area.

Table 1 – Plant Species Observed in the Survey Area*

Scientific Name	Common Name
Acourtia microcephala	sacapellote
Artemisia californica	California sagebrush
*Avena fatua***	wild oats
Baccharis pilularis	coyote brush
*Brassica nigra***	black mustard
*Bromus madritensis ssp. Rubens***	foxtail brome
*Carduus pycnocephalus***	Italian thistle
*Centaurea melitensis***	tocalote
Cuscuta californica	California dodder
Deinandra fasciculata	clustered tarweed
Descurainia pinnata	western tansy mustard
Eriogonum fasciculatum	California buckwheat
*Erodium cicutarium***	red-stem filaree
Euphorbia serpens	matted sandmat
Hesperoyucca whipplei	chaparral yucca
*Hirschfeldia incana***	summer mustard
Logfia filaginoides	California cottonrose
Lupinus succulentus	arroyo lupine
Madia gracilis	gumweed
Malacothrix saxatilis	cliff aster
Malosma laurina	laurel sumac
Marah macrocarpus	wild cucumber
*Marrubium vulgare***	horehound
Phacelia cicutaria var. hispida	caterpillar phacelia
Rhamnus crocea	redberry buckthorn
Rhus integrifolia	lemonade berry
*Salsola kali***	Russian thistle
Salvia mellifera	black sage
*Washingtonia robusta***	fan palm

* No special-status species were observed in the Study Area
** Non-native Species

4.2.3 Jurisdictional Waters/Wetlands

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California: the USACE Regulatory Program regulates activities pursuant to Section 404 of the federal CWA; the CDFW regulates activities under the Fish and Game Code Section 1600-1607; and the RWQCB regulates activities under Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. A comprehensive jurisdictional waters/wetlands delineation was not conducted as part of the survey presented in this report. However, during the survey, no potentially jurisdictional features were observed within the Survey Area.

4.3 COMMON WILDLIFE

Invertebrates and Gastropods

Focused insect surveys within the boundaries of the Survey Area were not performed during the June 2018 survey event; however, a variety of common insects are known to occur in the area. Habitat conditions in the Survey Area provide a suite of microhabitat conditions for a wide variety of terrestrial insects and other invertebrates. As in all ecological systems, invertebrates in the Survey Area play a crucial role in a number of biological processes. They serve as the primary or secondary food source for a variety of bird, reptile, and mammal predators; they provide important pollination vectors for numerous plant species; they act as efficient components in controlling pest populations; and they support the naturally occurring maintenance of an area by consuming detritus and contributing to necessary soil nutrients. General surveys of the Survey Area detected a wide variety of common and non-native invertebrates. Some of the orders identified in the Survey Area included *Odonata* (dragonflies, damselflies), *Hemiptera* (true bugs), *Coleoptera* (beetles), *Diptera* (flies), *Pleocoptera* (stone flies), *Lepidoptera* (moths and butterflies), *Hymenoptera* (wasps, bees and ants), and *Trichoptera* (caddis flies). No gastropod species were observed in the Survey Area.

Amphibians

Amphibians often require a source of standing or flowing water to complete their life cycle. However, some terrestrial species can survive in drier areas by remaining in moist environments found beneath leaf litter and fallen logs, or by burrowing into the soil. Amphibian species were not observed during surveys within the Survey Area. Species not observed in the Survey Area, but known to occur in the region, include the Pacific treefrog [chorus frog] (*Pseudacris regilla*), western toad (*Anaxyrus boreas*), and the nonnative bullfrog (*Lithobates catesbeiana*). These species all require aquatic habitat for all or part of their life cycle, which is not present in the Survey Area, and therefore are not likely to occur. These species are highly cryptic and often difficult to detect. Downed logs, bark, and other woody material, present in very limited portions of the Survey Area, in various stages of decay (often referred to as coarse woody debris) provide shelter and feeding sites for a variety of wildlife, including amphibians and reptiles (Maser and Trappe, 1984; Aubry et al., 1988).

Reptiles

The number and type of reptile species that may occur at a given site is related to a number of biotic and abiotic features. These include the diversity of plant communities, substrate, soil type, and presence of refugia such as rock piles, boulders, and native debris.

Western fence lizard (*Sceloporus occidentalis*) and southern alligator lizard (*Elgaria multicarinata*) were the only reptiles observed in the Survey Area. Weather conditions were favorable during the survey for reptile activity should they have been present in the Survey Area.

Although not observed, several other common reptiles likely occur in the Survey Area. Most reptile species, even if present in an area, are difficult to detect because they are cryptic and their life history characteristics (i.e., foraging and thermoregulatory behavior) limit their ability to be observed during most surveys. Further, many species are only active within relatively narrow thermal limits, avoiding both cold and hot conditions, and most take refuge in microhabitats that are not directly visible to the casual observer, such as rodent burrows, in crevices, under rocks and boards, and in dense vegetation where they are protected from unsuitable environmental conditions and predators (USACE and

CDFG, 2010). In some cases, they are only observed when flushed from their refugia. Although not detected in the Survey Area, habitat conditions are suitable for a number of common reptiles including western skink (*Plestiodon skiltonianus*), California whipsnake (*Masticophis lateralis*), coachwhip (*Masticophis flagellum*), California black-headed snake (*Tantilla planiceps*), and California western blindsnake (*Leptotyphlops humilis*).

Birds

Twenty species of common birds were identified in the Survey Area during the survey in June 2018 (refer to Table 2). It is possible that many other birds use the Survey Area either as wintering habitat, seasonal breeding, or as occasional migrants. Special-status species are further discussed in Section 5.4.

Birds were identified by sight and sound and were observed in every section of the Survey Area. Some of these included black phoebe (*Sayornis nigricans*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), and Anna's hummingbird (*Calypte anna*). Several exotic species including the feral pigeon or rock pigeon (*Columba livia*), and European starling (*Sturnus vulgaris*) were also observed.

Mammals

The Survey Area is largely confined to an isolated habitat "island" surrounded by industrial and developed areas. Generally, the distribution of mammals on site is associated with the presence of such factors as access to perennial water, topographical and structural components (e.g., rock piles, vegetation) that provide for cover and support prey base, and the presence of suitable soils for fossorial mammals (e.g., sandy areas). Only one common mammal, or their sign, was detected in the Survey Area: Audubon's cottontail (*Sylvilagus audubonii*) were observed in the Survey Area. Although not detected, mammal species such as California ground squirrel (*Spermophilus beecheyi*), virginia opossum (*Didelphis virginiana*), coyote (*Canis latrans*), and raccoon (*Procyon lotor*) are known to occur in the region. No special-status mammal species were observed in the Survey Area. Special-status species with the potential to occur are further discussed in Section 5.4.

Although bats were not detected in the Survey Area, they likely forage, and possibly roost, in adjacent areas. However, many bats tend to concentrate foraging activities in riparian and wetland habitats where insect abundance is high (CDFW, 2000); these habitats do not occur in the Survey Area but may occur in adjacent areas.

Table 2 – Wildlife Species Observed on the Survey Area*

Scientific Name	Common Name
Buteo jamaicensis	red-tailed hawk
Calypte anna	Anna's hummingbird
Carpodacus mexicanus	house finch
Cathartes aura	turkey vulture
Columba livia	rock pigeon
Corvus corax	common raven
Elgaria multicarinata	southern alligator lizard
Haemorhous mexicanus	house finch
Icterus cucullatus	hooded oriole
Melozone crissalis	California towhee

Scientific Name	Common Name
Mimus polyglottos	northern mockingbird
Molothrus ater	brown-headed cowbird
Myiarchus cinerascens	ash-throated flycatcher
Passer domesticus	house sparrow
Petrochelidon pyrrhonota	cliff swallow
Phainopepla nitens	phainopepla
Psaltriparus minimus	bushtit
Sayornis nigricans	black phoebe
Sceloporus occidentalis	western fence lizard
Sturnus vulgaris	European starling
Sylvilagus audubonii	Audubon's cottontail
Thryomanes bewickii	Bewick's wren
Zenaida macroura	mourning dove

*No special-status species were observed in the Survey Area

5.0 SPECIAL-STATUS SPECIES

The background information presented above, combined with field observations taken during the survey, was used to generate a list of special-status natural communities and special-status plant and animal taxa that either occur or may have the potential to occur within the Survey Area and/or adjacent habitats. For the purposes of this report, special-status taxa are defined as plants or animals that:

- Have been designated as either rare, threatened, or endangered by CDFW or the USFWS, and are protected under either the California or Federal ESAs;
- Are candidate species being considered or proposed for listing under these same acts;
- Are recognized as Species of Special Concern by the CDFW;
- Are ranked as CRPR 1, 2, 3 or 4 plant species;
- Are fully protected by the California Fish and Game Code, Sections 3511, 4700, 5050, or 5515; or
- Are of expressed concern to resource/regulatory agencies, or local jurisdictions.

5.1 SPECIAL-STATUS NATURAL COMMUNITIES

Special-status natural communities are defined by CDFW (2009) as, "...communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects." All vegetation within the state is ranked with an "S" rank, however only those that are of special concern (S1-S3 rank) are generally evaluated under the California Environmental Quality Act (CEQA). Based on the vegetation mapping, one CDFW

sensitive vegetation community, California sagebrush-California buckwheat scrub, occurs within the Survey Area; this community has a state rank of S4 (Apparently Secure).

5.2 DESIGNATED CRITICAL HABITAT

Literature review conducted prior to conducting field surveys determined that critical habitat for two species, southwestern willow flycatcher (*Empidonax traillii extimus*) and santa ana sucker (*Catostomus santaanae*), occurs immediately east, but outside, of the Survey Area. These areas of critical habitat are generally associated with the Hanson Dam Recreation Area and Tujunga Wash. Designated critical habitat for coastal California gnatcatcher (*Polioptila californica californica*) does not occur in the Survey Area; the nearest mapped critical habitat for this species occurs approximately 6.5 miles to the northwest.

5.3 SPECIAL-STATUS PLANTS

Table 3 lists special-status plants, including federally- and State-listed and CRPR 1-4 species that may occur in or near the Survey Area. No special-status plants were observed within the Survey Area during surveys conducted in June 2018.

A records search using the CNDDB, the CNPS Online Inventory, and the Consortium of California Herbaria (CCH) was performed for special-status plant taxa and botanical surveys were conducted within the Survey Area (refer to Appendix A, Figures 3A and 3B). Each of the taxa identified in the record searches was assessed for their potential to occur within the Survey Area based on the following criteria:

- Present: Taxa were observed within the Survey Area during recent botanical surveys or population has been acknowledged by CDFW, USFWS, or local experts.
- High: Both a documented recent record (within 10 years) exists of the taxa within the Survey Area or immediate vicinity (approximately 5 miles) and the environmental conditions (including soil type) associated with taxa presence occur within the Survey Area.
- Moderate: Both a documented recent record (within 10 years) exists of the taxa within the Survey Area or the immediate vicinity (approximately 5 miles) and the environmental conditions associated with taxa presence are marginal and/or limited within the Survey Area or the Survey Area is located within the known current distribution of the taxa and the environmental conditions (including soil type) associated with taxa presence occur within the Survey Area.
- Low: A historical record (over 10 years) exists of the taxa within the Survey Area or general vicinity (approximately 10 miles) and the environmental conditions (including soil type) associated with taxa presence are marginal and/or limited within the Survey Area.

Table 3. Known and Potential Occurrence of Special-Status Plant Taxa within the Survey Area

Species	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Astragalus brauntonii Braunton's milkvetch	Fed: END Calif: 1B.1	Perennial herb; Disturbed areas in chaparral; southern California coast, San Gabriel Mountains, and Peninsular Ranges; below 2,130 ft. elev.	Jan-Aug	**Low:** The Survey Area contains pockets of suitable soils/habitat for the species. This species was not observed on-site and the closest known record is more than 10 miles from the Survey Area.
Atriplex parishii Parish's brittlescale	Fed: none Calif: 1B.1	Annual herb; alkaline or clay soils; southern California coast and San Jacinto Mountains; below 1,500 ft. elev.	Jun-Oct	**Low:** The Survey Area contains pockets of suitable soils/habitat for the species. This species was not observed on-site and the closest known record is approximately 8 miles from the Survey Area.
Berberis nevinii Nevin's barberry	Fed: END Calif: END, 1B.1	Shrub; sandy to gravelly soils, washes, chaparral; southern California coast, Channel Islands, Western Transverse Ranges, and San Gabriel, Bernardino, and Jacinto Mountains; below 2,130 ft. elev.	May-Jun	**Low:** The Survey Area does not contain the preferred soils/habitat of this species. This species was not observed on-site and the closest known record is more than 10 miles from the Survey Area.
Calochortus clavatus var. Gracilis slender mariposa-lily	Fed: none Calif: 1B.2	Bulb; grasslands, shrublands and woodlands on rocky soils; Los Angeles and Ventura Cos; about 500-3300 ft. elev.	May-Jun	**Low:** The Survey Area contains pockets of suitable soils/habitat for the species. This species was not observed on-site and the closest known record is approximately 6 miles from the Survey Area.
Calochortus plummerae Plummer's mariposa-lily	Fed: none Calif: 4.2	Bulb; shrublands, woodlands, lower pine forests; mountains, foothills, and valleys; Ventura to Orange Cos., inland to Riverside and San Bernardino Cos.; about 300-5,600 ft. elev.	May-Jul	**Low:** The Survey Area contains pockets of suitable soils/habitat for the species. This species was not observed on-site and the closest known record is approximately 6 miles from the Survey Area.

Species	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Centromadia parryi ssp. Australis southern tarplant	Fed: none Calif: 1B.1	Annual herb; salt marshes, grassland, vernal pools, coastal scrub; southern coast of California; below 650 ft. elev.	May-Nov	**Not Likely to Occur:** Suitable habitat for this species does not occur within the Survey Area. This species was not observed on-site and the closest known record is approximately 8 miles from the Survey Area.
Chorizanthe parryi var. Fernandina San Fernando Valley spineflower	Fed: Proposed THR Calif: END, 1B.1	Annual herb; sandy areas in coastal scrub and native grasslands; Los Angeles and Ventura Cos.; 450-3500 ft. elev.	Apr-Jul	**Low:** The Survey Area contains pockets of moderately suitable soils/habitat for the species. This species was not observed on-site and the closest known record, historic in nature, is approximately 2 miles from the Survey Area.
Dodecahema leptoceras Slender-horned spineflower	Fed: END Calif: END, 1B.1	Annual herb; Sand or gravel related to wash/drainage systems; southern California coast, San Gabriel and Bernardino Mountains, and San Jacinto Mountains; 650-2,300 ft. elev.	Apr-Jun	**Low:** The Survey Area does not contain suitable soils/habitat for the species. This species was not observed on-site and the closest known record is approximately 0.3 miles from the Survey Area.
Harpagonella palmeri Palmer's grapplinghook	Fed: none Calif: 4.2	Annual herb; Dry, semi-barren sites in chaparral, coastal scrub, grassland; southern California coast, San Jacinto Mountains, and Sonoran Desert; below 3,280 ft. elev.	Mar-May	**Low:** The Survey Area contains pockets of moderately suitable soils/habitat for the species. This species was not observed on-site and the closest known record, historic in nature, is approximately 6.5 miles from the Survey Area.
Horkelia cuneata var. *puberula* Mesa horkelia	Fed: none Calif: 1B.1	Perennial herb; sandy or gravely soils in chaparral, woodlands, and coastal scrub. San Luis Obispo County south to San Diego County, from about 230 to 2,700 ft. elev.	Feb–Sept	**Low.** Limited suitable habitat present. Nearest known occurrence, historic in nature, approximately 0.10 miles to the west.

Species	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Lepidium virginicum var. Robinsonii Robinson's pepper-grass	Fed: none Calif: 4.3	Annual herb; bottomlands, gravelly and sandy shores, waste grounds, stream banks, grassy meadows, dry flats and stream beds, abandoned fields, woods, cliffs, plains, pastures, sagebrush and other desert shrub communities, dry mountain slopes; throughout California; from 2,300-8,500 ft. elev.	Jan-Jul	**Not Likely to Occur:** The Survey Area does not contain suitable soils/habitat for the species. This species was not observed on-site and the closest known record is approximately 4.5 miles from the Survey Area.
Malacothamnus davidsonii Davidson's bush-mallow	Fed: none Calif: 1B.2	Shrub; Slopes, washes; San Francisco Bay, outer south coast ranges, southern California coast, and San Gabriel Mountains; from 1,640-2,300 ft. elev.	Jun-Jan	**Not Likely to Occur:** The Survey Area does not contain suitable soils/habitat for the species. This species was not observed on-site and the closest known records, historic in nature, are approximately 1.5 miles from the Survey Area.
Orcuttia californica California Orcutt grass	Fed: END Calif: END, 1B.1	Annual grass; vernal pools; southern California coast and San Gabriel and Jacinto Mountains; below 2,300 ft. elev.	Apr-Aug	**Not Likely to Occur:** The Survey Area does not contain suitable soils/habitat for the species. This species was not observed on-site and the closest known records are approximately 6.5 miles from the Survey Area.
Pseudognaphalium leucocephalum white rabbit-tobacco	Fed: none Calif: 2B.2	Perennial herb; shrublands, sea level to about 7000 ft. elev.; open sand, usually on alluvium; San Luis Obispo through San Diego Cos, inland to Riverside and San Bernardino cos.	Aug-Nov	**Not Likely to Occur:** The Survey Area does not contain suitable soils/habitat for the species. This species was not observed on-site and the closest known records are approximately 3.5 miles from the Survey Area.
Symphyotrichum greatae Greata's aster	Fed: none Calif: 1B.3	Perennial herb; Damp places in canyons; San Gabriel Mountains; from 980-6,560 ft. elev.	Jun-Oct	**Not Likely to Occur:** The Survey Area does not contain suitable soils/habitat for the species. This species was not observed on-site and the closest known records, historic in nature, are approximately 5 miles from the Survey Area.

Source: Baldwin et al. 2012; CDFW, 2018a; CNPS, 2018.

Status Codes
US Fish and Wildlife Service (Fed.) Designations:
END: Federally listed, endangered.
THR: Federally listed, threatened.
California Department of Fish and Wildlife (Calif.) Designations:
END: State listed, endangered.
THR: State listed, threatened.
California Rare Plant Rank (CRPR) designation
1A Plants presumed extinct in California.
1B Plants rare, threatened, or endangered in California and elsewhere.
2A Plants rare, threatened, or endangered in California, but more common elsewhere.
2B Plants presumed extinct in California but more common elsewhere.
3 Plants about which we need more information – a review list.
4 Plants of limited distribution – a watch list.
.1 Seriously threatened in California (high degree/immediacy of threat).
.2 Fairly threatened in California (moderate degree/immediacy of threat).
.3 Not very threatened in California (low degree/immediacy of threats or no current threats known).

5.4 SPECIAL-STATUS WILDLIFE

Special-status taxa include those listed as threatened or endangered under the federal or California Endangered Species Acts, taxa proposed for such listing, Species of Special Concern, and other taxa that have been identified by the USFWS, CDFW, or local jurisdictions as unique or rare and which have the potential to occur within the Survey Area. No special-status wildlife species were either observed or assumed to be present within or immediately adjacent to the Survey Area based on the survey conducted in June 2018.

The CNDDB was queried for occurrences of special-status wildlife taxa within the USGS topographical quadrangles in which the Survey Area occurs and the eight surrounding quadrangles, as discussed above in Section 2.0. The specific habitat requirements and the locations of known occurrences of each special-status wildlife taxa were the principal criteria used for inclusion in the list of taxa potentially occurring within the Survey Area. Table 4 summarizes the special-status wildlife taxa known to regionally occur and their potential for occurrence in the Survey Area; refer to Appendix A, Figures 3A and 3B for a graphical depiction of species locations. Each of the taxa identified in the database reviews/searches were assessed for its potential to occur within the Survey Area based on the following criteria:

- Present: Taxa (or sign) were observed in the Survey Area or in the same watershed (aquatic taxa only) during the most recent surveys, or a population has been acknowledged by CDFW, USFWS, or local experts.
- High: Habitat (including soils) for the taxa occurs on site and a known occurrence occurs within the Survey Area or adjacent areas (within 5 miles of the Survey Area) within the past 20 years; however, these taxa were not detected during the most recent surveys.
- Moderate: Habitat (including soils) for the taxa occurs on site and a known regional record occurs within the database search, but not within 5 miles of the Survey Area or within the past 20 years; or a known occurrence occurs within 5 miles of the Survey Area and within the past 20 years and marginal or limited amounts of habitat occurs on site; or the taxa's range includes the geographic area and suitable habitat exists.

- Low: Limited habitat for the taxa occurs on site and no known occurrences were found within the database search and the taxa's range includes the geographic area

Table 4. Known and Potential Occurrence of Special-Status Wildlife within the Survey Area

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
INVERTEBRATES					
Bombus crotchii	Crotch bumble bee	**SA**	This bee lives in grassland and scrub habitat types. It nests underground. Its food plants include milkweeds, dusty maidens, lupines, medics, phacelias, and sages.	The Survey Area supports very limited suitable habitat with the required food plants for this species. The nearest CNDDB record (from 1936) is approximately 5 miles to the south of the Survey Area.	**Not Likely to Occur**
Danaus plexippus pop. 1	Monarch butterfly (California overwintering population)	**SA**	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby	Although not detected this species may occur intermittently as a transient within the Survey Area; suitable winter roosting habitat is not available in the Survey Area but may be present in adjacent areas. The CNDDB reports an occurrence of this species approximately 6.5 miles to the northwest of the Survey Area.	**Low**
FISH					
Catostomus santaanae	Santa Ana sucker	**FT**	Typically inhabits small, shallow streams and rivers less than 23 feet (7 meters) wide where water temperature is generally below 72 ° F (22 ° C), and where currents range from swift to sluggish (USFWS, 2000).	Suitable aquatic habitat for this species is not present within or adjacent to the Survey Area.	**Not Likely to Occur**
Gila orcuttii	arroyo chub	**CSC**	Los Angeles Basin southern coastal streams; slow water stream sections with mud or sand bottoms; feeds heavily on aquatic vegetation and associated invertebrates.	Suitable aquatic habitat for this species is not present within or adjacent to the Survey Area.	**Not Likely to Occur**
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	**CSC**	Santa Ana speckled dace are found mainly in perennial streams fed by cool springs that maintain summer water temperatures below 20^0C (Moyle et al. 1995)	Suitable aquatic habitat for this species is not present within or adjacent to the Survey Area.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
AMPHIBIANS					
Rana muscosa	southern mountain yellow-legged frog	**FE, SE, WL**	Prefers partly shaded, shallow streams with a rocky substrate; requires a minimum of 15 weeks of permanent water for metamorphosis.	Suitable aquatic habitat for this species is not present within or adjacent to the Survey Area.	**Not Likely to Occur**
Spea hammondii	Western spadefoot	**CSC**	Occurs in numerous habitat types, primarily in grasslands but can be found in valley-foothill hardwood woodlands, sage scrubs, chaparral where pooled/ponded water, supporting typically clay-rich soils, remains through early spring (April/May); in some areas, vernal pools, stock ponds, and road pools are essential for breeding, egg-laying, and larval development.	Suitable breeding habitat is not present on the Survey Area but may occur within the Hansen Dam Recreational Area approximately 1 mile to the east; suitable upland habitat is present for the terrestrial portion of their life cycle. Nearest recorded occurrence (CNDDB) is approximately 7 miles northwest of the Survey Area.	**Not Likely to Occur**
REPTILES					
Anniella pulchra	Silvery (=California) legless lizard	**CSC**	Sandy or loose loamy soils under sparse vegetation; soil moisture is essential; prefer soils with high moisture content.	There are no known recent records for this species in the Survey Area; the Survey Area is located within the known geographic distribution for this widespread species; limited suitable habitat occurs in the eastern portion of the Survey Area in the vicinity of Zaca Creek. The CNDDB reports multiple occurrences of this species approximately 7.5 miles to the north and northwest of the Survey Area.	**Low**
Arizona elegans occidentalis	California glossy snake	**CSC**	Medium sized snake with smooth, glossy scales. Generally found in arid scrub, rocky washes, grasslands, and chaparral.	Limited suitable habitat for this species is present within the Survey Area. The CNDDB reports an occurrence of this species approximately 4.5 miles to the northeast within the San Gabriel Mountains and are associated with creeks/streams.	**Low**
Aspidoscelis tigris stejnegeri	coastal whiptail	**CSC**	Found in deserts and semi-arid areas with sparse vegetation and open areas; also found in woodland and riparian habitats; substrates may be firm soil, sandy, or rocky.	Suitable habitat for this species is present within the Survey Area. The closest CNDDB occurrence was reported approximately 2.5 miles to the east within the San Gabriel Mountains.	**Moderate**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Emys marmorata	Western pond turtle	**CSC**	Inhabits permanent or nearly permanent bodies of water in various habitat types; requires basking sites such as partially submerged logs, vegetation mats, or open mud banks.	Suitable habitat is not present on the Survey Area Suitable aquatic habitat is likely present within the Hansen Dam Recreational Area approximately 1 mile to the east. The closest CNDDB occurrence was reported approximately 2.5 miles to the east within the San Gabriel Mountains.	**Not likely to Occur**
Phrynosoma blainvillii	Coast horned lizard	**CSC**	A variety of habitats, including coastal sage scrub, chaparral, oak woodland, riparian woodland, and coniferous forest. Friable, sandy soils in areas with an abundant prey base of native ants are key habitat components.	The Survey Area is located within the known geographic distribution for this species; limited suitable habitat occurs within portions of the Survey Area. The CNDDB reports multiple occurrences of this species approximately 2.5 miles east and west of the Survey Area.	**Low**
Thamnophis hammondii	Two-striped garter snake	**CSC**	Highly aquatic; found in or near permanent fresh water; often along streams with rocky beds and riparian growth.	The Survey Area is located within the known geographic distribution for this species; suitable habitat does not occur on the Survey Area. The nearest CNDDB record for this species occurs approximately 8 miles east of the Survey Area.	**Not Likely to Occur**
BIRDS					
Accipiter cooperii (nesting)	Cooper's hawk	**WL**	Woodland, chiefly of open, interrupted, or marginal type; nest sites mainly in riparian growths of deciduous trees.	Suitable nesting habitat is not present within the Survey Area; suitable foraging habitat is present approximately 1 mile east of the Survey Area. There are no CNDDB records within 10 miles of the Survey Area however this species is known to occur in the region.	**Moderate (foraging)/Not Likely to Occur (nesting)**
Agelaius tricolor (nesting colony)	Tricolored blackbird	**BCC, CSC**	Highly colonial species; requires open water, protected nesting substrate, and foraging areas with insect prey within a few kilometers of colony.	There are no known recent records for this species in the Survey Area; the Survey Area is located within the known geographic range for this species. Suitable breeding and foraging habitat does not occur within the Survey Area. There are no CNDDB records within 10 miles of the Survey Area.	**Low (as transient)**
Buteo swainsoni	Swainson's hawk	**ST, BCC**	Breeds in stands with few trees in juniper-sage flats, riparian areas, and oak savannahs.	Suitable nesting habitat is not present within the Survey Area; limited suitable foraging habitat is present within the Survey Area. There is a historic CNDDB record for this species approximately 1.3 miles north of the Survey Area.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Coccyzus americanus occidentalis	western yellow-billed cuckoo	**FT, SE**	Nests along the broad, lower flood-bottoms of larger river systems; also nests in riparian forests and riparian jungles of willow often mixed with cottonwoods, with an understory of blackberry, nettles, or wild grape (USACE and CDFG, 2010).	Suitable nesting habitat is not present within the Survey Area; suitable foraging habitat is present approximately 1 mile east of the Survey Area. here is a historic CNDDB record for this species approximately 1.3 miles north of the Survey Area.	**Not Likely to Occur**
Empidonax traillii extimus	Southwestern willow flycatcher	**FE, SE**	Summer resident in the southern third of California and the Southwest. Typically breeds in dense riparian vegetation associated with standing water. Vegetative microhabitats used for nesting variable; willows, mulefat, blackberry and cottonwood are commonly used. Nests typically within ten feet of the ground.	The required dense riparian habitat is not present in the Survey Area. Potentially suitable habitat exists approximately 1 mile to the east within the Hansen Dam Recreational Area where critical habitat for this species is mapped. The CNDDB does not report any occurrences of this species within 10 miles of the Survey Area.	**Not Likely to Occur**
Falco mexicanus	prairie falcon	**WL**	Rare in southern California; nests along cliff faces or rocky outcrops; forages over open spaces, agricultural fields.	Suitable nesting habitat is not present within the Survey Area; limited suitable foraging habitat is present within the Survey Area. There is a historic CNDDB record for this species approximately 8 miles north of the Survey Area.	**Not Likely to Occur**
Polioptila californica californica	coastal California gnatcatcher	**FT, CSC**	Various sage scrub communities, often dominated by California sage and buckwheat; generally avoids nesting in areas with a slope of greater than 40%, and typically less than 820 feet in elevation (USACE and CDFG, 2010).	Limited suitable nesting habitat is present within the Survey Area and in adjacent areas; slopes within the Survey Area are of a steep incline not suitable for nesting by this species. There are CNDDB records for this species approximately 1-2 miles east of the Survey Area near the Hansen Dam Recreational Area.	**Moderate (foraging)/Low (nesting)**
Vireo bellii pusillus (nesting)	Least Bell's vireo	**FE, BCC, SE**	Summer resident of southern California in low riparian habitats in vicinity of water or dry river bottoms; found below 2000 ft.; nests placed along margins of bushes or on twigs projecting into pathways, usually willow, mesquite, baccharis.	There are no known records for this species in the Survey Area or in surrounding areas. Suitable habitat is present within the Hansen Dam Recreational Area approximately 1 mile east of the Survey Area. The CNDDB reports multiple occurrences of this species approximately within the Hansen Dam Recreational Area.	**Low (as transient)**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
MAMMALS					
Antrozous pallidus	Pallid bat	**CSC**	Desert, grassland, shrubland, woodland, forest; most common in open, dry habitats with rocky areas for roosting; very sensitive to disturbance of roosting sites.	There are no known recent records for this species in the Survey Area; the Survey Area is located within the known geographic range for this species. Nearest CNDDB for this record is approximately 6.5 miles south of the Survey Area. Suitable rock crevices and hollow trees are not present within the Survey Area.	**Low**
Corynorhinus townsendii	Townsend's big-eared bat	**SC, CSC**	Coastal conifer and broadleaved forests, oak and conifer woodlands, arid grasslands and deserts, and high-elevation forests and meadows. Primarily roosts in caves and abandoned mines, but may roost in buildings, bridges, rock crevices, and hollow trees in many habitat types.	There are no known recent records for this species in the Survey Area; the Survey Area is located within the known geographic range for this species. Nearest CNDDB record (historic) for this species is approximately 2 miles east of the Survey Area. Very limited roosting and foraging habitat occur within portions of the Survey Area.	**Low**
Lasionycteris noctivagans	silver-haired bat	**SA**	Maternity roosts appear to be almost exclusively in trees, inside natural hollows and bird excavated cavities or under loose bark of large diameter snags.	There are no known recent records for this species in the Survey Area; the Survey Area is located within the known geographic range for this species. Nearest CNDDB record for this species is approximately 5.miles south of the Survey Area. Suitable cavities and hollow trees are not present within the Survey Area.	**Not Likely to Occur**
Lasiurus cinereus	hoary bat	**SA**	Prefers deciduous and coniferous woodlands; primarily roosts in tree foliage.	There are no known recent records for this species in the Survey Area; the Survey Area is located within the known geographic range for this species. Nearest CNDDB record for this species is a historic one from approximately 1.2 miles north of the Survey Area. Suitable roosting habitat is not present within the Survey Area.	**Not Likely to Occur**
Lepus californicus bennettii	San Diego black-tailed jackrabbit	**CSC**	Intermediate canopy stages of shrub habitats and shrub, tree, herbaceous edges; primarily coastal sage scrub habitats.	Suitable habitat for this species is present within portions of the Survey Area; the Survey Area is located within the known geographic range for this species. Nearest CNDDB record for this species is approximately 3 miles east of the Survey Area.	**Moderate**
Neotoma lepida intermiedia	San Diego desert woodrat	**CSC**	Coastal scrub; prefers moderate to dense canopies; particularly abundant in rock outcrops, rocky cliffs, and slopes.	The closest CNDDB record for the San Diego desert woodrat is approximately 8 miles northwest of the Survey Area; marginally suitable habitat for this species is present within portions of the Survey Area.	**Low**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Nyctinomops macrotis	big free-tailed bat	**CSC**	Prefers desert shrub, woodlands, and evergreen forests	There are no known recent records for this species in the Survey Area; the Survey Area is located within the known geographic range for this species. Nearest CNDDB record for this species is a historic one from approximately 1.2 miles southeast of the Survey Area. Suitable habitat is not present in the Survey Area.	**Not Likely to Occur**
Onychomys torridus ramona	southern grasshopper mouse	**CSC**	Occurs primarily in grassland and sparse coastal sage scrub habitats.	Suitable habitat is present within portions of the Survey Area. There is a CNDDB record for this species approximately 3.5 miles east of the Survey Area.	**Low**
Perognathus longimembris brevinasus	Los Angeles pocket mouse	**CSC**	Lower elevation grasslands and coastal sage communities in the Los Angeles basin. Prefers open ground with fine, sandy soils.	Suitable habitat is present within portions of the Survey Area. There is a historic CNDDB record for this species approximately 5 miles south of the Survey Area.	**Low**
Taxidea taxus	American badger	**CSC**	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils; require sufficient food source, friable soils, and open, uncultivated ground; prey on burrowing rodents.	There are no known recent records for this species on the Survey Area; the Survey Area is located within the known geographic range for this species; suitable habitat occurs within portions of the Survey Area. There are no known CNDDB records within 10 miles of the Survey Area.	**Low**

Federal Rankings:
FE = Federally Endangered
FT = Federally Threatened
FC = Federal Candidate for Listing
BCC = USFWS Bird of Conservation Concern

State Rankings:
SE= State Endangered
ST = State Threatened
SC = State Candidate for Listing
CFP = California Fully Protected
CPF = California Protected Fur-bearer
SA = CDFW Special Animal
WL = CDFW Watch List
CSC = California Species of Special Concern

5.5 WILDLIFE CORRIDORS AND SPECIAL LINKAGES

Linkages and corridors facilitate regional animal movement and are generally centered in or around waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Drainages generally serve as movement corridors because wildlife can move easily through these areas, and fresh water is available. Corridors also offer wildlife unobstructed terrain for foraging and for dispersal of young individuals.

As the movements of wildlife species are more intensively studied using radio-tracking devices, there is mounting evidence that some wildlife species do not necessarily restrict their movements to some obvious landscape element, such as a riparian corridor. For example, recent radio-tracking and tagging studies of Coast Range newts, California red-legged frogs, southwestern pond turtles, and two-striped garter snakes found that long-distance dispersal involved radial or perpendicular movements away from a water source with little regard to the orientation of the assumed riparian "movement corridor" (Hunt, 1993; Rathbun et al., 1992; Bulger et al., 2002; Trenham, 2002; Ramirez, 2002, 2003a, 2003b). Likewise, carnivores do not necessarily use riparian corridors as movement corridors, frequently moving overland in a straight line between two points when traversing large distances (Newmark, 1995; Beier, 1993, 1995; Noss, et al., 1996; Noss et al., no date). In general, the following corridor functions can be utilized when evaluating impacts to wildlife movement corridors:

- Movement corridors are physical connections that allow wildlife to move between patches of suitable habitat. Simberloff et al. (1992) and Beier and Loe (1992) correctly state that, for most species, we do not know what corridor traits (length, width, adjacent land use, etc.) are required for a corridor to be useful. But, as Beier and Loe (1992) also note, the critical features of a movement corridor may not be its physical traits but rather how well a particular piece of land fulfills several functions, including allowing dispersal, plant propagation, genetic interchange, and recolonization following local extirpation.

- Dispersal corridors are relatively narrow, linear landscape features embedded in a dissimilar matrix that links two or more areas of suitable habitat that would otherwise be fragmented and isolated from one another by rugged terrain, changes in vegetation, or human-altered environments. Corridors of habitat are essential to the local and regional population dynamics of a species because they provide physical links for genetic exchange and allow animals to access alternative territories as dictated by fluctuating population densities.

- Habitat linkages are broader connections between two or more habitat areas. This term is commonly used as a synonym for a wildlife corridor (Meffe and Carroll, 1997). Habitat linkages may themselves serve as source areas for food, water, and cover, particularly for small- and medium-size animals.

- Travel routes are usually landscape features, such as ridgelines, drainages, canyons, or riparian corridors within larger natural habitat areas that are used frequently by animals to facilitate movement and provide access to water, food, cover, den sites, or other necessary resources. A travel route is generally preferred by a species because it provides the least amount of topographic resistance in moving from one area to another yet still provides adequate food, water, or cover (Meffe and Carroll, 1997).

- Wildlife crossings are small, narrow areas of limited extent that allow wildlife to bypass an obstacle or barrier. Crossings typically are manmade and include culverts, underpasses, drainage pipes, bridges, and tunnels to provide access past roads, highways, pipelines, or other physical obstacles. Wildlife crossings often represent

"choke points" along a movement corridor because useable habitat is physically constricted at the crossing by human-induced changes to the surrounding areas (Meffe and Carroll, 1997).

5.5.1 Wildlife Movement in the Survey Area

A review of available literature, including the South Coast Missing Linkage Project (Penrod et al., 2001), has not identified any critical habitat linkages or established wildlife corridors in the Survey Area. In general, the literature review revealed that sufficient evidence is lacking regarding wildlife movement within the Survey Area. The Survey Area is surrounded on all sides by industrial and residential areas as well as the Whiteman Airport which limits use of the area by wildlife. The Survey Area may act as a temporary sink for wildlife moving through the area from the nearby Hanson Dam Recreation Area. Even considering smaller spatial scales or single habitat types, habitat fragmentation is no less important an issue. At these spatial scales, several studies have documented the negative effects on population structure, home range size, and genetic connectivity resulting from dirt roads, pipeline corridors, transmission line corridors, and other seemingly innocuous features traversing formerly undisturbed habitat (Mader, 1984; Swihart and Slade, 1984; Dunning et al., 1992).

The Survey Area is fenced to the northwest, north and east which likely limits wildlife movement in the area; no other anthropogenic barriers to dispersal for ground-dwelling wildlife and plants were observed within the Survey Area.

6.0 PROJECT IMAPCTS AND AVOIDANCE AND MINIMIZATION MEASURES

6.1 PROJECT IMPACTS

In general, direct impacts to special-status plants and terrestrial wildlife include ground-disturbing activities associated with construction of the project (i.e., grading, vegetation removal) and increased human presence (i.e., crushing, trampling, trapping). Potential indirect impacts include increased noise levels from heavy equipment (wildlife only), increased human disturbance, exposure to fugitive dust, the spread of noxious weeds, and disruption of breeding or foraging activity due to routine maintenance activities (wildlife only). If project construction were to occur during the avian nesting season (generally considered to be between February 15th through September 15th, although some raptors species may nest as early as January), indirect impacts to nesting birds could occur. The MBTA of 1918 (16 U.S.C. 703-711) does not allow for take of migratory birds.

6.2 AVOIDANCE AND MINIMIZATION MEASURES

6.2.1 Avoidance and Minimization Measure 1 - Implement Best Management Practices (BMPs)

BMPs shall be implemented as standard operating procedures during all ground disturbance and construction-related activities to avoid or minimize project impacts on biological resources. BMPs shall include:

- Restrict non-essential equipment to the existing roadways and/or ruderal areas to avoid disturbance to native vegetation.

- All excavation, steep-walled holes or trenches in excess of 6 inches in depth shall be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earthen fill or wooden planks with a 2:1 slope ratio. Trenches will also be inspected for entrapped wildlife each morning prior to onset of construction activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they will be thoroughly inspected for entrapped wildlife. Any wildlife discovered will be allowed to escape before construction activities are allowed to resume or removed from the trench or hole by a qualified biologist holding the appropriate permits (if required).
- Minimize mechanical disturbance of soils to reduce impact of habitat manipulation on small mammals, reptiles, and amphibians.
- Removal/disturbance of vegetation shall be minimized to the greatest extent feasible.
- Install and maintain appropriate erosion/sediment control measures as needed throughout the duration of work activities.
- No vehicles or equipment shall be refueled within 100 feet of an ephemeral drainage or wetland unless a bermed and lined refueling area is constructed. Spill kits shall be maintained on the Project Site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven and/or operated within or adjacent to drainages or wetlands shall be checked and maintained daily to prevent leaks of materials.

6.2.2 Avoidance and Minimization Measure 2 - Implement a Worker Environmental Education Program

Prior to the start of any construction related activities within the Survey Area (i.e., surveying, mobilization, fencing, grading, or construction), a Worker Environmental Education Program (WEEP) shall be implemented. Briefings for project personnel shall include: a discussion of the Federal and State Endangered Species Acts, Bald and Golden Eagle Protection Act, and the MBTA; the consequences of non-compliance with these acts; identification and values of plant and wildlife species and significant natural plant community habitats; hazardous substance spill prevention and containment measures; a contact person and phone number in the event wildlife needs to be relocated or dead or injured wildlife is discovered; and a review of mitigation requirements.

6.2.3 Avoidance and Minimization Measure 3 - Pre-Construction Surveys (Plants and Wildlife) and Biological Monitoring

Wildlife Surveys: Prior to ground disturbance or vegetation clearing within the Survey Area, a qualified biologist shall conduct surveys for wildlife (no more than 14 days prior to Project Site disturbing activities) where suitable habitat is present and may be directly impacted by construction activities. Wildlife found within the Project Site or in areas potentially affected by the project will be relocated to the nearest suitable habitat that will not be affected by the project prior to the start of construction. Special-status species found within a project impact area shall be relocated by an authorized biologist to suitable habitat outside the impact area.

Plant Surveys: Prior to initial ground disturbance within the Survey Area, a qualified biologist shall conduct pre-construction surveys for special-status plant species in all areas subject to ground-disturbing activity. If construction starts in the fall and will extend into the spring, additional surveys shall be conducted in all areas where new ground disturbing activities would occur during the spring (after 1 March). All listed plant species found shall be marked and avoided. Any populations of special-status plants found during surveys will be fully described, mapped, and a CNPS Field Survey Form or written equivalent shall be prepared.

Prior to Site grading, any populations of special-status plant species identified during the surveys shall be protected by a buffer zone. The buffer zone shall be established around these areas and shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including human trampling, erosion, and dust. The size of the buffer depends upon the proposed use of the immediately adjacent lands and includes consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, physical and chemical characteristics of soils) that are identified by the qualified plant ecologist or botanist. The buffer for herbaceous and shrub species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species. Highly visible flagging shall be placed along the buffer area and remain in good working order during the duration of any construction activities in the area.

Where impacts to listed plants cannot be avoided, the USFWS and/or CDFW shall be consulted for authorization, as appropriate.

Biological Monitoring: A qualified biologist shall be present during initial ground disturbance within the tank site and periodically during the bird nesting season. If required, during pre-construction surveys and/or monitoring efforts, the qualified biologist will relocate common and special-status species that enter the Project Site. Some special-status species may require specific permits prior to handling and/or have established protocols for relocation. Records of all detections, captures, and releases shall be reported to CDFW.

6.2.4 Avoidance and Minimization Measure 4 - Nesting Bird Surveys and Avoidance Measures

Where possible, vegetation removal activities should occur after September 15 but prior to February 15 to avoid impacts to nesting birds. Prior to initial site disturbance/issuance of grading permits, seasonally timed presence/absence surveys for nesting birds shall be conducted by a qualified biologist. If construction occurs outside of avian nesting season, only a single presence/absence survey for special status species will be conducted. If construction is scheduled to begin during the avian nesting season (February 15 through September 15), a minimum of three survey events, three days apart, shall be conducted, with the last survey no more than three days prior to the start of site disturbance. Surveys shall be conducted within 500 feet of all proposed project activities.

If coastal California gnatcatcher, or other special-status species are observed, consultation with USFWS and/or CDFW will be conducted. If breeding birds with active nests are found prior to or during construction, a qualified biologist shall establish a 300-foot buffer around the nest and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. The prescribed buffers may be adjusted by the qualified biologist based on existing conditions around the nest, planned construction activities, tolerance of the species, and other pertinent factors. The qualified biologist shall conduct regular monitoring of the nest to determine success/failure and to ensure that project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails.

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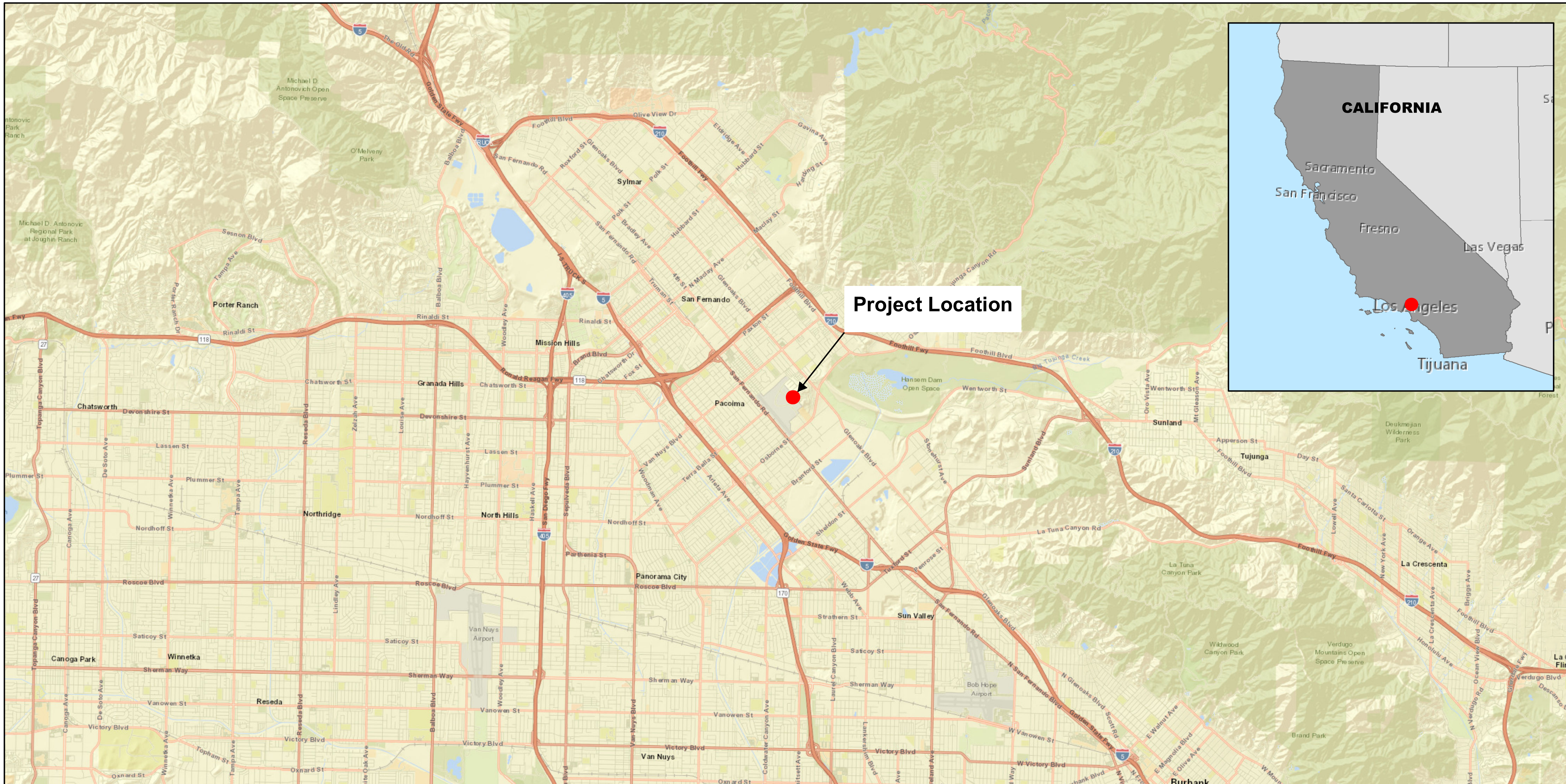
Appendix A FIGURES



Project Location

N

0 4,200 8,400 Feet

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Notes

1. NAD 1983 CORS96 StatePlane California VI FIPS 0406 Ft US
2. Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

Stantec

Project Location

Pacoima, CA

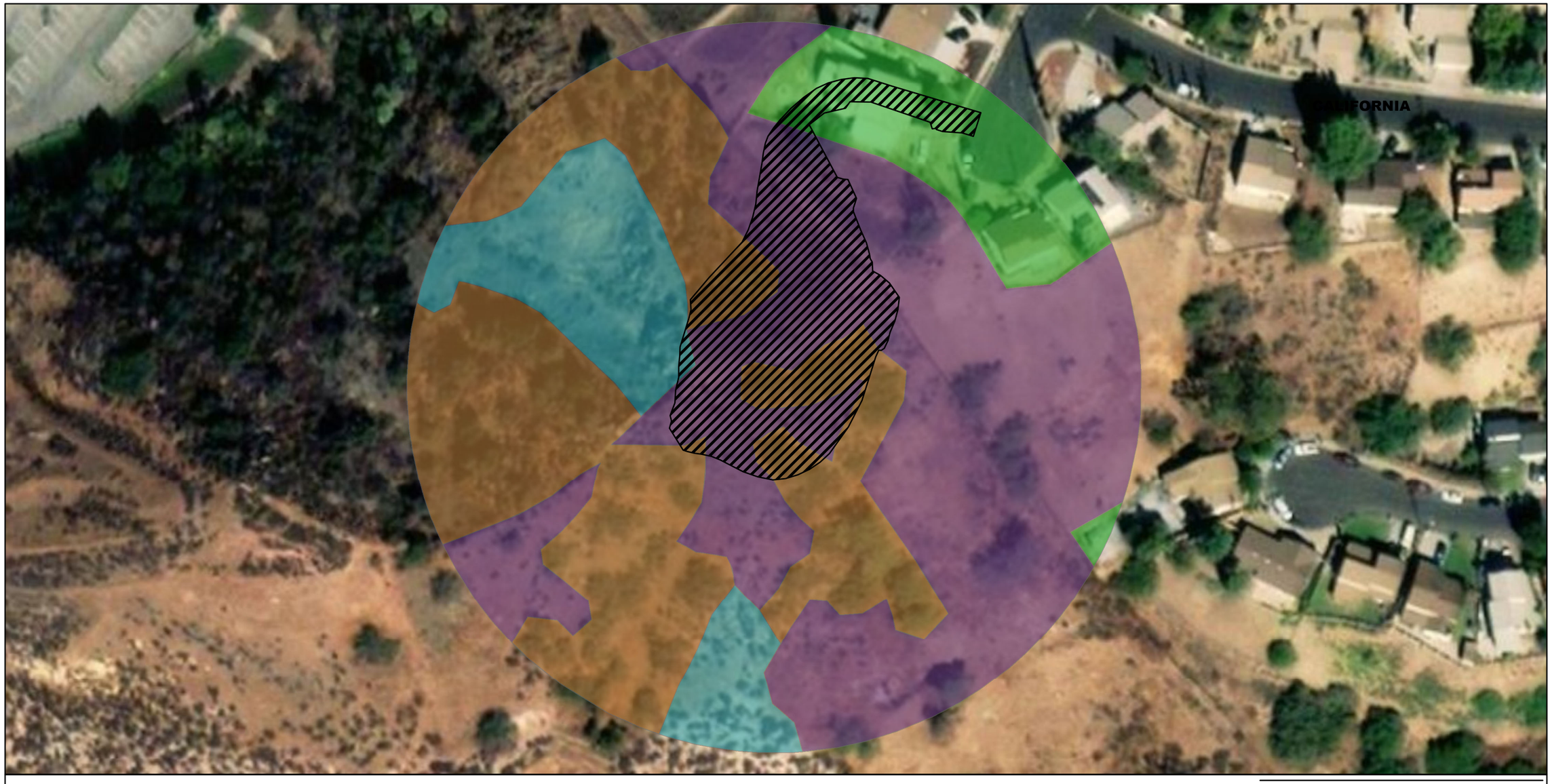
Prepared by JV on 2018-08-01
Technical Review by RB on 2018-08-02
Independent Review by LB on 2018-08-02

Client/Project

Los Angeles Department of Water and Power
Garber Street Recycled Water Tank Project

Figure No.
1

Title
Project Location



Vegetation and Land Cover Types

- California sagebrush - California buckwheat scrub
- Disturbed/Developed
- Laurel Sumac Scrub
- Wild Oats Grasslands

Extent of Project Grading (Maximum Impact Area)

N

0 40 80 Feet

1:950 (At original document size of 8.5x11)

Notes
1. NAD 1983 CORS96 StatePlane California VI FIPS 0406 Ft US
2. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Stantec

Project Location

Pacoima, CA

Prepared by JV on 2018-08-01
Technical Review by RB on 2018-08-02
Independent Review by LB on 2018-08-02

Client/Project

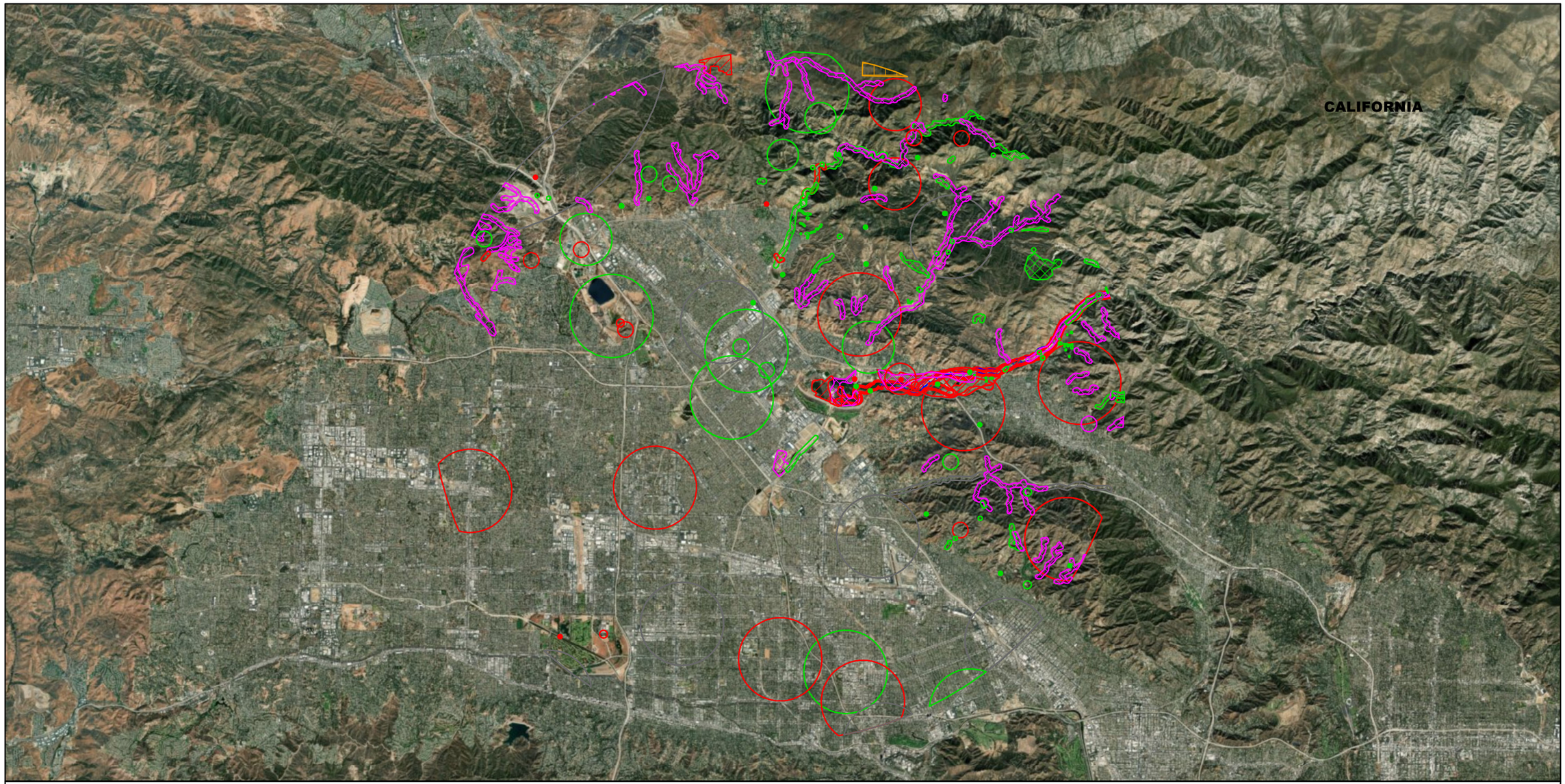
Los Angeles Department of Water and Power
Garber Street Recycled Water Tank Project

Figure No.

2

Title

Vegetation and Land Cover Types



- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

N

0 6,600 13,200 Feet

1:156,978 (At original document size of 8.5x11)

Notes

1. NAD 1983 CORS96 StatePlane California VI FIPS 0406 Ft US
2. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Stantec

Project Location

Pacoima, CA

Prepared by JV on 2018-08-01
Technical Review by RB on 2018-08-02
Independent Review by LB on 2018-08-02

Client/Project

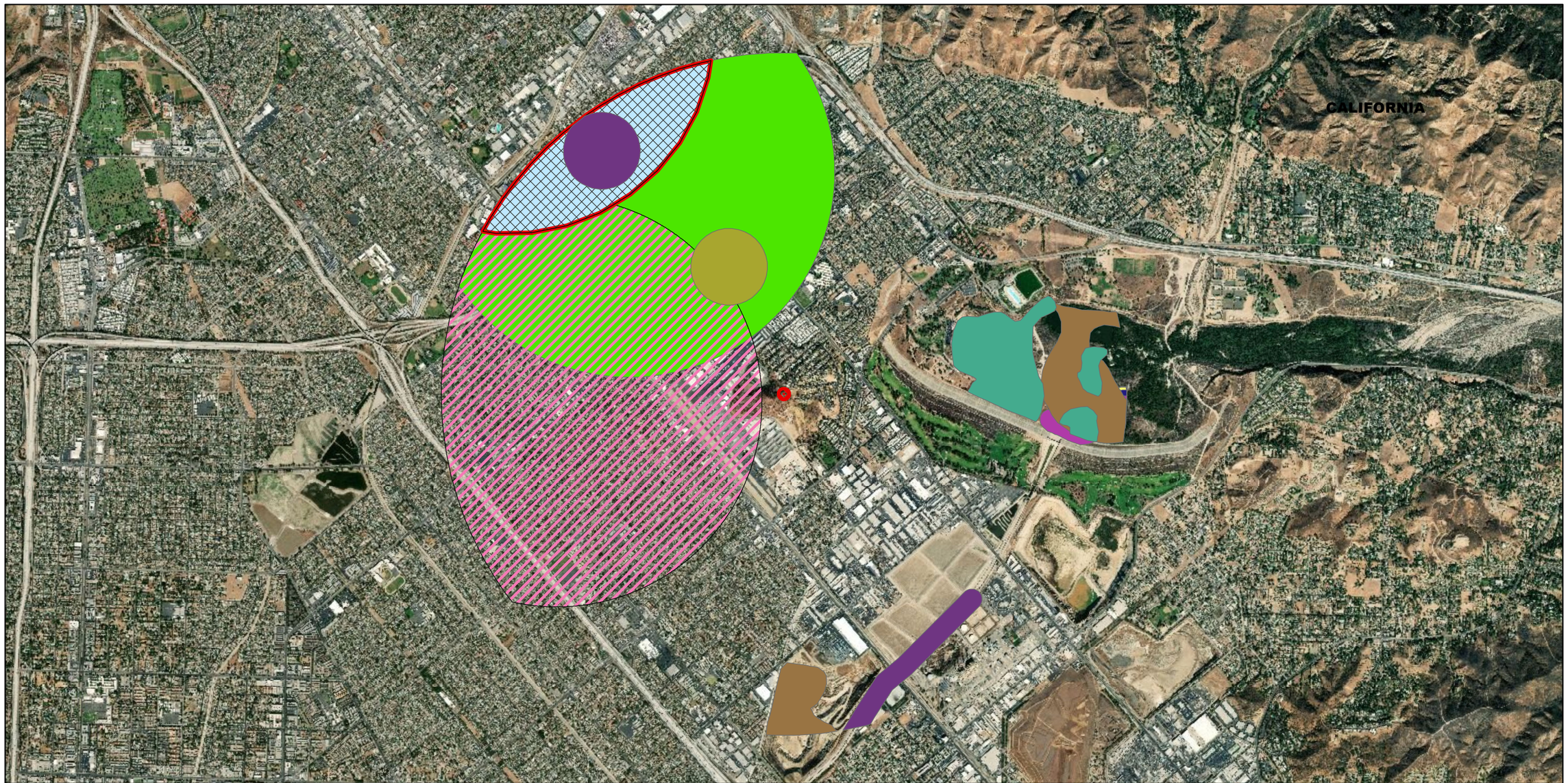
Los Angeles Department of Water and Power
Garber Street Recycled Water Tank Project

Figure No.

3A

Title

CNDDB Records - 10 Mile Radius



Swainson's hawk
western yellow-billed cuckoo
arroyo chub
Davidson's bush-mallow
Nevin's barberry
Riversidian Alluvial Fan Sage Scrub
Santa Ana speckled dace
Santa Ana sucker
hoary bat
least Bell's vireo
mesa horkelia
slender-horned spineflower
Project Site

N

0 1,300 2,600 Feet

1:31,893 (At original document size of 8.5x11)

Notes
1. NAD 1983 CORS96 StatePlane California VI FIPS 0406 Ft US
2. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Stantec

Project Location
Pacoima, CA

Prepared by JV on 2018-08-01
Technical Review by RB on 2018-08-02
Independent Review by LB on 2018-08-02

Client/Project
Los Angeles Department of Water and Power
Garber Street Recycled Water Tank Project

Figure No.
3B

Title
CNDDB Records - 2 Mile Radius

Appendix B PHOTOGRAPHIC LOG

STANTEC CONSULTING SERVICES INC. PHOTOGRAPHIC RECORD	
Client: LADWP	**Job Number:** 185865140
Site Name: Garber Street Recycled Water Tank Project	**Photographer:** Jared Varonin

Photo 1: June 13, 2018

Southwestern facing photo taken from the northern portion of the Survey Area.

Photo 2: June 13, 2018

North facing photo taken from the center of the Survey Area showing the habitat and steep terrain.

STANTEC CONSULTING SERVICES INC. PHOTOGRAPHIC RECORD	
Client: LADWP	**Job Number:** 185865140
Site Name: Garber Street Recycled Water Tank Project	**Photographer:** Jared Varonin
Photo 3: June 13, 2018	

Southeastern facing photo taken from the central portion of the Survey Area