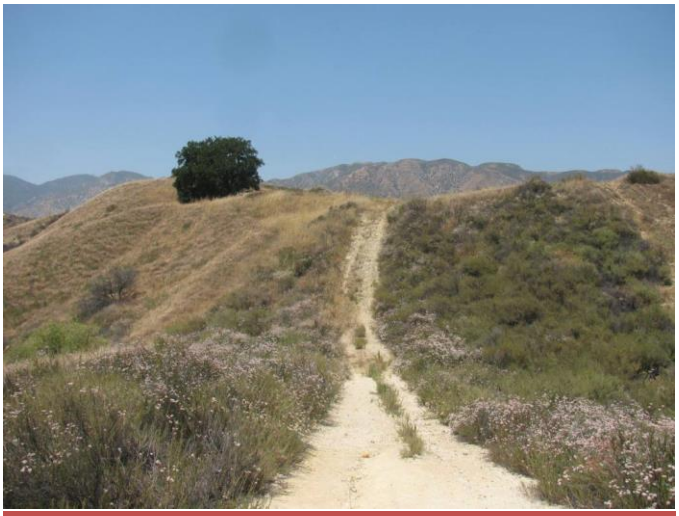


Biological Technical Report

Lopez Canyon Equestrian Trails and Trailhead Project

Los Angeles County, CA

August 2016

Prepared for:

City of Los Angeles
Bureau of Sanitation
Wastewater Engineering Services Division
2714 Media Center Drive
Los Angeles, CA 90065

[redacted]

Contents

Appendices

Figures

Tables

THIS PAGE INTENTIONALLY LEFT BLANK.

Executive Summary

The City of Los Angeles Bureau of Sanitation (LASAN) is proposing the Lopez Canyon Equestrian Trails and Trailhead Project (project or proposed project), which would consist of an equestrian trail loop and vehicle staging area near the community of Sylmar in the northern San Fernando Valley. LASAN is proposing to operate the trail loop system adjacent to the Lopez Canyon Landfill, which closed in 1996, and primarily within the "buffer" lands owned by the City of Los Angeles (City) to the east. The northern trail extent would extend into the Los Angeles National Forest. The proposed trail loop would extend approximately five miles and would overlap three jurisdictions: (1) City of Los Angeles, (2) County of Los Angeles, and (3) U.S. National Forest. The trail loop would incorporate a maintenance access road, segments of an existing, disconnected trail network, and two trail gap segments that would connect to a trailhead staging area. Once constructed, the proposed project would provide a formal trail system for equestrians and hikers. The proposed project would be constructed in three phases.

This Biological Technical Report (BTR) integrates information collected from a variety of literature sources and field surveys to describe the biological resources within the vicinity of the project area. Information was gathered from publicly available literature, data provided by relevant land management agencies, reviews of aerial photography and U.S. Geological Survey (USGS) topographic maps, data from the State of California Department of Fish and Wildlife (CDFW), data from the U.S. Fish and Wildlife Service (USFWS), and the results of field surveys conducted in 2016. The purpose of the data collection and analysis for this report is to determine whether any sensitive species or habitats, including areas subject to jurisdiction by the U.S. Army Corps of Engineers (USACE), CDFW, and Regional Water Quality Control Board (RWQCB) could be significantly impacted by development of the proposed project and to propose mitigation measures that could avoid or minimize impacts of construction, and maintenance and operation of the proposed project. A summary of the results is provided below:

- The study area supports 23 vegetation communities or cover types, including two subassociations of chaparral and six subassociations of coastal sage scrub. Three of these vegetation communities are considered sensitive by the CDFW (Blue Elderberry Stands, California Brittle Bush Scrub, and Black Willow Thickets). The majority of the study area is comprised of disturbed habitat, including existing unpaved access roads and trails, and non-native grassland, with smaller amounts of native vegetation communities.
- The study area supports Plummer's mariposa lily (*Calochortus plummerae*, California Rare Plant Rank List 4.2) and suitable nesting and foraging habitat for the federally endangered least Bell's vireo (*Vireo bellii pusillus*, LBVI) and federally threatened coastal California gnatcatcher (*Polioptila californica californica*, CAGN). Avoidance and minimization measures have been recommended in Section 4 of this report. After implementation of these avoidance and minimization measures, impacts to these species would be less than significant.
- The study area supports federally and state regulated waters. The project will result in discharge of fill to federally-regulated waters and modification of state-regulated bed and bank. Avoidance and minimization measures have been recommended in Section 4 of this report. After implementation of these avoidance and minimization measures and through

compliance with the required regulatory processes, impacts to these resources are expected to be less than significant.

- The project does not modify existing wildlife movement corridors, but may impact migratory bird nesting habitat. Avoidance measures have been recommended in Section 4 of this report. After implementation of avoidance measures, impacts to nesting migratory birds are less than significant.

1 Project Location and Description

1.1 Project Location

The proposed project is located in the Lake View Terrace area in the northeast quadrant of the City of Los Angeles (Figure 1). The Lake View Terrace area is located approximately 15 miles from downtown Los Angeles. The nearest adjacent cities include Burbank and Glendale to the southeast. As shown in Figure 2, a majority of the project would be located within the Lopez Canyon Landfill property boundaries and associated "buffer" lands, while the northern trail extent would be located within the Angeles National Forest (Los Angeles River Ranger District).

Regional access to the project site is generally provided by Interstates 5 and 210. Local access to the equestrian staging area and trailhead would be provided from Terra Bella Street and Terra Vista Way, which are accessed by Foothill Boulevard and Fenton Avenue.

1.2 Project Description

The proposed project includes the formation of an equestrian trail loop system and supporting trailhead staging area. The trail loop would incorporate an existing maintenance access road, segments of an existing, disconnected trail network, and the design and construction of two trail gap segments (herein referred to as Future Connection 1 and Future Connection 2), which will connect the aforementioned trails to form a loop, and the trailhead staging area. Once constructed, the proposed project would provide a formal trail system for equestrians and hikers. As shown in Figure 2, the proposed project would be constructed in three phases and adhere to the following standards in Table 1.

Table 1: Project Trail Specifications

Project Phase	Trail Width	Max Grade[1]	Surface	Drainage Crossings	Length
Phase 1	10 feet	10%	Aggregate, Native Soil	Arizona	6,300 feet
Phase 2	10 feet	8%	Aggregate, Native Soil	None	4,700 feet
Phase 3	8 feet[2]	12%	Native Soil	Arizona	12,210 feet

Notes: 1. Maximum trail gradient per County of Los Angeles Trails Manual (County of Los Angeles Department of Parks and Recreation 2013).
2. Future Connection 2 may require a deviation from this standard during final design.

Erosion and drainage control best management practices (BMPs) would be integrated into the project's design, as appropriate. These would include both temporary construction and long-term BMPs to minimize the erosion of soil materials in temporary work areas and address concentrated drainage runoff along the trail system.

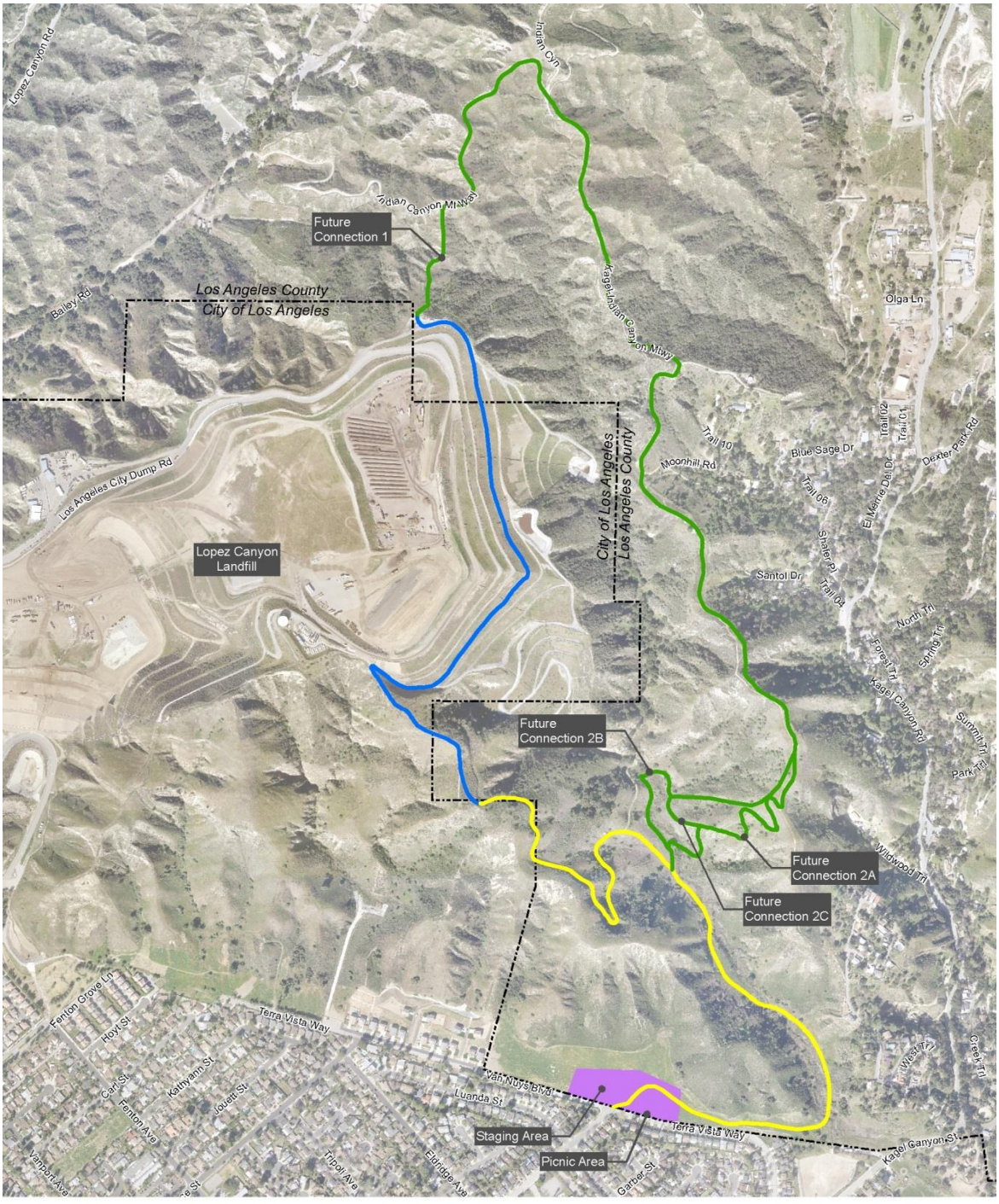
Phase 1 – Trailhead Staging Area and Backbone

Phase 1 would include the construction of the equestrian trailhead staging area and the backbone of the trail system (Figure 2). Phase 1 of the trail would begin at the proposed trailhead located at the

Figure 1. Regional Location

ABURVALL5/17/2016 G:\GIS_PRODUCTION\PROJECTS\CITYOFLOSANGELES_BOS_381838\LOPEZCANYONENVANALYSIS_260729\7.2_WORK_IN_PROGRESS\MAP_DOCS\MXD\REGIONAL.MXD

Figure 2. Project Phases



equestrian staging area and meander north up to the landfill boundary. Portions of the 1.2-mile Phase 1 trail segment would follow the existing maintenance access road that follows the western ridgeline up towards the closed landfill. A small lookout and turnaround area would be constructed near the terminus of Phase 1 to allow for the placement of a bench and table along with providing sufficient work area for Phase 2. Limited fencing would be used in areas (e.g., steep slopes) to maintain user safety by guiding users onto the designated trail.

A 4.1-acre trailhead staging area would be situated at the base of the trail loop and constructed in Phase 1. Entrance to the staging area is located at the intersection of Terra Vista Way and Terra Bella Street. As shown in Figure 3, the western half of the equestrian staging area would be dedicated for equestrian users while the eastern half would be dedicated to hikers. The western half of the equestrian staging area would include parking for horse trailers. The eastern half of the equestrian staging area would include approximately six pedestrian/parking spaces. Vehicles with horse trailers would exit the site onto Terra Vista Way via a secondary driveway located on the western boundary of the equestrian staging area.

The trailhead staging area would serve as a rest stop for trail users and include a water fountain and hand pump and a picnic area. Signage and wayfinding showing the overall trail route and giving pertinent trail use information (such as trail hazards, protection of native plants and animals, restriction to designated trails and use areas, and respecting private property) and regulations would be placed near the trailhead, where appropriate. The driveway, parking area for horse trailers, and picnic area pathways would be graded and covered with a permeable layer of recycled asphalt grindings.

As shown in Figure 3, approximately one acre of the equestrian staging area would be designed as a bioswale to provide on-site treatment of stormwater runoff. Hydroseed using an appropriate native seed mix would be applied to the bioswale area. There is currently a small group of mature trees located on the equestrian staging area, which would be maintained as part of the project. Implementation of the proposed project would include installation of additional native trees in the horse trailer parking area and the picnic area.

Phase 2 – Perimeter Trail

Phase 2 involves the extension of the backbone trail approximately 0.9 mile along the eastern boundary of the closed landfill (Figure 2). The majority of the Phase 2 trail is within City owned property. As shown in Figure 2, a portion of the trail would be constructed within the boundaries of the Angeles National Forest. Construction of this trail segment would require a combination of fencing and berms to provide a physical separation from the closed landfill disposal area and active composting operation.

Phase 3 – Future Trail Connections

Phase 3 involves construction of Future Connection 1 (0.1 mile), Future Connection 2 (0.3 mile), and improvement of the remaining existing trail network (1.9 miles) to accommodate equestrian use through the trail loop. The northern portion of the Phase 3 trail and Future Connection 1 are located within the boundaries of the Angeles National Forest. The remainder of the trail and Future

Figure 3. Staging Area

Connection 2 are located within City owned property in unincorporated Los Angeles County. In addition to two new trail connections, Phase 3 of the trail would incorporate a portion of the existing Kagel Indian Canyon Mountainway along the eastern ridgeline. Once completed, the trail system would ultimately comprise a loop of approximately five miles.

The proposed alignment for Future Connection 1 is illustrated in Figure 4. As shown, the trail alignment would be constructed along a shallow ridgeline that connects the northern segment of Phase 2 with the Kagel Indian Canyon Mountainway to the north. The trail alignment would be constructed so as to minimize the removal of native vegetation, including coastal sage scrub. Guardrails and fencing would also be installed, where appropriate, to maintain user safety.

Figure 5 illustrates three optional alignments for Future Connection 2. As shown, this trail connection would traverse a west-facing hill slope that extends approximately 250 vertical feet from the Phase 1 trail intersection up to an existing unnamed trail that connects with Kagel Indian Canyon Mountainway. Due to this topographical gradient, multiple switchbacks would be required to maintain the trail parameters identified in Table 1. Additional or intervening switchbacks may be required during final design.

Long-Term Management and Maintenance

LASAN would manage the proposed project for equestrian and pedestrian users. Motorcycles and mountain bikes would be prohibited. LASAN will be responsible for the day-to-day management of the loop trail, including maintenance of the trail network and staging area facilities. The trail area would be open during daylight hours (e.g., dawn to dusk) year round, unless special conditions such as high fire danger or activities or work necessitate temporary closure. No fires would be allowed in the picnic area. No smoking would be allowed in any of the public areas. Overnight camping would be prohibited.

Access would be restricted by double-leaf rino gates at the primary and secondary access driveways. Security fencing would be installed along the trail adjacent to the landfill to direct equestrians and hikers to the designated trail. Split rail fencing would be installed on the City's property to designate certain points of the trail.

LASAN will also be responsible for the monitoring and maintenance of erosion and drainage control BMPs.

LASAN is currently authorized to use/occupy approximately 60 acres or 0.09 square mile of National Forest System lands in the Angeles National Forest per a Special Use Permit (Authorization ID: LAR106601A). This permit, which expires on December 31, 2019, authorizes LASAN to continue their operation, maintenance and monitoring activities associated with the closed Lopez Canyon Landfill using existing foot trails and National Forest System roads. Of the 60-acre permit area, only seven acres was used as a disposal area during the landfill's operational years. LASAN will work with the U.S. Forest Service (USFS) to amend their existing use permit to facilitate the implementation of Future Connection 1.

Figure 4. Future Connection 1

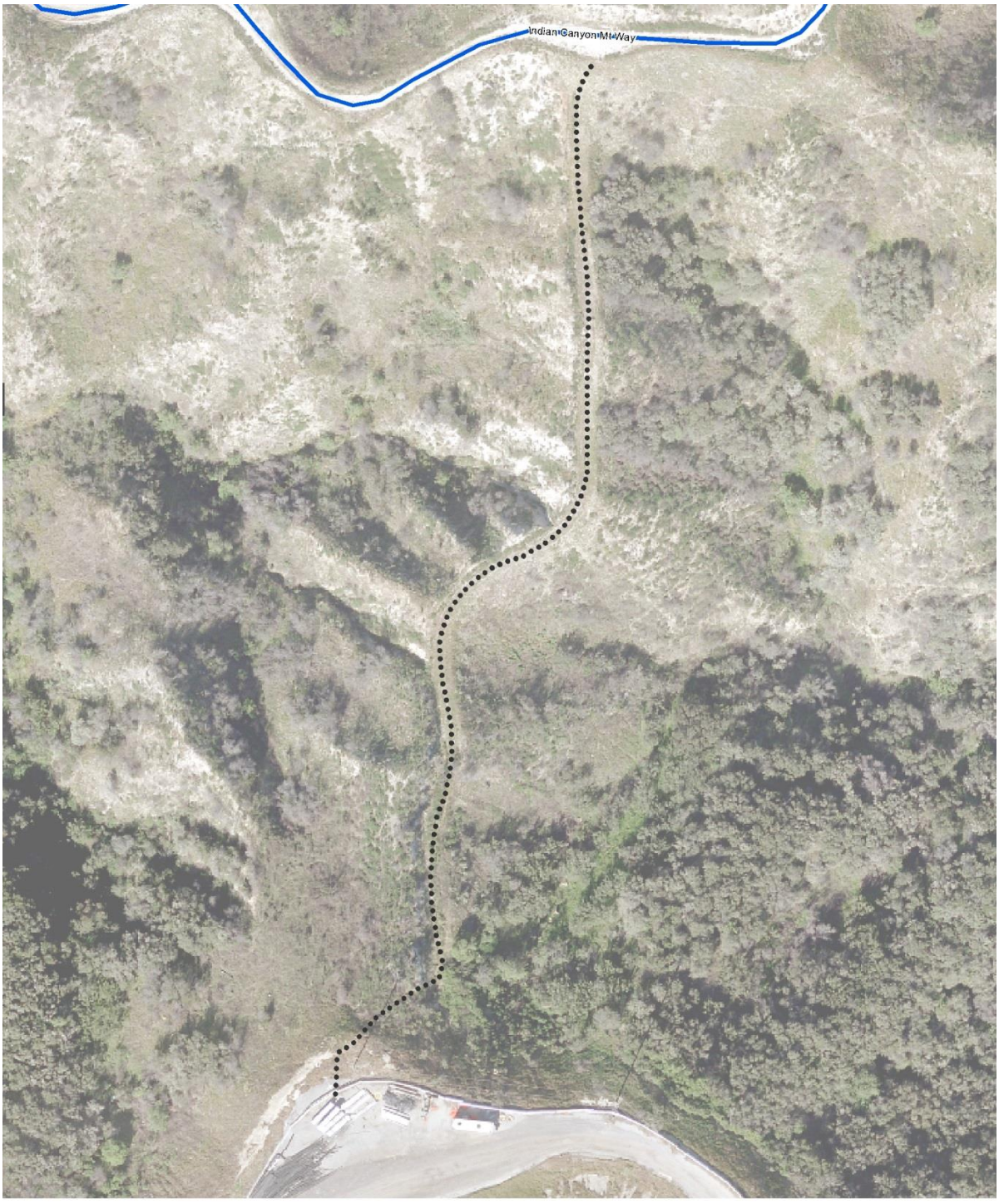
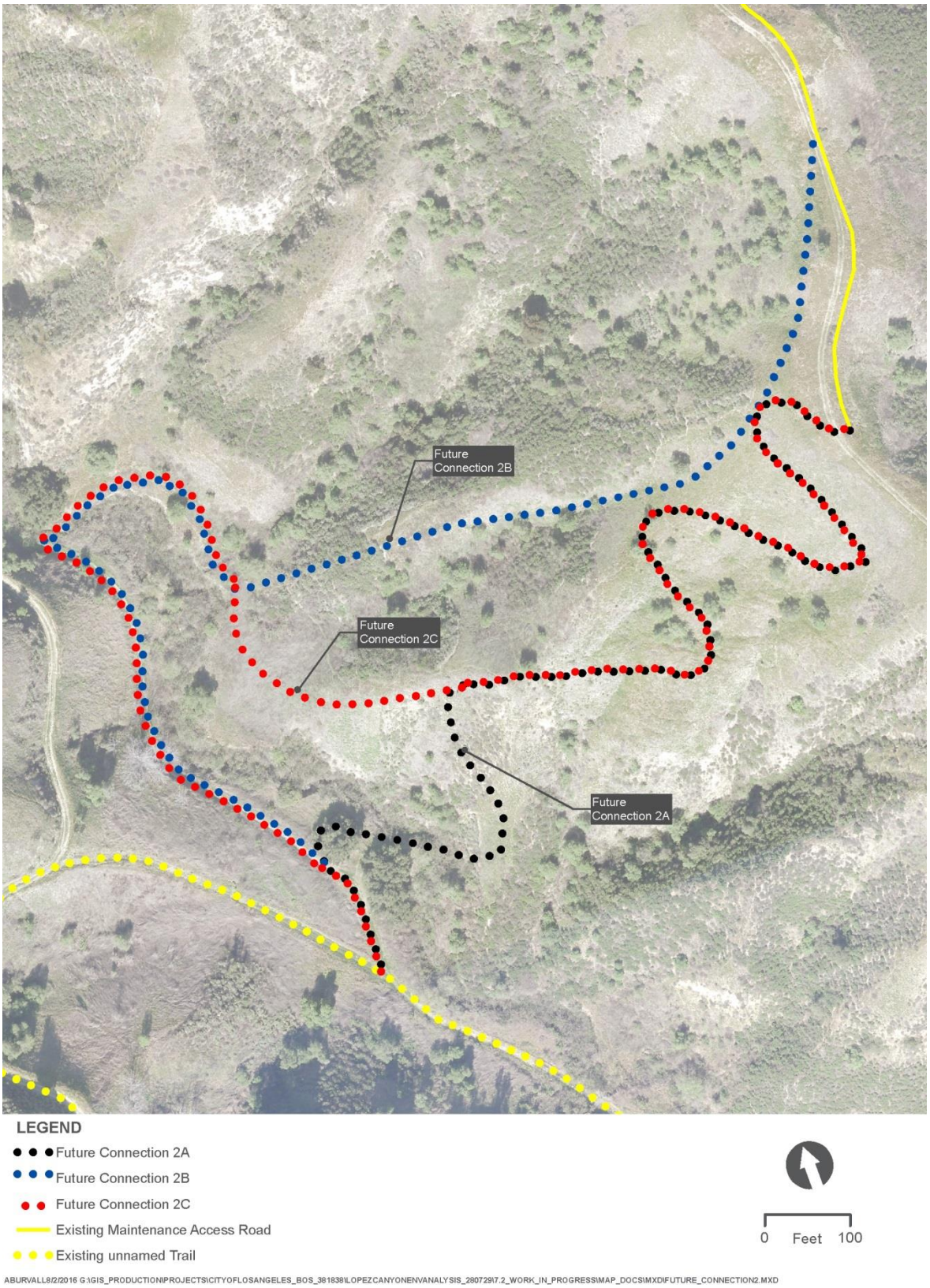


Figure 5. Future Connection 2 (Options A, B, and C)



Project Construction and Scheduling

Construction of Phase 1 is anticipated to start in 2017 and last four to six months. Construction activities would involve site preparation, minor grading and paving, limited re-vegetation of disturbed habitat areas, and limited utility installation. Subsequent phases would be constructed as funding allows following the approval of any permit amendments and/or maintenance agreements with the County and the USFS. LASAN's current plan is to have the trail loop fully functional by 2025.

Typical construction activities involved in the construction of the project include:

- Materials transport
- Site preparation (vegetation removal, if necessary)
- Earthwork (grading, excavation, backfill)
- Minimal asphalt paving and fence footings

Anticipated motorized construction equipment associated within these activities includes rubber-tired dozers (and backhoes), front end loaders, graders, dump trucks, and water trucks. LASAN expects that construction would be completed by a crew of 10 to 20 people, plus inspectors. To the extent feasible, construction activities would occur in the dry months to minimize damage to unpaved roadways used by heavy equipment.

Construction staging would be required to store pipe, construction equipment, and other construction related items. The construction staging area would be located within the proposed trailhead and vehicle staging area (Figure 3).

THIS PAGE INTENTIONALLY LEFT BLANK.

2 Survey Methods and Limitations

This report focuses on the existing federal and state resources in and around the proposed project. The *project area* is defined as the limits of ground disturbing impacts and temporary staging and access associated with full build-out of the proposed project. The *study area* is defined as the area within 100 feet of the trail centerline (for vegetation mapping) and within 50 feet of the trail centerline (for rare plants and the wetland and waterway delineation) that was mapped and evaluated for potential direct and indirect impacts to biological resources. The study area for this project component is approximately 100.43 acres.

Surveys conducted for the proposed project consisted of a general biological survey with a focus on vegetation mapping, a habitat assessment for sensitive and federally and state listed plant and animal species, and a jurisdictional wetland and waterway delineation. The entire area was surveyed on foot. Photographs documenting existing conditions within the study area are included in Appendix A.

2.1 General Biological Survey Methods

Vegetation Communities

HDR biologists Shelly Austin, Aaron Newton, and Allegra Engleson conducted vegetation mapping of the study area on May 25 and 26, 2016. The study area was surveyed on foot where site topography and vegetation density allowed. Areas that were too steep, too densely vegetated, or covered with poison oak were surveyed using binoculars. Plant community nomenclature is generally derived from the California Department of Fish and Wildlife (CDFW) List of Alliances and Vegetation Associations (CDFW 2010) and supplemented with the standard Holland classification (Holland 1986). Plant species discussed in this report follow both Latin and common names from the Jepson Manual (Hickman 1993) and Jepson Flora Project (Regents of the University of California 2016). Information on plant species was also taken from the California Native Plant Society (CNPS) online inventory (CNPS 2016) and the Calflora online database (Calflora 2016). A list of all plant species observed within the study area during the field surveys is provided in Appendix B, Floral Compendium.

2.1.1 Wildlife

All wildlife species observed or detected during general biological and jurisdictional delineation surveys were noted and are provided in Appendix C, Faunal Compendium. Nomenclature for wildlife species follows Stebbins (2003) for reptiles and amphibians, American Ornithologists' Union (2015) for birds, and Reid (2006) for mammals.

2.1.2 Rare Plant Survey Protocol

Sensitive plant species with the potential to occur in the study area were identified by conducting a records search of the CDFW California Natural Diversity Data Base (CNDDB) Rare Find 5 program

(CDFW 2016) as well as the CNPS Inventory of Rare and Endangered Plants (CNPS 2016) for the nine USGS quadrangles including and surrounding the project site (Appendix D).

HDR biologists Shelly Austin, Allegra Engleson, and Aaron Newton conducted rare plant surveys on May 25 and 26, 2016. These survey dates were selected to coincide with the flowering period of the sensitive plant species provided in Appendix D. Surveys were conducted according to the following survey protocols: United States Fish and Wildlife Service (USFWS) Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants (USFWS 1996); CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2009); and CNPS Botanical Survey Guidelines (CNPS 1983, revised 2001). Surveys were conducted within the vegetated portions of the survey area. The surveys consisted of walking meandering transects through suitable habitat within 50 feet from the centerline of the proposed trail (survey area), focusing on vegetation communities with the potential to support the sensitive plants identified in Appendix D.

Table 2 lists survey dates, personnel, and field conditions for the focused rare plant surveys. Surveys were floristic in nature; that is, all plant species observed were identified to species, if feasible. All plant species observed during the surveys were identified according to The Jepson Manual (Hickman 1993) and Jepson Flora Project (Regents of the University of California 2016) using the Calflora online database (Calflora 2016) as a tool to assist with plant identification. The Floral Compendium is included as Appendix B.

Table 2. Summary of Survey Dates and Weather Conditions

Surveyors	Survey Date	Times	Skies (% cloud cover)		Temperature (ÁF)		Winds (mph)
			Start	End	Start	End	
Shelly Austin, Allegra Engleson, Aaron Newton	5/25/16	8:00AM to 4:30 PM	60	0	60	70	0-5
	5/26/16	7:30 AM to 3:30 PM	30	0	61	72	0-5

2.1.3 Jurisdictional Delineation

Prior to conducting delineation fieldwork, the following literature and materials were reviewed:

- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil mapping data (Figure 6).
- United States Geological Survey (USGS) map (Figure 7) to determine the presence of any “blue line” drainages or other potential water features.
- USFWS National Wetlands Inventory (NWI) to identify areas mapped as potential wetland features (Figure 8).

HDR biologists Allegra Engleson and Aaron Newton conducted a jurisdictional delineation survey for the proposed project on May 25, 2016. The study area for the jurisdictional delineation extends 50 feet from the project centerline to capture jurisdictional features within and adjacent to the proposed project footprint. HDR examined the project site to determine the limits of USACE jurisdiction pursuant to Section 404 of the CWA and the limits of CDFW jurisdiction subject to Section 1602 of the State Fish and Game Code. The site was evaluated in accordance with the 1987 USACE

Wetland Delineation Manual (Environmental Laboratory 1987), the 2008 Interim Regional Supplement to the USACE Wetland Delineation Manual: Arid West Supplement (Arid West Supplement) (USACE 2008a), the Regulatory Program CWA Guidance to Implement the U.S. Supreme Court Decision for the Rapanos and Carabell Cases (USACE 2008b) and the Field Guide to the Identification of the Ordinary High Water Mark (OHWM) on the Arid West Region of the United States (USACE 2008c). In addition, the 2016 Arid West Regional Wetland Plant List was referenced when conducting the delineation (Lichvar et al. 2016). CDFW jurisdiction was mapped to the top of bank and included any riparian vegetation. All accessible areas within the study area were investigated on foot.

When a potential jurisdictional drainage was encountered, the OHWM width was mapped on 1:1200-scale aerial maps. In general, the OHWM was typically indicated by a break in the bank slope, scouring, or destruction of vegetation. Other data recorded included bank height and morphology, substrate type, and all vegetation within and adjacent to the streambed. No hydrophytic vegetation or other indicators of a three-parameter wetland were encountered and, therefore, no soil pits were dug.

2.2 Literature Search

Prior to surveying the project study area, a literature review was conducted to determine the existence or potential occurrence of federally or state listed or other sensitive plant and animal species on the project site and in the project vicinity. Database records for the Agua Dulce, Burbank, Canoga Park, Mint Canyon, Newhall, Oat Mountain, San Fernando, Sunland, and Van Nuys USGS 7.5-minute series quadrangles were searched on April 28, 2016, using the CDFW Natural Diversity Data Base Rarefind 5 online application and the CNPS' Online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2016). The results of the CNDDB and CNPS records searches are included as Appendix E to this BTR. In addition, information regarding the potential for federally listed plant and animal species with the potential to occur within the project vicinity was requested from the U.S. Fish and Wildlife Service (USFWS) and is included as Appendix E to this BTR. Geographic Information System (GIS) maps of USFWS-designated critical habitats (CBI 2016) were used to determine the locations of critical habitats relative to the study area.

2.3 Regulatory Framework

2.3.1 Federal

2.3.1.1 Federal Endangered Species Act

The federal Endangered Species Act (ESA) defines and lists *species* as "endangered" or "threatened" and provides regulatory protection for the listed species. The federal ESA provides a program for conservation and recovery of threatened and endangered species. It also ensures the conservation of designated critical habitat that the USFWS has determined is required for the survival and recovery of these listed species. Section 9 of the federal ESA prohibits the "Take" of species listed by the USFWS as threatened or endangered. *Take* is defined as: "…to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct." In recognition that *Take* cannot always be avoided, Section 10(a) of the federal ESA includes provisions for *Take* that is incidental to, but not the purpose of, otherwise lawful activities.

Section 10(a)(1)(B) permits (incidental take permits) may be issued if *Take* is incidental and does not jeopardize the survival and recovery of the species.

Section 7(a)(2) of the federal ESA requires that all federal agencies, including the USFWS, evaluate projects with respect to any species proposed for listing or already listed as endangered or threatened and any proposed or designated critical habitat for the species. Federal agencies must undertake programs for the conservation of endangered and threatened species and are prohibited from authorizing, funding, or carrying out any action that will jeopardize a listed species or destroy or modify its critical habitat.

As defined in the federal ESA, individuals, organizations, states, local governments, and other nonfederal entities are affected by the designation of critical habitat only if their actions occur on federal lands; require a federal permit, license, or other authorization; or involve federal funding (USFWS 2013).

The project does not occur within an approved Habitat Conservation Plan (HCP); therefore, impacts to threatened or endangered species, as considered by the USFWS, are not covered. Consequently, should any listed species be detected during focused species surveys (if required based on the presence of suitable habitat), incidental take permits would need to be obtained.

2.3.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 Code of Federal Regulations (C.F.R.) Part 10, including feathers, or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R. 21). Sections 3505, 3503.5, and 3800 of the CDFW Code also prohibit the take, possession, or destruction of birds, their nests, or eggs.

2.3.1.3 Clean Water Act (CWA)

U.S. Army Corps of Engineers

The USACE regulates the discharge of dredged or fill material into Waters of the U.S. (WOUS) pursuant to Section 404 of the CWA (USEPA 2015a).

Waters of the U.S.

The term “Waters of the U.S.” is defined in USACE regulations at 33 CFR Part 328.3(a) as:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:

i. Which are or could be used by interstate or foreign travelers for recreation or other purposes; or

ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

iii. Which are used or could be used for industrial purpose by industries in interstate commerce;

4. All impoundments of waters otherwise defined as Waters of the U.S. under the definition;
5. Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
6. The territorial seas;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section; and
8. Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the Environmental Protection Agency (EPA).

The limits of USACE jurisdiction in non-tidal waters extend to the OHWM, which is defined at 33 CFR 328.3(e) as:

"…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

Wetlands

The term "wetlands" (a subset of "Waters of the U.S.") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987, the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries followed by the Arid West Supplement in 2008. The methodology set forth in the 1987 Wetland Delineation Manual (Environmental Laboratory 1987) and Arid West Supplement (USACE 2008a) generally requires that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual provides great detail in methodology and allows for varying special conditions, a wetland should normally meet each of the following three criteria:

1. The plant community must be determined to be hydrophytic based on: (1) the dominance test applied using the 50/20 rule[1], or (2) where the vegetation fails the dominance test and wetland hydrology and hydric soils are present, vegetation is determined to be hydrophytic

[1] If a particular species accounts for more than 50% of the total coverage of vegetation in the stratum, or for at least 20% of the total coverage in the stratum in which the species was found, that species is defined as dominant.

using the Prevalence Index test[2] based upon the indicator status (i.e., rated as facultative or wetter) in the National List of Plant Species that Occur in Wetlands[3];

2. Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., redoximorphic features with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and

3. Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for a sufficient period to cause: (1) the formation of hydric soils; and (2) establishment of a hydrophytic plant community. A positive test for wetland hydrology is based on the presence of one primary or two secondary indicators.

2015 Clean Water Rule

The Final Clean Water Rule: Definition of "Waters of the United States" was published in the Federal Register on June 29, 2015. The rule became effective on August 28, 2015. Since publication of the rule in the Federal Register, numerous lawsuits were filed challenging the regulation, and several parties sought preliminary injunctions to delay implementation of the rule. The United States District Courts in Georgia and West Virginia agreed with the Agencies that legal challenges to the Rule could only be brought in the United States Court of Appeals for the 6th Circuit and therefore denied the requests for preliminary injunction. On August 27, the District Court for North Dakota found that it had jurisdiction and granted the request of a number of States (not including California) and issued a decision preliminarily enjoining the Clean Water Rule. However, on October 9, a federal appeals court (6th Circuit) issued a nationwide stay of the 2015 Final Clean Water Act rule (originally effective August 28, 2015) redefining WOUS. Should this stay be reversed prior to permit issuance, the New Clean Water Rule would be applied to determine jurisdictional limits. The New Rule is not anticipated to change the limits proposed herein.

2.3.1.4 Supreme Court Decisions

Solid Waste Agency of North Cook County

On January 9, 2001, the Supreme Court of the United States issued a decision on Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al. with respect to whether the USACE could assert jurisdiction over isolated waters. The Solid Waste Agency of North Cook County (SWANCC) ruling stated that the USACE does not have jurisdiction over “non-navigable, isolated, intrastate” waters.

Rapanos/Carabell

In the Supreme Court cases of *Rapanos v. United States* and *Carabell v. United States* (herein referred to as *Rapanos*), the Court attempted to clarify the extent of USACE jurisdiction under the CWA. The nine Supreme Court justices issued five separate opinions (one plurality opinion, two

[2] A Prevalence Index is calculated using wetland indicator status and relative abundance for each vascular plant species present.

[3] Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

concurring opinions, and two dissenting opinions), with no single opinion commanding a majority of the Court. In light of the *Rapanos* decision, the USACE will assert jurisdiction over traditional navigable waters (TNW); wetlands adjacent to TNW; non-navigable tributaries of TNW that are relatively permanent waters (RPW), where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and wetlands that directly abut such tributaries. The USACE will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not relatively permanent, and wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary (USACE 2008b).

Flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary indicate whether they significantly affect the chemical, physical, and biological integrity of downstream TNW. The consideration of hydrological factors includes volume, duration and frequency of flow, proximity to TNW, size of watershed, average annual rainfall, and average annual winter snow pack. The consideration of ecological factors also includes the ability for tributaries to carry pollutants and flood waters to a TNW, the ability of a tributary to provide aquatic habitat that supports a TNW, the ability of wetlands to trap and filter pollutants or store flood waters, and maintenance of water quality.

According to the USACE Regulatory Guidance Letter 07-01, the USACE generally will not assert jurisdiction over the following features: swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow) and ditches (including roadside ditches) excavated wholly in and draining only uplands that generally do not carry a relatively permanent flow of water (USACE 2007).

2.3.1.5 Regional Water Quality Control Board

The RWQCB regulates activities pursuant to Section 401(a)(1) of the federal CWA. Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into navigable waters (USEPA 2015b). The study area occurs within the Los Angeles RWQCB (Region 4). Impacts to WOUS would require 401 Certification from Region 4.

2.3.2 State

2.3.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) prohibits the take of listed species, except as otherwise provided in state law. The take for the CESA is defined as it is in the federal ESA; however, unlike the federal ESA, CESA also applies the take prohibitions to species petitioned for listing as state candidates rather than only listed species. State lead agencies are required to consult with the CDFW to ensure that any actions undertaken by the lead agency are not likely to jeopardize the continued existence of any state-listed species or result in destruction or degradation of required habitat. CDFW is authorized to enter into a Memorandum of Understanding (MOU) with individuals,

public agencies, universities, zoological gardens, and scientific or educational institutions to import, export, take, or possess listed species for scientific, educational, or management purposes.

Due to the potential presence of state-listed rare, threatened, endangered, or candidate species within the proposed project area (e.g., San Fernando Valley spineflower, coastal California gnatcatcher, etc.), compliance with the CESA was considered in the evaluation of the proposed project.

2.3.2.2 Section 2080 and 2081 of the State Fish and Game Code

Section 2080 of the Code states:

No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter [Chapter 1.5, Endangered Species], or the Native Plant Protection Act, or the California Desert Native Plants Act (California Law 2016).

Pursuant to Section 2081 of the Code, the CDFW may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or MOUs: (1) if the take is incidental to an otherwise lawful activity, (2) if impacts of the authorized take are minimized and fully mitigated, (3) if the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and (4) if the applicant ensures adequate funding to implement the measures required by the CDFW. The CDFW shall make this determination based on available scientific information and shall include consideration of the ability of the species to survive and reproduce.

Due to the potential presence of state-listed rare, threatened, endangered, or candidate species within the proposed project area, Sections 2080 and 2081 of the Code were considered in the evaluation of the proposed project.

2.3.2.3 Sections 3503 and 3503.5 of the State Fish and Game Code

These sections of the Code provide regulatory protection to resident and migratory birds and all birds of prey within the State of California, including the prohibition of the taking of nests and eggs, unless otherwise provided for by the Code. Specifically, these sections of the Code make it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code.

2.3.2.4 Sections 1600 to 1603 of the State Fish and Game Code

The State of California regulates water resources under Section 1600-1616 of the California Fish and Game Code. Section 1602 states:

“An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.”

CDFW jurisdiction includes ephemeral, intermittent and perennial watercourses and extends to the top of the bank of a stream or lake if unvegetated, or to the limit of the adjacent riparian habitat located contiguous to the watercourse if the stream or lake is vegetated.

2.3.2.6 California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires state and local agencies to identify impacts to the environment that might be caused by their actions.

2.3.3 Local

2.3.3.1 City of Los Angeles

2.3.3.1.1 Protected Tree Ordinance No. 177,404

SEC. 46.00. PROTECTED TREE REGULATIONS.

(Title and Section Amended by Ord. No. 177,404, Eff. 4/23/06.)

No protected tree may be relocated or removed except as provided in Article 7 of Chapter 1 or this article. The term "removed" or "removal" shall include any act that will cause a protected tree to die, including but not limited to acts that inflict damage upon the root system or other part of the tree by fire, application of toxic substances, operation of equipment or machinery, or by changing the natural grade of land by excavation or filling the drip line area around the trunk.

SEC. 46.01. DEFINITION.

(Amended by Ord. No. 177,404, Eff. 4/23/06.)

"PROTECTED TREE" means any of the following Southern California native tree species which measures four inches or more in cumulative diameter, four and one half feet above the ground level at the base of the tree:

(a) Oak tree including Valley Oak (*Quercus lobata*) and California Live Oak (*Quercus agrifolia*), or any other tree of the oak genus indigenous to California but excluding the Scrub Oak (*Quercus dumosa*); (b) Southern California Black Walnut (*Juglans californica* var. *californica*); (c) Western Sycamore (*Platanus racemosa*); and (d) California Bay (*Umbellularia californica*).

This definition shall not include any tree grown or held for sale by a licensed nursery, or trees planted or grown as a part of a tree planting program.

SEC. 46.02. REQUIREMENTS FOR PUBLIC WORKS PERMITS TO RELOCATE OR REMOVE PROTECTED TREES.

(Title and Section Amended by Ord. No. 177,404, Eff. 4/23/06.)

No person shall relocate or remove any protected tree, as that term is defined in Section 46.01, where the protected tree is not regulated pursuant to Article 7 of Chapter I of this Code, without first having applied for and obtained a permit from the Board of Public Works or its designated officer or employee, except as otherwise provided in this section.

2.3.3.2 County of Los Angeles

2.3.3.2.1 Los Angeles County General Plan 2035

The California Government Code requires that each city and county adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning." The Los Angeles County General Plan is the guide for long-term physical development and conservation through a framework of goals, policies, and implementation programs.

The General Plan's Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas. The Conservation and Natural Resources Element includes policies adopted for the purpose of avoiding or mitigating adverse environmental impacts to biological resources. Applicable goals and policies are identified below.

Conservation and Natural Resources Element

- **Policy C/NR 3.1:** Conserve and enhance the ecological function of diverse habitats and biological resources.
- **Policy C/NR 3.3:** Restore upland communities and significant riparian resources, such as degraded streams, rivers, and wetlands to maintain ecological function – acknowledging the importance of incrementally restoring ecosystem values when complete restoration is not feasible.
- **Policy C/NR 3.11:** Discourage development in riparian habitats, streambeds, wetlands, and other native woodlands in order to maintain and support their preservation in a natural state, unaltered by grading, fill, or diversion activities.

2.3.3.2.2 Los Angeles County Oak Tree Ordinance Section 22.56.2050

The Los Angeles County Oak Tree Ordinance was adopted in 1998 and regulates oak trees of 25 inches or more in circumference (8 inches in diameter), or in the case of an oak with more than one trunk, whose combined circumference of any two trunks is at least 38 inches (12 inches in diameter) DBH. An oak tree permit must be obtained in order to cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any regulated oak tree. Additionally, the County adopted the Oak Woodlands Conservation Management Plan (OWCMP) in 2012, which develops a consistent policy for the management of oak woodlands. The OWCMP extends CEQA consideration of impacts to oak woodlands comprised of oaks 5 inches or larger in DBH.

3 Results of the General Biological Survey

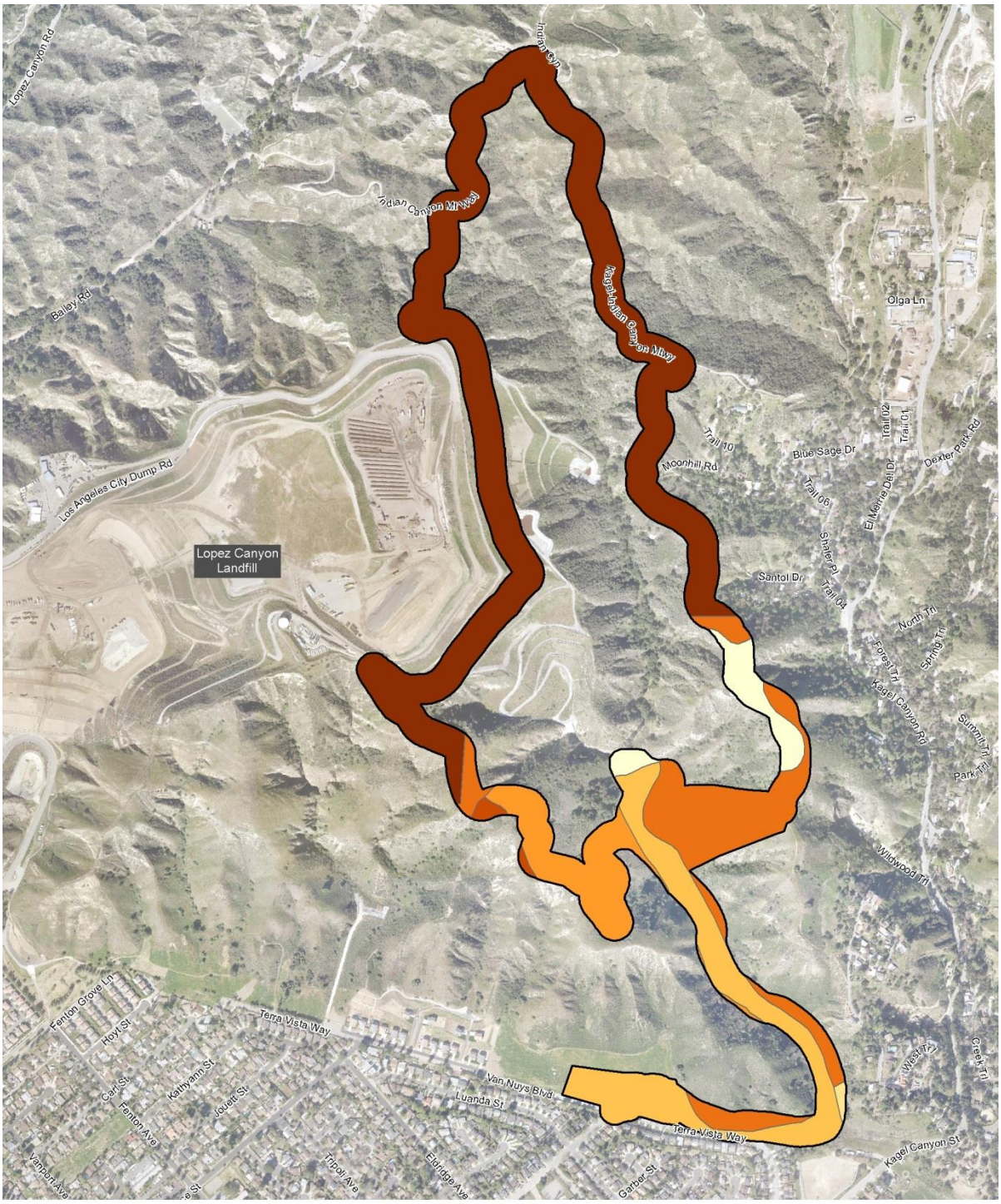
The following discussion identifies biological resources (vegetation communities, plant and animal species, potential habitat for federally and state listed species, and jurisdictional areas) observed or assessed during the general biological survey.

3.1 Project Soils

Generally, the site consists of loam soils. Onsite soils were identified using United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS 2016) soil mapping data. The study area contains seven different soil series, shown on Figure 6, including:

- **Badland** – This series consists of moderately steep to very steep barren land dissected by many intermittent drainage channels. Ordinarily, the areas are not stony. Badland is most common in semiarid and arid regions where streams cut into soft geologic material. Potential runoff is very high, and erosion is active. This soil series is located within the study area associated with Future Connection 2 and along Kagel Indian Canyon Mountainway associated with Phase 3.
- **Balcom silty clay loam, 30 to 50 percent slopes** – This series consists of moderately deep, well drained soils that formed in material weathered from soft, calcareous shale and sandstone. These moderately alkaline soils occur on hills at elevations of 200 to 2,300 feet. Balcom soils have low to high runoff, and moderate to moderately slow permeability. This soil series is located within the far southeastern part of the study area for Phase 1.
- **Conejo-Urban land complex, 2 to 9 percent slopes** – This series consists of a complex of two soil series (Conejo and urban land). Conejo soils are very deep, well drained soils that formed in alluvium from basic igneous or sedimentary rocks. These slightly alkaline soils occur on alluvial fans and stream terraces ranging from elevations of 30 to 2,000 feet. Conejo soils have slow to medium runoff and some areas with these soils are subject to occasional flooding. Urban land is land mostly covered by streets, parking lots, buildings, and other structures of urban areas. This soil complex is located within the staging area and most of the existing access road for Phase 1.
- **Gazos silty clay loam, 30 to 50 percent slopes** ï This series consists of moderately deep to bedrock, well drained soils that formed in material weathered from sandstone and shale. These slightly acid soils are found on hills at elevations of 50 to 4,000 feet. Gazos soils have high to very high runoff and moderately slow permeability. This soil series is located within the upper one-third of the study area for Phase 1.
- **Saugus loam, 30 to 50 percent slopes** – This series consists of deep, well drained soils that formed from weakly consolidated sediments. Saugus soils occur on dissected terraces and foothills, ranging in elevations of 600 to 2,500 feet. These neutral to slightly acid soils are formed in material weathered from weakly consolidated sediments mostly from granitic and closely related rocks. This soil series is well drained with medium to rapid runoff, and moderate permeability. This soil series is located along the southern and eastern extent of Phase 1, at the upper end of Phase 1 where it connects to Phase 2, and along Future Connection 2.

Figure 6. Soils



- **Soper gravelly sandy loam, 30 to 50 percent slopes** – This series consists of moderately deep, well drained soils that formed in material weathered from conglomerate and sandstone. Soper soils are found on hills and uplands at elevations of 100 to 2,500 feet. These soils are well drained with rapid runoff and moderately slow permeability. This soil series is located at the upper end of Phase 1.
- **Trigo-Modesto-San Andreas families association, 15 to 70 percent slopes** – This series consists of an association of three different soil series (Trigo, Modesto, and San Andreas). The Trigo series consists of shallow, well drained soils formed in consolidated alluvium from mixed sources on dissected terraces at elevations of 200 to 2,000 feet. Trigo soils are slightly acid and have medium to rapid runoff and moderately rapid permeability. The Modesto series consists of moderately well drained to somewhat poorly drained soils developed from alluvium derived from granitic rock sources but with a mixture of metamorphic rocks. This series is moderately to slightly acid found on nearly level alluvial fans in areas where surface drainage is very slow and local ponding occurs. The San Andreas series consists of well drained, moderately deep soils that formed in material weathered from soft sandstone. These neutral to moderately acid soils occur on hills and mountainous uplands at elevations of 200 to 2,500 feet. These soils have low to medium runoff and moderately rapid permeability. This soil series association encompasses the greatest area of all of the soil types and is located along almost the entire length of Phases 2 and 3.

3.2 Topography

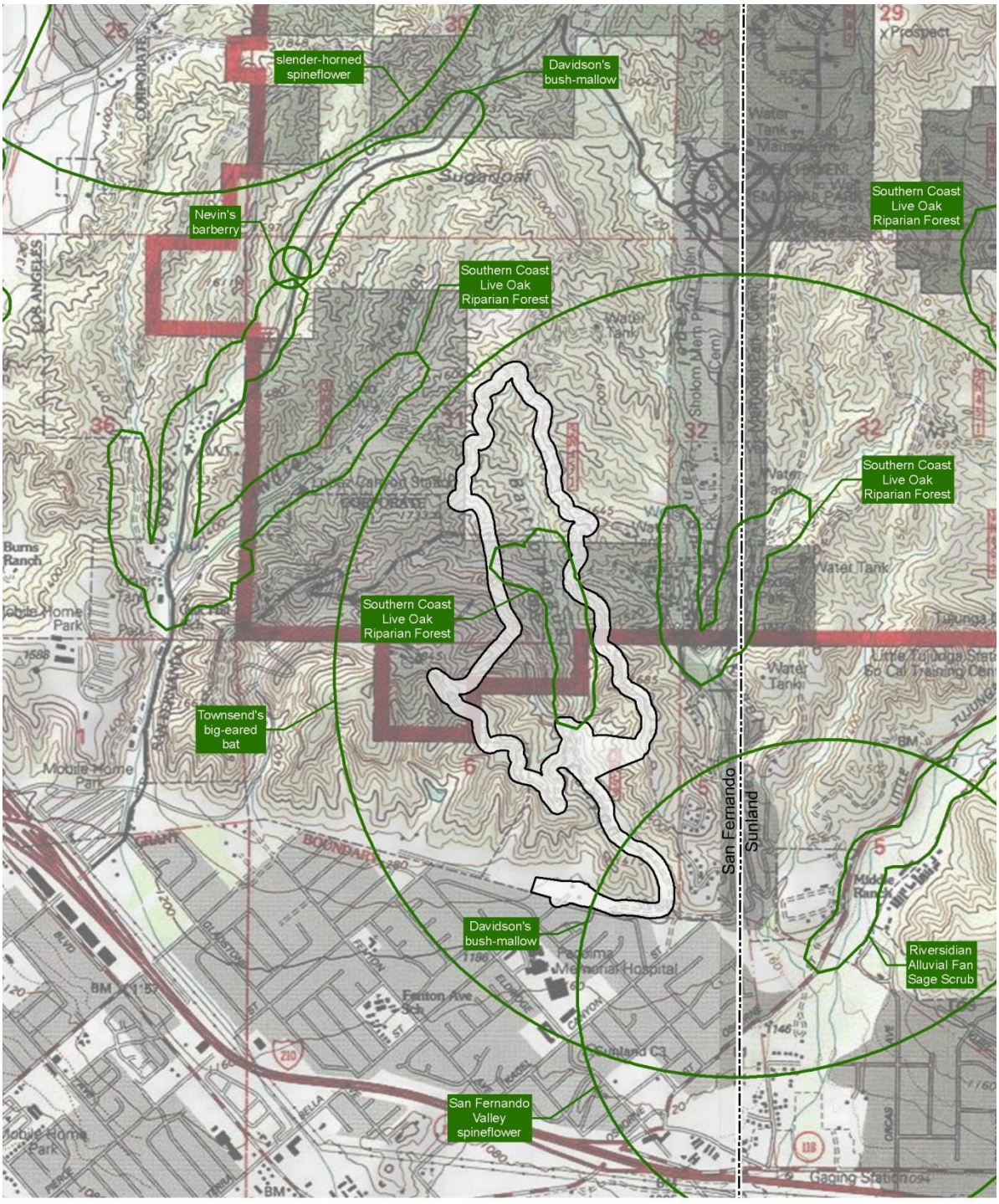
The study area is located in the central part of Los Angeles County at the western edge of the Angeles National Forest at elevations between 1,228 and 1,796 feet above mean sea level (AMSL). Topography within the study area is typical of foothill areas with flatter areas ranging from 2 to 9 percent slopes and steeper areas ranging from 15 to 70 percent slopes. The topography across the project site is complex with the proposed trail loop straddling two ridgelines that encircle Kagel Canyon. The proposed trailhead and staging area is located at the base of the western ridgeline (see Figure 7).

3.3 Hydrology

The proposed project is located within the Los Angeles River Watershed (Hydrologic Unit: 18070105), which encompasses an area of 834 square miles.

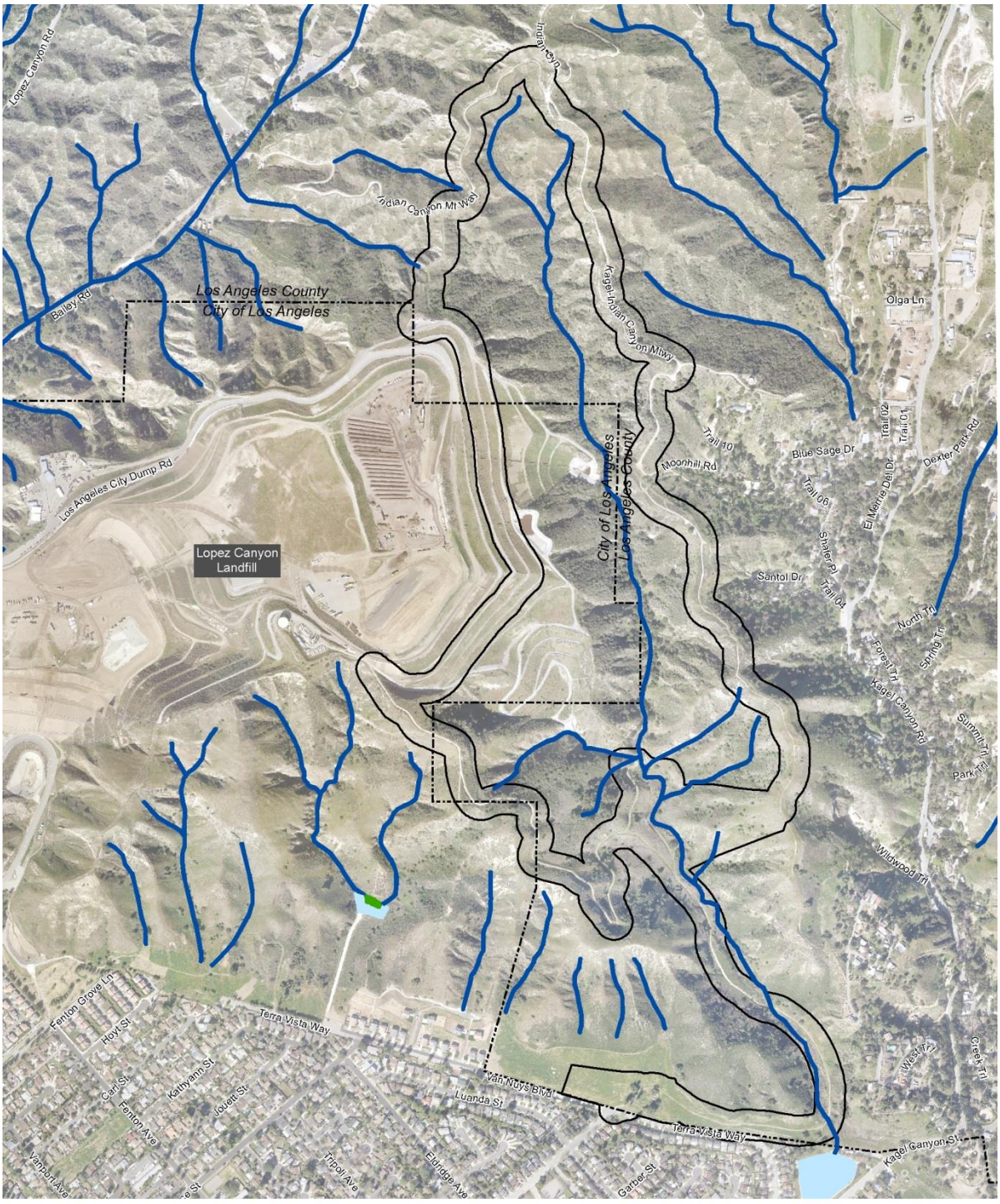
The eastern portion spans from the Santa Monica Mountains to the Simi Hills and in the west from the Santa Susana Mountains to the San Gabriel Mountains. The watershed encompasses and is shaped by the path of the Los Angeles River, which flows from its headwaters in the mountains eastward to the northern corner of Griffith Park. Here the channel turns southward through the Glendale Narrows before it flows across the coastal plain and into San Pedro Bay near Long Beach and into the Pacific Ocean (LADPW 2016).

Figure 7. USGS Topo with CNDDB Overlay



ABURVALL8/2/2016 G:\GIS_PRODUCTION\PROJECTS\CITYOFLOSANGELES_BOS_381838\LOPEZCANYONENVANALYSIS_280729\7.2_WORK_IN_PROGRESS\MAP_DOCS\MXD\USGS_CNDDB.MXD

Figure 8. National Wetlands Inventory



The major issues of concern in the watershed include: 1) protection and enhancement of fish and wildlife habitat, 2) removal of exotic vegetation, 3) enhancement of recreational areas, 4) attaining a balance between water reclamation and minimum flows to support habitat, 5) management of storm water quality, 6) assessment of other nonpoint sources including horse stables, golf courses, and septic systems, 7) pollution from contaminated groundwater, 8) groundwater recharge with reclaimed water, 9) contamination of groundwater by volatile organic compounds, 10) leakage of Methyl tertiary butyl ether (MTBE) from underground storage tanks, 11) groundwater contamination with heavy metals, particularly hexavalent chromium, and 12) contaminated sediments within the LA River estuary (LARWQCB 2016).

The majority of stormwater within the project area flows south off of the slopes and into an un-named tributary (Tributary A). The tributary outlets into an offsite retention basin managed by the landfill. The retention basin drains into storm drains maintained by the City of Los Angeles. The storm drains appear to direct flows into the Hansen Flood Control Basin located approximately one mile south of the study area (LADPW 2016). The Hansen Flood Control Basin/Hansen Dam outlets into Tujunga Wash, which flows south and southeast through highly urban areas and into the Los Angeles River. The Los Angeles River flows east and then south into the Pacific Ocean at the Port of Long Beach.

3.4 Vegetation Communities

Descriptions of CDFW Alliances and Vegetation Associations are taken from A Manual of California Vegetation, Second Edition (Sawyer et al. 2009). Descriptions of other vegetation communities not listed in the Sawyer et al. reference are taken from Holland (1983). The study area supports one unvegetated cover type and 22 vegetation communities (includes subassociations). The majority of the study area is comprised of unpaved roads and areas that are heavily disturbed with native vegetation occurring primarily along the periphery of the study area. Figures 9a through 9e identify the location of these vegetation communities and cover types. Acreages of these communities and cover types within the study area are shown in Table 3. Detailed descriptions of these vegetation communities and cover types along with their rarity rankings are provided below.

Table 3. Existing Vegetation Communities and Cover Types within the Study Area

Vegetation Community	Existing Acres within the Study Area
Blue Elderberry Stands (*Sambucus nigra* Alliance)	2.35
Chaparral	
Chamise Chaparral (*Adenostoma fasciculatum* Alliance)	8.89
Hoary Leaf Ceanothus Chaparral (*Ceanothus crassifolius* Alliance)	5.24
Coast Live Oak Woodland (*Quercus agrifolia* Alliance)	2.20
Coastal Sage Scrub	
Black Sage Scrub (*Salvia mellifera* Alliance)	1.75
California Brittle Bush Scrub (*Encelia californica* Alliance)	3.23
California Buckwheat Scrub (*Eriogonum fasciculatum* Alliance)	1.28
California Sagebrush Scrub (*Artemisia californica* Alliance)	7.08
California Sagebrush – Black Sage Scrub (*Artemisia californica – Salvia mellifera* Alliance)	7.76
California Sagebrush – Buckwheat Scrub (*Artemisia californica – Eriogonum fasciculatum* Alliance)	9.15
Disturbed California Sagebrush Scrub (*Artemisia californica* Alliance)	0.04

Vegetation Community	Existing Acres within the Study Area
Poison Oak Scrub (*Toxicodendron diversilobum* Alliance)	0.71
Native Riparian	
Arroyo Willow Thickets (*Salix lasiolepis* Alliance)	0.06
Black Willow Thickets (*Salix gooddingii* Alliance)	0.58
Sandbar Willow Thickets (*Salix exigua* Alliance)	0.01
Mulefat Thickets (*Baccharis salicifolia* Alliance)	2.23
Non-native Communities	
Non-native Grassland	21.16
Tree of Heaven (*Ailanthus altissima*) Stands	0.42
Olive (*Olea europaea*) Stands	0.19
Pepper Tree Groves (*Schinus molle* Semi-Natural Stands)	0.52
Ornamental	0.76
Disturbed/Developed Cover Types	
Disturbed Habitat	18.49
Urban/Developed	7.23
Total	**101.33**

Blue Elderberry Stands (*Sambucus nigra* Shrubland Alliance) G3 S3 (CDFW Code: *63.410.00)4

Blue Elderberry Stands are characterized by the dominance of blue elderberry (*Sambucus nigra* subsp. *caerulea*) in the shrub canopy with California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), mulefat (*Baccharis salicifolia*), California-lilac (*Ceanothus* spp.), saw-toothed goldenbush (*Hazardia squarrosa*), toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), lemonade berry (*Rhus integrifolia*), and poison oak (*Toxicodendron diversilobum*) potentially present in the understory. Emergent trees may be present at low cover, including ash (*Fraxinus* spp.) or coast live oak (*Quercus agrifolia*). Shrubs are generally less than eight meters tall in an open to continuous canopy with a variable herbaceous layer that is usually grassy (Sawyer et al. 2009).

This alliance occurs adjacent to non-native grassland and coastal sage scrub within the study area for Phases 1 and 3 (including along Future Connection 2) (Appendix A, Photo 1).

Chaparral (Holland Code 37000)

Three Two subtypes of chaparral were observed within the study area. These subtypes are based on the dominant plant species within the community. Descriptions of each of these subtypes are provided below.

[4] State (S) and Global (G) Rarity rankings are from the CDFW. For alliances with State ranks of S1-S3, all associations within them are considered to be highly imperiled and these alliances have an asterisk to the left of the CDFW Code.

Figure 9a. Vegetation Communities/Biological Resources

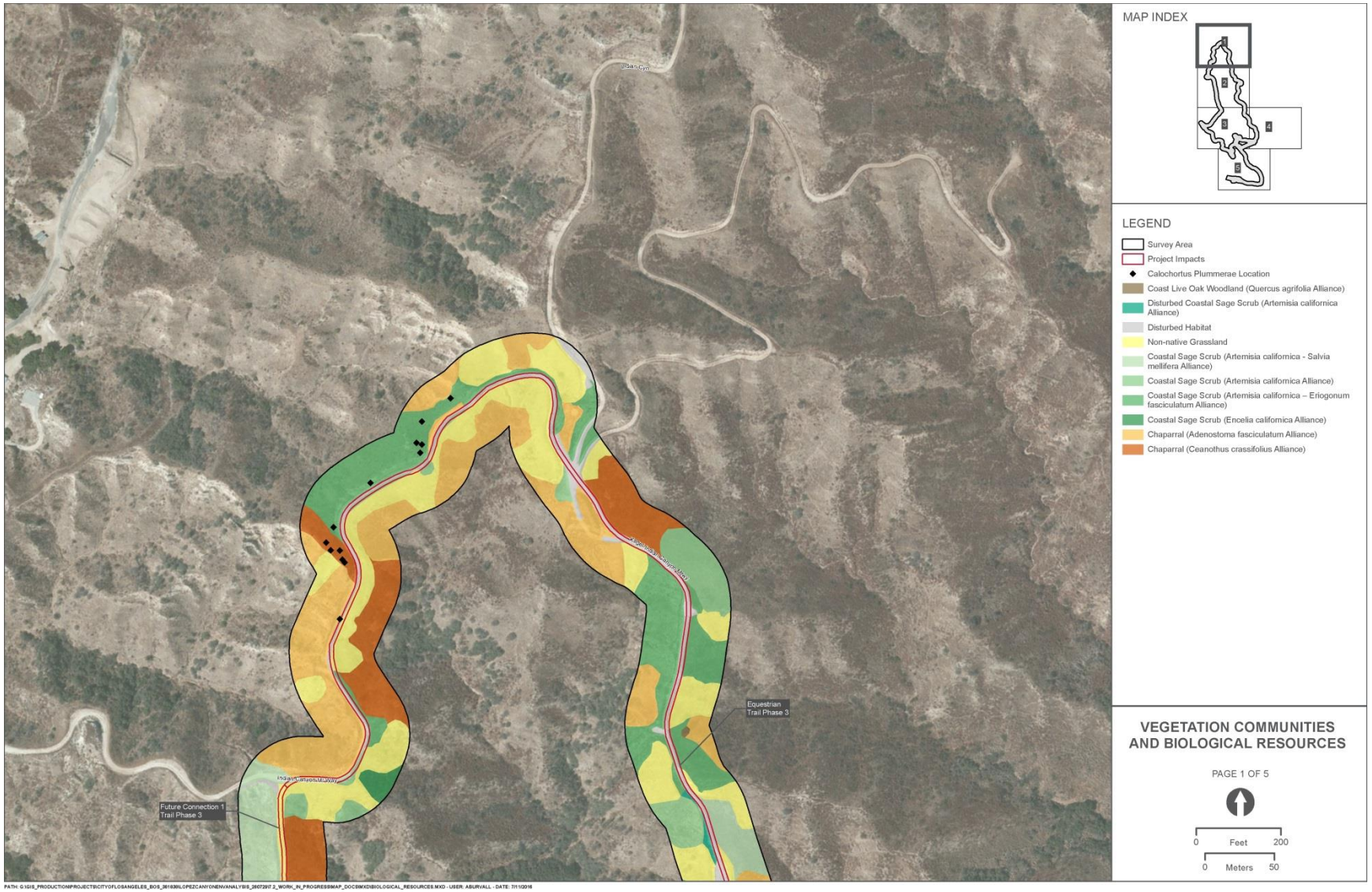


Figure 9b. Vegetation Communities/Biological Resources

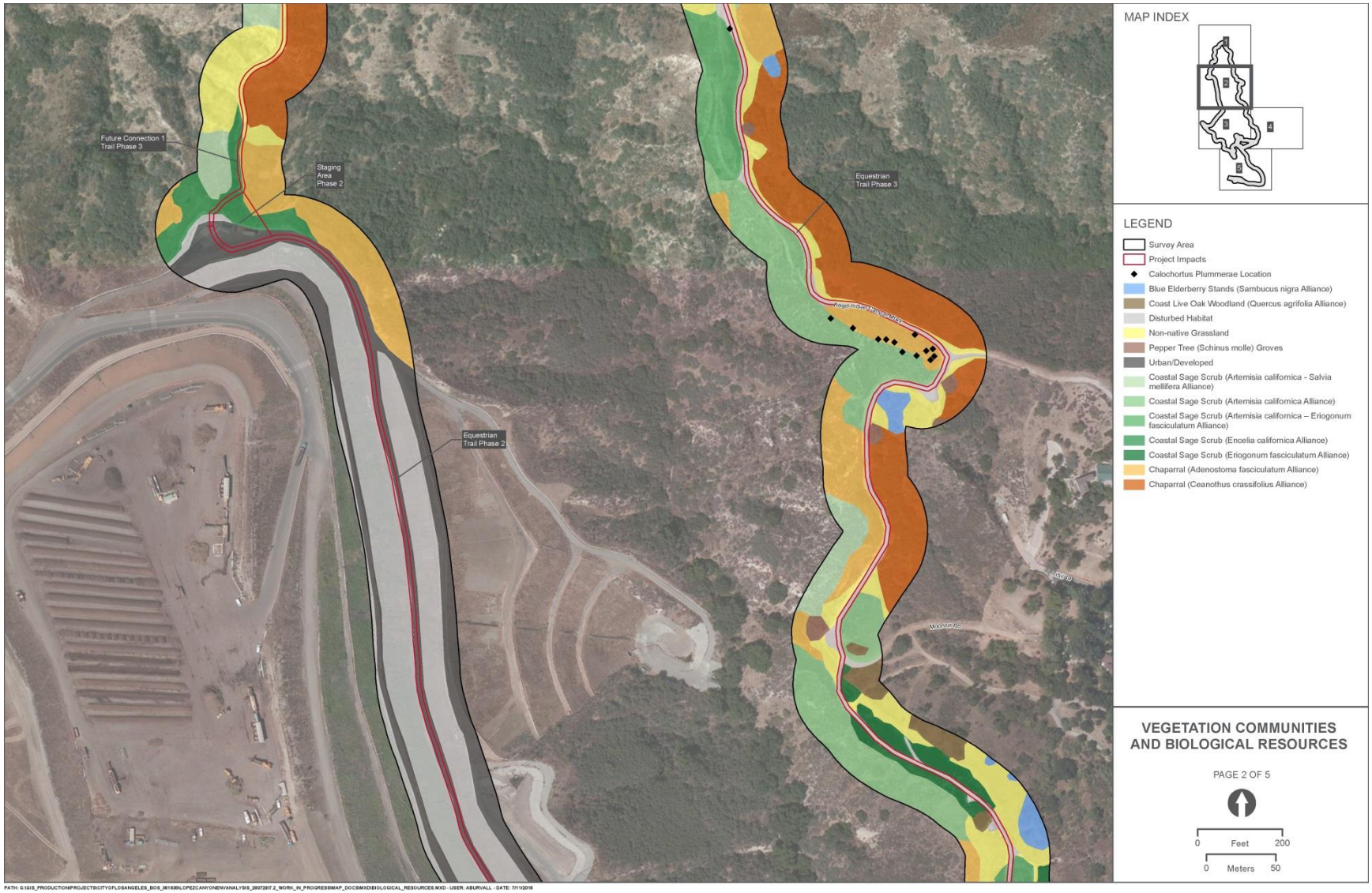


Figure 9c. Vegetation Communities/Biological Resources

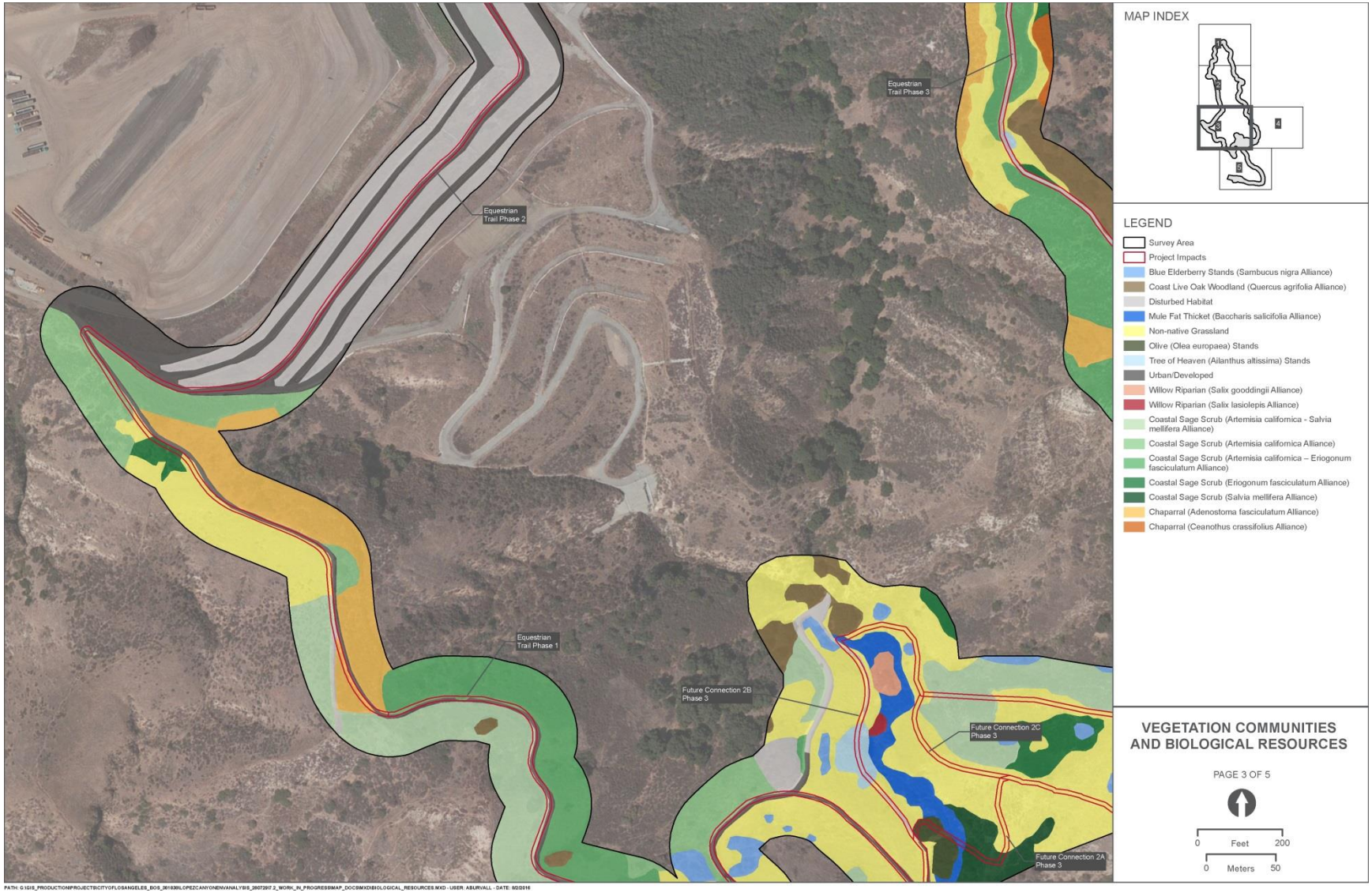
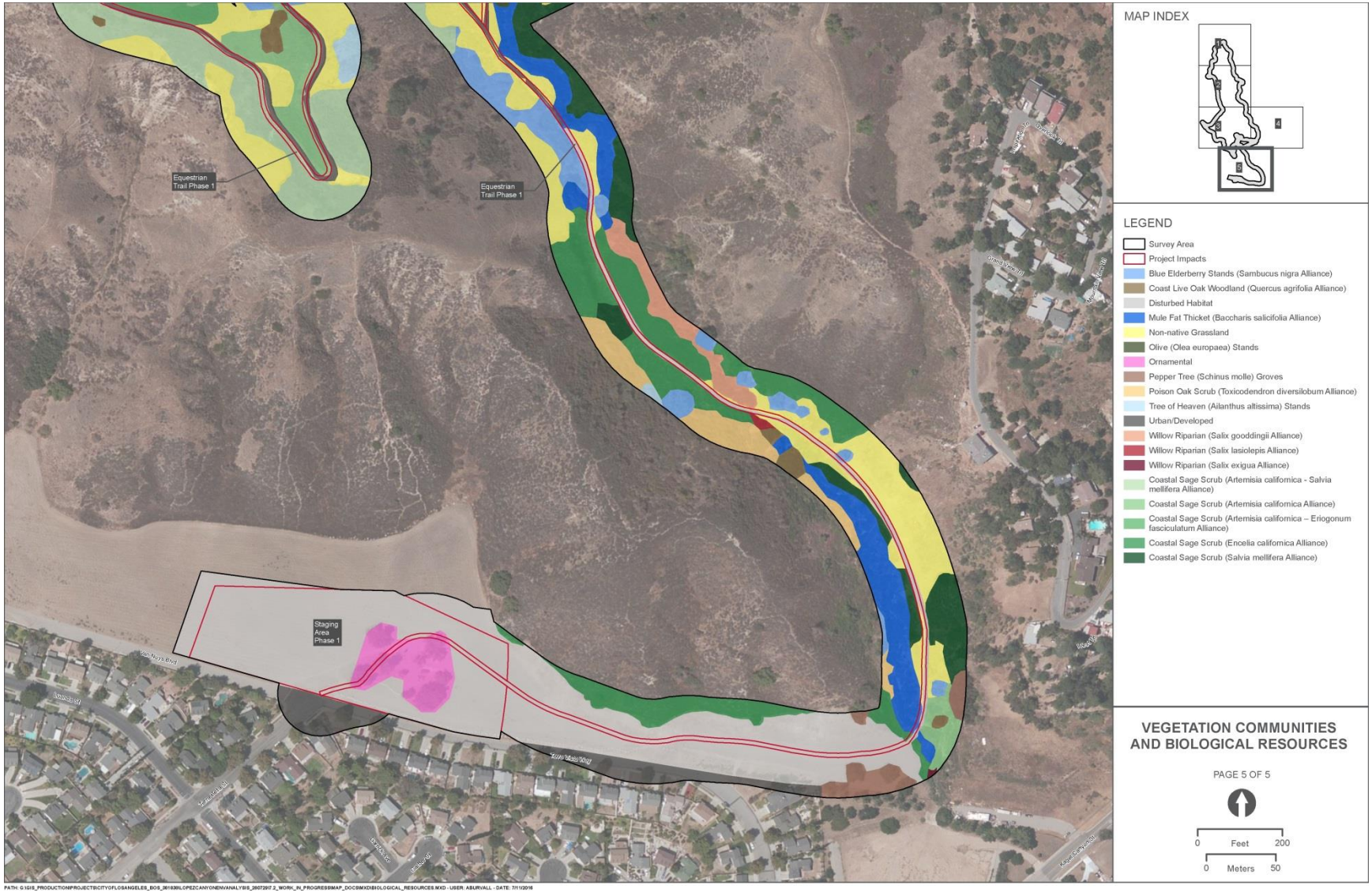


Figure 9d. Vegetation Communities/Biological Resources

Figure 9e. Vegetation Communities/Biological Resources



Chamise Chaparral (*Adenostoma fasciculatum* Shrubland Alliance) G5 S5 (CDFW Code: 37.101.00)

Chamise Chaparral is characterized by the dominance of chamise (*Adenostoma fasciculatum*) in the shrub canopy with California-lilac, California buckwheat (*Eriogonum fasciculatum*), and other chaparral species occurring as sub-dominants. Emergent trees may be present at low cover and shrubs are generally less than four meters tall. The canopy layer is generally intermittent to continuous and occurs across varied topography. Soils are commonly shallow over colluvium with varying kinds of parent bedrock (Sawyer et al. 2009).

This alliance occurs on slopes adjacent to coastal sage scrub and non-native grassland within the study area for Phases 1 and 3 (including a portion of Future Connection 1 (Appendix A, Photo 2).

Hoary Leaf Ceanothus Chaparral (*Ceanothus crassifolius* Shrubland Alliance) G4 S4 (CDFW Code: 37.208.00)

Hoary Leaf Ceanothus Chaparral is characterized by the dominance or co-dominance of hoary leaf ceanothus (*Ceanothus crassifolius*) and chamise in the shrub canopy with California buckwheat (*Eriogonum fasciculatum*) and other chaparral species occurring as sub-dominants. Emergent trees may be present at low cover and shrubs are generally less than four meters tall. The canopy layer is generally intermittent to continuous and occurs across varied topography. Soils are commonly shallow over colluvium with varying kinds of parent bedrock (Sawyer et al. 2009).

This alliance occurs on slopes adjacent to coastal sage scrub and non-native grassland within the study area for Phase 3.

Coast Live Oak Woodland (*Quercus agrifolia* Woodland Alliance) G5 S4 (CDFW Code: 71.060.00)

Coast Live Oak Woodland is characterized by the dominance or co-dominance of coast live oak in the tree canopy with other oak trees or willows (*Salix* spp.) potentially present. Trees in this community are typically less than 30 m tall and the canopy is open to continuous. The shrub layer is sparse to intermittent and the herbaceous layer is sparse or grassy. This community occurs in canyon bottoms, along stream banks, and slopes. Soils are typically deep, sandy, or loamy with high organic matter (Sawyer et al. 2009).

This alliance occurs adjacent to mule fat thickets associated with the drainage and on slopes adjacent to coastal sage scrub within the study area for Phase 1. It also occurs on slopes adjacent to coastal sage scrub, non-native grassland, and chaparral within the study area for Phase 3 (Appendix A, Photo 3).

Coastal Sage Scrub (Holland Codes 32000 and 32500)

Seven subtypes of coastal sage scrub were observed within the study area. These subtypes are based on the dominant plant species within the community. Descriptions of each of these subtypes are provided below.

Black Sage Scrub (*Salvia mellifera* Shrubland Alliance) G4 S4 (CDFW Code: 32.020.00)

Black Sage Scrub is characterized by the dominance or co-dominance of black sage (*Salvia mellifera*) in the shrub canopy with California buckwheat, California brittle bush (*Encelia californica*), chamise, California sagebrush, coyote brush, sticky monkeyflower (*Mimulus aurantiacus*), chaparral yucca (*Hesperoyucca whipplei*), deerweed (*Acmispon glaber*), chaparral mallow (*Malacothamnus fasciculatus*), laurel sumac, coastal prickly pear (*Opuntia littoralis*), and/or white sage (*Salvia apiana*) potentially present. Emergent trees may be present at low cover. Shrubs are generally less than two meters tall with a continuous or intermittent canopy and a variable herbaceous layer (grasses and herbs are seasonal). This alliance typically occurs on dry slopes and alluvial fans in shallow soils (Sawyer et al. 2009).

This alliance occurs adjacent to mule fat scrub, non-native grassland, chaparral, and intergrades with other alliances of coastal sage scrub within the study area for all Phases, including along Future Connection 2.

California Brittle Bush Scrub (*Encelia californica* Shrubland Alliance) G4 S3 (CDFW Code: *32.050.00)

California Brittle Bush Scrub is characterized by the dominance or co-dominance of California brittle bush in the shrub canopy with California sagebrush, California buckwheat, coyote brush, sticky monkeyflower, chaparral yucca, coastal goldenbush, deerweed, wishbone bush (*Mirabilis laevis* var. *crassifolia*), coastal prickly pear, lemonade berry, black sage, and blue elderberry (Evens and San 2006, Klein and Evens 2006, Keeler-Wolf and Evens 2005). Shrubs are generally less than two meters tall, with an intermittent to continuous canopy and a variable herbaceous layer. This alliance typically occurs on sunny, steep slopes in soils developed from sandstone, shale, or volcanic substrates (Sawyer et al. 2009).

This alliance occurs adjacent to disturbed habitat, willow riparian, non-native grassland, and intergrades with other alliances of coastal sage scrub within the study area for Phases 1 and 3.

California Buckwheat Scrub (*Eriogonum fasciculatum* Shrubland Alliance) G5 S5 (CDFW Code: 32.040.00)

California Buckwheat Scrub is characterized by the dominance or co-dominance of California buckwheat in the shrub canopy with California sagebrush, coyote brush, sticky monkeyflower, California brittle bush, coastal goldenbush (*Isocoma menziesii*), deerweed, chaparral mallow, white sage, and black sage present with lower cover. Shrubs are generally less than two meters tall, with a continuous or intermittent canopy and variable and sometime grassy herbaceous layer. This alliance typically occurs on upland slopes, channels, and washes on coarse, well drained, moderately acidic to slightly saline soils (Sawyer et al. 2009).

This alliance occurs adjacent to non-native grasslands and intergrades with other alliances of coastal sage scrub within the study area for Phases 2 and 3, including along Future Connections 1 and 2 (Appendix A, Photo 4).

California Sagebrush Scrub (*Artemisia californica* Shrubland Alliance) G5 S5 (CDFW Code: 32.010.00)

California Sagebrush Scrub is characterized by the dominance or co-dominance of California sagebrush in the shrub canopy with other scrub species such as chamise, black sage, sticky monkeyflower, California brittle bush, California buckwheat, chaparral yucca, deerweed, and white sage present. Emergent taller shrubs may be present at low cover. Shrubs are generally less than two meters tall and the canopy is intermittent to continuous. The herbaceous layer is variable and often supports non-native grasses in more disturbed habitats. This alliance occurs on steep, east- to southwest-facing slopes with soils that are generally derived from colluvium (Sawyer et al. 2009).

This alliance occurs adjacent to mule fat thickets, blue elderberry stands, coast live oak woodland, chaparral, non-native grassland, and intergrades with other alliances of coastal sage scrub within the study area for all three Phases.

California Sagebrush – Black Sage Scrub (*Artemisia californica - Salvia mellifera* Shrubland Alliance) G4 S4 (CDFW Code: 32.120.00)

California Sagebrush - Black Sage Scrub is characterized by the co-dominance of California sagebrush and black sage in the shrub canopy with other scrub species such as chamise, sticky monkeyflower, California brittle bush, California buckwheat, chaparral yucca, deerweed, and white sage present. Emergent taller shrubs may be present at low cover. Shrubs are generally less than two meters tall and the canopy is intermittent to continuous. The herbaceous layer is variable and often supports non-native grasses in more disturbed habitats. This alliance occurs on steep, east- to southwest-facing slopes with soils that are generally derived from colluvium (Sawyer et al. 2009).

This alliance occurs adjacnet to chaparral, non-native grassland, mule fat thickets, blue elderberry stands, and intergrades with other alliances of coastal sage scrub within the study area for Phases 1 and 3, including along Future Connections 1 and 2 (Appendix A, Photo 5).

California Sagebrush – California Buckwheat Scrub (*Artemisia californica - Eriogonum fasciculatum* Shrubland Alliance) G4 S4 (CDFW Code: 32.110.00)

California Sagebrush - California Buckwheat Scrub is characterized by the co-dominance of California sagebrush and California buckwheat in the shrub canopy with other shrub species such as chamise, sticky monkeyflower, black sage, interior goldenbush (*Ericameria linearifolia*), chaparral yucca, deerweed, and white sage potentially present. Shrubs are generally less than five meters tall and the canopy is two-tiered, with intermittent to continuous cover. The herbaceous layer is seasonally present. Soils are colluvially derived (Sawyer et al. 2009).

This alliance occurs adjacent to non-native grassland, chaparral, and intergrades with other alliances of coastal sage scrub within the study area for Phases 1 and 3 (Appendix A, Photo 6).

Disturbed California Sagebrush Scrub (*Artemisia californica* Shrubland Alliance) (No Holland or CDFW Code)

Disturbed California Sagebrush Scrub is characterized by the dominance of California sagebrush in the shrub canopy and the domiance of non-native plant species in the herbaceous layer, including filaree (*Erodium* sp.) and non-native grasses (*Bromus* spp., *Schismus* spp.).

Within the study area, this alliance occurs within the existing dirt access road northeast of Future Connection 1 where plants have grown up between tire ruts. Over time, in the absence of further disturbance, this community would likely convert to a more diverse coastal sage scrub community (Appendix A, Photo 7).

Disturbed/Developed Cover Types

There are two disturbed/developed cover types in the study area – disturbed habitat and urban/developed. These are described in more detail below.

Disturbed Habitat (Holland Code 11300, no CDFW Code)

Disturbed Habitat is primarily used to identify areas of severe impacts to natural communities to the extent where they are no longer self-sustaining or functioning naturally. These areas have been previously physically disturbed, but continue to retain a soil substrate. Disturbed areas consist of predominantly non-native, weedy species. This is not a natural community and generally does not provide habitat for wildlife or sensitive species. Examples of disturbed habitat generally include areas that have been graded or cleared, staging areas, and off-road vehicle trails.

Disturbed habitat occurs throughout the study area for all Phases and consists of unpaved roads and areas that have been graded, repeatedly cleared, and/or experienced repeated use that prevents natural revegetation, including parts of the landfill in Phase 2 and the mowed area including the proposed Staging Area in Phase 1 (Appendix A, Photo 8). Characteristic species include invasive, non-native plants such as Russian thistle or tumbleweed (*Salsola tragus*) and brome grasses (*Bromus* spp.).

Urban/Developed (Holland Code 12000)

Urban/Developed land is comprised of areas of intensive use with much of the land constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is highly modified and characterized by permanent or semi-permanent structures, pavement, unvegetated areas, and landscaped areas that require irrigation.

Urban/developed land occurs as paved roads associated with the landfill and residential areas within the study area for Phases 1 and 2.

Native Riparian

Four native riparian communities were observed within the study area, including three subtypes of willow riparian communities and mulefat thickets. These subtypes are based on the dominant plant species within the community. Descriptions of each of these subtypes are provided below.

Sandbar Willow Thickets (*Salix exigua* Shrubland Alliance) G5 S4.2 (CDFW Code: 61.209.00)

Sandbar Willow Thickets are characterized by the dominance or co-dominance of sandbar willow in the shrub canopy with mulefat and arroyo willow potentially present. Emergent trees of many different species may be present at low cover. Shrubs are generally less than seven meters tall and support an intermittent to continuous canopy with a variable herbaceous layer. This alliance occurs on temporarily flooded floodplains, depositions along rivers and streams, and at springs (Sawyer et al. 2009). The USACE Arid West 2016 Regional Wetland Plant List (Lichvar et al. 2016) recognizes sandbar willow as a facultative wet (FACW) plant, indicating that it usually occurs in wetlands, but is occasionally found in non-wetlands.

This alliance is associated with the southern part of the drainage and occurs adjacent to coastal sage scrub within the study area for Phase 1 (Appendix A, Photo 9).

Black Willow Thickets (*Salix gooddingii* Woodland Alliance) G4 S3 (CDFW Code: *61.211.00)

Black Willow Thickets are characterized by the dominance or co-dominance of black willow in the tree canopy with willows and blue elderberry potentially present. Shrubs may include coyote brush and mulefat. Trees are generally less than 30 meters tall, with an open to continuous canopy and shrub layer. The herbaceous layer can be variable. This alliance typically occurs on terraces along large rivers and canyons and along rocky floodplains of small, intermittent streams, seeps, and springs (Sawyer et al. 2009). The USACE Arid West 2016 Regional Wetland Plant List (Lichvar et al. 2016) recognizes black willow as a facultative wet (FACW) plant, indicating that it usually occurs in wetlands, but is occasionally found in non-wetlands.

This alliance is associated with the drainage and occurs adjacent to coastal sage scrub, non-native grassland, mule fat thickets, and blue elderberry stands within the study area for Phase 1 along Future Connection 2B.

Arroyo Willow Thickets (*Salix lasiolepis* Shrubland Alliance) G4 S4 (CDFW Code: 61.201.00)

Arroyo Willow Thickets are characterized by the dominance or co-dominance of arroyo willow (*Salix lasiolepis*) in the tall shrub or low tree canopy with coyote brush, mulefat, willows, and blue elderberry potentially present. As a shrubland, emergent trees may be present at low cover. Plants in this community are typically less than 10 meters in height, with an open to continuous canopy. The herbaceous layer is variable. This alliance is found on stream banks and benches, slope seeps, and stringers along drainages (Sawyer et al. 2009). The USACE Arid West 2016 Regional Wetland Plant List (Lichvar et al. 2016) recognizes black willow as a facultative wet (FACW) plant, indicating that it usually occurs in wetlands, but is occasionally found in non-wetlands.

This alliance is associated with the drainage and occurs adjacent to mule fat thickets, tree of heaven stands, and non-native grassland within the study area for Phase 1 and along Future Connection 2B within Phase 3.

Mulefat Thickets (*Baccharis salicifolia* Shrubland Alliance) G5 S4 (CDFW Code: 63.510.00)

Mulefat Thickets are characterized by the dominance or co-dominance of mulefat in the shrub canopy with California sagebrush, coyote brush, laurel sumac, arrow-weed (*Pluchea sericea*), willows, blue elderberry, and tamarisk (*Tamarix ramosissima*) potentially present. Emergent trees may be present at low cover, including pines (*Pinus* spp.), oaks (*Quercus* spp.), or willows. Shrubs are generally less than five meters tall and the canopy is continuous with a sparse herbaceous layer. This alliance typically occurs in canyon bottoms, floodplains, and stream channels in soils consisting of mixed alluvium (Sawyer et al. 2009). The USACE Arid West 2016 Regional Wetland Plant List (Lichvar et al. 2016) recognizes mulefat as a facultative (FAC) plant, indicating that it is equally likely to occur in wetland and non-wetlands.

This alliance is associated with drainages and occurs adjacent to coastal sage scrub, blue elderberry stands, coast live oak woodland, willow riparian, and non-native grassland within the study area for Phases 1 and 3, including Future Connection 2 (Appendix A, Photos 1 and 3).

Non-native Communities

Five types of non-native communities are present within the study area. These areas are characterized by the presence of non-native grasses or ornamental trees species that have not been planted, but that likely occur as escapees from surrounding urban and residential areas.

*Non-native Grassland (*Holland Code 42200*)*

Non-native grasslands in the study area were generally mapped as such and were not mapped to the alliance level. However, most of the grasslands within the study area would either be considered Annual Brome Grassland (*Bromus* spp.) Semi-Natural Herbaceous Stands (CDFW Code: 42.026.00) or Wild Oats Grassland (*Avena* spp.) Semi-Natural Herbaceous Stands (CDFW Code: 44.150.00). These grasslands are characterized by the dominance or co-dominance of ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), false brome (*Brachypodium distachyon*), slender wild oat (*Avena barbata*), or wild oat (*Avena fatua*) in the herbaceous layer. Emergent trees and shrubs may be present at low cover. These alliance accounts for the largest acreage of grassland vegetation in cismontane California and habitats vary from foothills and rangelands to waste places.

Non-native grassland occurs along the slopes adjacent to the existing access roads and proposed trail alignments within the study area for all three Phases, including Future Connections 1 and 2 (Appendix A, Photos 6 and 10).

*Tree of Heaven (Ailanthus altissima) Stands (*No Holland or CDFW Codes*)*

Tree of Heaven Stands are characterized by the dominance of tree of heaven (*Ailanthus altissima*) in the tree layer. Trees are generally less than 20 meters tall, with an open to continuous canopy. The understory of this community is characterized by the presence of non-native grasses and herbaceous plants. This community occurs in coastal canyons, washes, slopes, riparian areas, and along roadsides.

Tree of heaven stands occur on slopes adjacent blue elderberry stands, poison oak scrub, mule fat thickets, coastal sage scrub, and non-native grassland within the study area for Phases 1 and 3, including along Future Connection 2B.

*Olive (Olea europaea) Stands (*No Holland or CDFW Codes*)*

Olive Stands are characterized by the dominance of olive (*Olea europaea*) in the tree layer. Trees are generally less than 15 meters tall, with an open to continuous canopy. The understory of this community is characterized by the presence of non-native grasses and herbaceous plants. This community occurs along slopes, in washes, riparian areas, and along roadsides.

Olive stands occur adjacent to mule fat thickets and non-native grassland within the study area for Phase 3 along Future Connection 2A.

*Pepper Tree Groves (Schinus molle Semi-Natural Woodland Stands) (*CDFW Code: 79.200.00*)*

Pepper Tree Groves are characterized by the dominance of pepper tree (*Schinus molle*) in the tree canopy. Trees are generally less than 18 meters tall, with an open to continuous canopy. Shrubs are infrequent or common and the herbaceous layer is simple to diverse. This community occurs in coastal canyons, washes, slopes, riparian areas, and along roadsides (Sawyer et al. 2009).

Pepper Tree Groves occur as escapees from landscaped areas adjacent to coastal sage scrub, chaparral, non-native grassland, and disturbed habitat within the study area for Phases 1 and 3 (Appendix A, Photo 10).

*Ornamental (*No Holland Code*)*

Ornamental refers to areas where non-native ornamental species and landscaping have been installed. Ornamental is not described by Holland (1986) and is included in Disturbed Habitat in Oberbauer et al. (2008). Ornamental areas are not typically regulated by environmental resource agencies unless they include wetlands. Ornamental plantings provide aesthetic value or function, such as screening or erosion control. Ornamental vegetation is not considered a sensitive plant community.

Ornamental plantings occur within the proposed Staging Area for Phase 1 and include Canary Island pine (*Pinus canariensis*), olive, Australian banyan (*Ficus macrophylla*), Japanese spindle (*Euonymus japonica*) and cape leadwort (*Plumbago auriculata*) (Appendix A, Photo 11).

3.4.2 Botanical Resources

During the general biological surveys conducted by HDR, all plant species observed and identifiable to species were recorded and are included in Appendix B, Floral Compendium. The species detected are representative of the vegetation communities located within the study area. The potential for sensitive plant species to occur within the study area is discussed in Section 3.6.

3.5 Zoological Resources

3.5.1 Birds

Several avian species were observed during the survey and are commonly found in the vegetation communities occurring within and adjacent to the study area. These included black phoebe (*Sayornis nigricans*), red-tailed hawk (*Buteo jamaicensis*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), western scrub jay (*Aphelocoma californica*), California towhee (*Melozone crissalis*), and Phainopepla (*Phainopepla nitens*). A complete list of avian species observed during general biological surveys can be found in Appendix C, Faunal Compendium. The potential for sensitive avifauna to occur within the study area is discussed in Section 3.7.

3.5.2 Mammals

Three mammal species, coyote (*Canis latrans*), California ground squirrel (*Otospermophilus beecheyii*), and desert cottontail (*Sylvilagus audubonii*), were detected or observed within the study area. These species are commonly found in the vegetation communities occurring within the study area. The potential for sensitive mammalian species to occur within the study area is discussed in Section 3.7.

3.5.3 Reptiles and Amphibians

Two reptilian species, side-blotched lizard (*Uta stansburiana*) and California striped racer (*Coluber lateralis lateralis*) were observed during the general biological survey. The potential for sensitive reptilian species to occur within the study area is discussed in Section 3.7.

3.6 Federal and State Listed Species

The CNDDB, CNPS, and USFWS record searches indicated 20 known occurrences of federally or state listed or candidate plant and wildlife species within nine quadrangles surrounding the project area (Appendix E). These species and their potential for occurrence within the study area are provided in Appendices D and F. No designated critical habitat occurs within the study area.

3.6.1 Federal and State Listed Plant Species

The study area consists primarily of undeveloped native plant communities, disturbed habitat, and non-native grassland. The study area provides a suitable combination of soils and habitat for two federally or state listed or candidate plant species: Nevin's barberry (*Berberis nevinii*, FE, CE, California Rare Plant Rank [CRPR5] List 1B.1) and San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*, FC, CE, CRPR List 1B.1).

Suitable habitat for Nevin's barberry occurs in sandy or gravelly soils in chaparral and coastal scrub within the study area along the upper end of Phase 1. The nearest known occurrence of this species

[5] CNPS Rare Plant Ranks (CRPR or California Rare Plant Ranks) are assigned by a committee of government agency and non-governmental botanical experts and are not official State designations of rarity status.

is from an observation in 2000 along Lopez Canyon Road in alluvial scrub within the Angeles National Forest (Calflora 2016, CNDDB 2016). This perennial evergreen species was not observed during focused plant surveys, which were conducted during its' flowering period (February through June).

Marginally suitable habitat for San Fernando Valley spineflower occurs in sandy, sparsely vegetated, thin or highly mineralized soils in coastal sage scrub and grassland within the study area for Phase 3. The nearest known occurrence of this species is from a collection in 1920, approximately 2.5 miles to the southeast of the study area in the Lower Tujunga Wash (Calflora 2016, CNDDB 2016). This annual herbaceous species was not observed during focused plant surveys, which were conducted during its' peak flowering period (April through July).

Additional information on the potential for these plant species to occur within the study area is provided in Appendix D.

3.6.2 Other Special Status Plant Species

The study area provides suitable habitat for 11 sensitive, non-listed plant species. These species include: Santa Susana tarplant (*Deinandra minthornii*, State Rare and CRPR List 1B.2), white rabbit-tobacco (*Pseudognaphalium leucocephalum*, CRPR List 2B.2), Robinson's pepper-grass (*Lepidium virginicum* subsp. *menziesii*, CRPR List 4.3), short-joint beavertail (*Opuntia basilaris* var. *brachyclada*, CRPR List 1B.2), Peirson's morning-glory (*Calystegia peirsonii*, CRPR List 4.2), many-stemmed dudleya (*Dudleya multicaulis*, CRPR List 1B.2), white-veined monardella (*Monardella hypoleuca* subsp. *hypoleuca*, CRPR List 1B.3), slender mariposa lily (*Calochortus clavatus* var. *gracilis*, CRPR List 1B.2), Plummer's mariposa lily (*Calochortus plummerae*, CRPR List 4.2), Davidson's bush-mallow (*Malacothamnus davidsonii*, CRPR 1B.2), and mesa horkelia (*Horkelia cuneata* var. *puberula*, CRPR List 1B.1). Additional information on the potential for these species to occur within the study area is provided in Appendix D.

One of these special status plant species was observed during focused plant surveys: Plummer's mariposa lily (*Calochortus plummerae*), which is not federally or state listed, but considered by the CNPS as being of limited distribution and moderately threatened in California (CRPR List 4.2). Two occurrences[6] of Plummer's mariposa lily totaling 51 individuals were found in openings of coastal sage scrub and chaparral within the study area for Phase 3 (Figures 9a and 9b). These plants were typically found on slopes or the top of hills next to the existing access road/trail in Trigo-Modesto-San Andreas soils (Appendix A, Photos 12 and 13). Although suitable habitat for this plant is present within coastal sage scrub and chaparral along Phases 1 and 2, this species was not observed within the study area for those phases.

No other sensitive plant species were observed during focused plant surveys and are not expected to occur (Appendix D).

[6] An occurrence as defined by the CNDDB includes all plants within 0.25 mile of each other.

3.7 Federal and State Listed Zoological Species

The study area supports suitable nesting, roosting, foraging and/or dispersal habitat for five federal/state listed endangered/threatened/fully protected/candidate wildlife species: (1) the state threatened Swainson's hawk (*Buteo swainsoni*; nesting and foraging); (2) the state fully protected white-tailed kite (*Elanus leucurus*; nesting and foraging); (3) the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; nesting and foraging); (4) the federal and state endangered least Bell's vireo (*Vireo bellii pusillus*; nesting and foraging); and (5) the state candidate for threatened Townsend's big-eared bat (*Corynorhinus townsendii*). The study area may provide suitable dispersal and migration habitat for the federally endangered southwestern willow flycatcher (*Empidonax traillii extimus*), but does not support suitable nesting habitat. See Appendix F for a summary of listed wildlife species and their potential to occur within the study area. No federally designated critical habitat occurs within the study area.

3.7.1 Other Special Status Zoological Species

The study area supports suitable nesting, roosting, foraging and/or dispersal habitat for 12 non-listed federal and/or state sensitive wildlife species, which includes the following status designations: Rare in California (CR) and State Species of Concern (SSC). These species include: (1) silvery legless lizard (*Anniella pulchra pulchra*; SSC); (2) coast horned lizard (*Phrynosoma blainvillii*; SSC); (3) grasshopper sparrow (*Ammodramus savannarum*; SSC); (4) loggerhead shrike (*Lanius xanthinus*; SSC); (5) pallid bat (*Antrozous pallidus*; SSC); (6) western mastiff bat (*Eumops perotis californicus*; SSC); (7) western yellow bat (*Lasiurus xanthinus*; SSC); (8) San Diego black-tailed jackrabbit (*Lepus californicus bennettii* SSC); (9) San Diego woodrat (*Neotoma lepida intermedia*; SSC); (10) southern grasshopper mouse (*Onychomys torridus Ramona*; SSC); (11) Los Angeles pocket mouse (*Perognathus longimembris brevinasus*; SSC); and (12) American badger (*Taxidea taxus*; SSC). See Appendix F for a summary of sensitive wildlife species and their potential to occur within the study area.

3.8 Jurisdictional Delineation

A jurisdictional delineation was conducted to identify the limits of USACE and RWQCB jurisdiction, including wetlands, pursuant to the CWA and limits of CDFW jurisdiction pursuant to Fish and Game Code Section 1600-1603. The following is a summary of the jurisdictional delineation conducted within the study area. The delineation results represent HDR's best professional judgment. The actual limits of jurisdiction are determined by each regulatory agency. A Preliminary Jurisdictional Determination form is included in Appendix G.

The study area supports approximately 0.45 acre of potential USACE/RWQCB regulated non-wetland waters, 0.18 acre of CDFW regulated unvegetated streambed, and 2.45 acres of CDFW regulated riparian habitat (Figures 10a and 10b; Table 4). All jurisdictional areas are associated with Tributary A, which occurs in the western portion of the study area. A description of Tributary A is provided below. Photographs depicting jurisdictional features within the study area are located in Appendix A.

Table 4. USACE/RWQCB and CDFW Jurisdictional Areas Located within the Study Area

Potential Jurisdictional Feature	USACE/RWQCB Non-Wetland Waters of the U.S. (Acres)	CDFW Riparian (Acres)	CDFW Unvegetated Streambed (Acres)	Total CDFW (Acres)	Linear Feet within the Study Area
Tributary A	0.45	2.45	0.18	2.63	3,618

A single drainage, Tributary A, occurs within the western portion of the study area. The low-order ephemeral drainage flows north to south and crosses the existing dirt access road/trail in two locations (Appendix A, Photo 14). Where the channel crosses the existing road, the channel bed consists of natural substrate and supports an approximately 3-foot-wide OHWM. The channel originates further upstream and outside of the study area within the canyon separating the eastern and western portions of the study area (Figures 10a and 10b; Appendix A, Photo 15). As discussed in Section 3.3 Hydrology, the tributary flows offsite into a retention basin managed by the landfill, which outlets to the Hansen Flood Control Basin, which in turn connects to the Los Angeles River and eventually outlets into the Pacific Ocean at the Port of Long Beach. Therefore, this potentially jurisdictional feature has a nexus to a TNW (Pacific Ocean).

Tributary A supports a defined OHWM that ranges between 3 and 7 feet wide along the 3,618-foot length of channel within the study area. Indicators of an OHWM include destruction of terrestrial vegetation, shelving, change in soil character, and wrack and debris (Appendix A, Photo 16). In general, the feature supports sandy-silty soils with small to medium cobble, is entrenched/confined by adjacent hillslopes, and does not support a broad floodplain. The feature supports moderate to vertically sloped banks ranging from 2-12 feet in height. The channel was completely dry at the time of the delineation survey.

The drainage supports a mix of upland and riparian vegetation along the banks and occasionally within the channel (Table 5, below; Figures 9c and 9e; Appendix A, Photo 17). Although a few small sections of the active channel support hydrophytic vegetation such as mule fat (FAC) and willows (FACW), soils are sandy and the channel did not support evidence of prolonged inundation (e.g., water-stained leaves, water marks, biotic crust and soil cracks) that might indicate the presence of hydric soils. The Future Connection 2B and 2C crossing of Tributary A is shown in Appendix A, Photo 18.

Potential CDFW jurisdiction extends to the top of bank where the channel supports upland vegetation and to the edge of all riparian vegetation associated with the channel (Figures 9c and 9e).

Figure 10a. Jurisdictional Areas

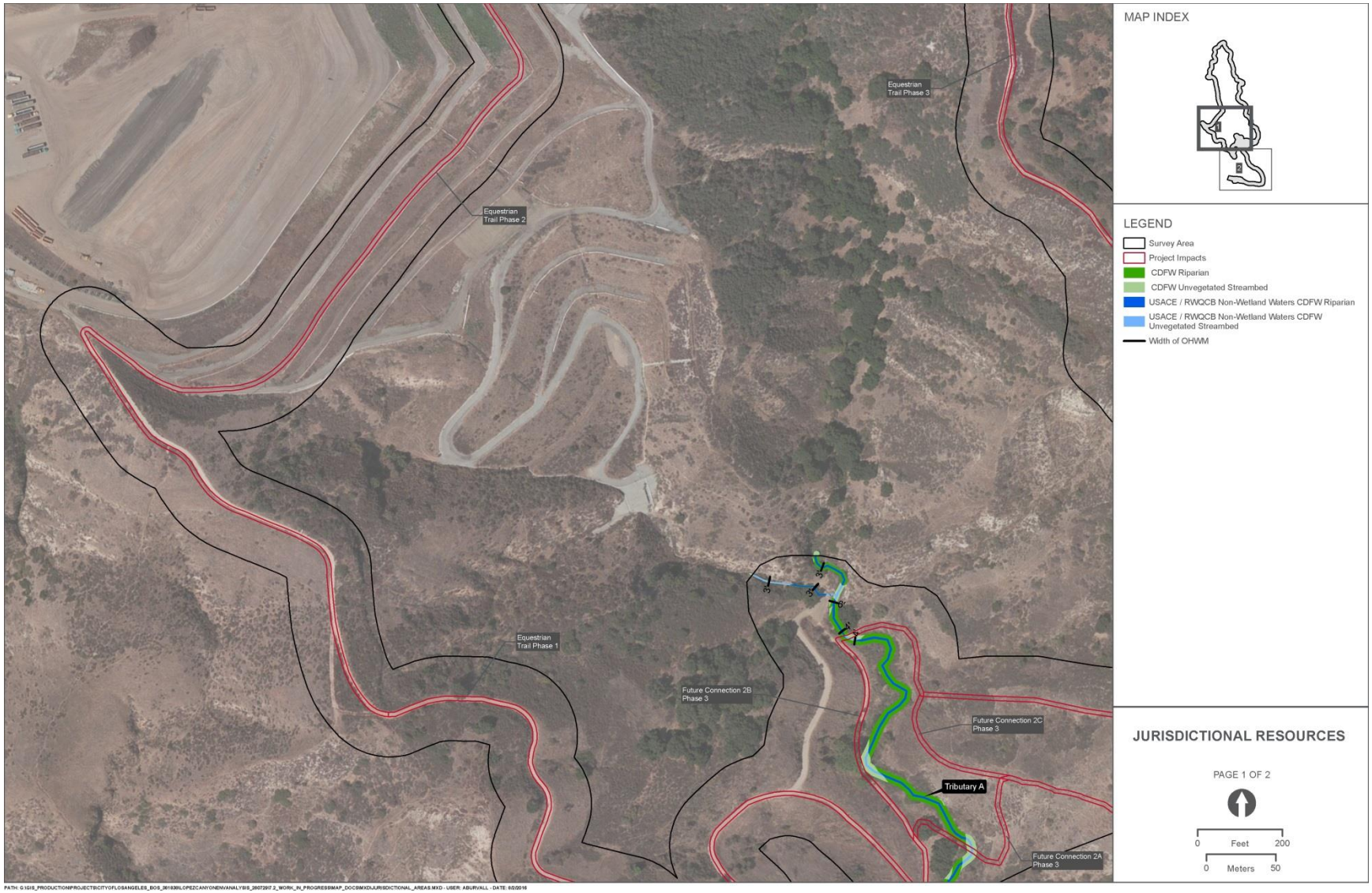


Figure 10b. Jurisdictional Areas

Table 5. Potential USACE and CDFW Jurisdictional Areas by Vegetation Community

Jurisdiction	Acres within Tributary A
USACE/RWQCB Non-Wetland Waters of the U.S.	
Arroyo Willow Thickets (*Salix lasiolepis* Alliance)	0.01
Black Sage Scrub (*Salvia mellifera* Alliance)	0.01
Black Willow Thickets (*Salix gooddingii* Alliance)	0.08
Blue Elderberry Stands (*Sambucus nigra* Alliance)	0.01
California Brittle Bush Scrub (*Encelia californica* Alliance)	<0.01
California Sagebrush Scrub (*Artemisia californica* Alliance)	0.02
Coast Live Oak Woodland (*Quercus agrifolia* Alliance)	0.04
Disturbed Habitat	<0.01
Mule Fat Thicket (*Baccharis salicifolia* Alliance)	0.25
Non-native Grassland	0.02
Olive (*Olea europaea*) Stands	<0.01
Poison Oak Scrub (*Toxicodendron diversilobum* Alliance)	<0.01
Tree of Heaven (*Ailanthus altissima*) Stands	0.01
Total USACE	***0.45***
CDFW Riparian	
Arroyo Willow Thickets (*Salix lasiolepis* Alliance)	0.05
Black Willow Thickets (*Salix gooddingii* Alliance)	0.52
Blue Elderberry Stands (*Sambucus nigra* Alliance)	0.07
Coast Live Oak Woodland (*Quercus agrifolia* Alliance)	0.21
Mule Fat Thicket (*Baccharis salicifolia* Alliance)	1.60
Subtotal CDFW	***2.45***
CDFW Unvegetated Streambed	
Black Sage Scrub (*Salvia mellifera* Alliance)	0.05
California Sagebrush Scrub (*Artemisia californica* Alliance)	0.04
Disturbed Habitat	0.01
Non-native Grassland	0.04
Olive (*Olea europaea*) Stands	<0.01
Tree of Heaven (*Ailanthus altissima*) Stands	0.03
Subtotal CDFW	***0.18***
Total CDFW	**2.63**

3.9 Migratory Birds

Suitable habitat that would support nesting migratory birds occurs within and adjacent to the study area. Suitable habitat includes native and non-native shrubs and mature trees (>24-in diameter).

3.10 Wildlife Dispersal Corridors or Linkages

Wildlife movement corridors, also called dispersal corridors or landscape linkages, are linear features primarily connecting at least two significant habitat areas. Wildlife corridors and linkages are important features in the landscape, and the viability and quality of a corridor or linkage are dependent upon site-specific factors. Topography and vegetative cover are important factors for

corridors and linkages. These factors should provide cover for both predator and prey species. They should direct animals to areas of contiguous open space or resources and away from humans and development. The corridor or linkage should be buffered from human encroachment and other disturbances (e.g., light, loud noises, domestic animals) associated with developed areas that have caused the habitat fragmentation (Schweiger et al. 2000). Wildlife corridors and linkages may function at various levels depending upon these factors and, as such, the most successful wildlife corridors and linkages will accommodate all or most of the necessary life requirements of predator and prey species.

The northern portion of the study area occurs within a designated "Key Place" in the Angeles National Forest Land Management Plan (ANFLMP) (USDA 2005). The "Key Place" is known as The Front County Place and is accessible from various points along the Interstate 5, 15, and 210 travel corridors. It is generally bound to the south by I-210 and the communities of Sylmar, San Fernando, and Burbank to the south, Santa Clarita and Highway 14 to the west, the Angeles National Forest to the north (including other "Key Places"), and the San Bernardino National Forest to the east. The following description of The Front Country Place is taken from the 2005 ANFLMP.

> The southern aspect of the Place includes steep slopes with sharp to rounded summits and deep narrow canyons. The steeper reaches of the slopes are typically barren and highly eroded. Canyons characteristically have steep, rocky sides and are often strewn with large distinctive boulders. There is a rich diversity of plant and animal species found in the Place, as well as habitat for four federally listed plants and several other rare plants. Riparian areas along the streams include habitat for numerous riparian dependent species, and serve as valuable linkages between the national forest and adjacent habitat on private land. Potential threats to habitat for riparian dependent species and other sensitive habitat include recreation uses, wildland fire, flood control and other water conservation activities and practices. This Place includes a variety of special designations, including the San Dimas Experimental Forest and the 1,400-acre Fern Canyon Research Natural Area, which offers opportunity for study of mixed chaparral and live oak woodland communities. Five Inventoried Roadless Areas are located in the Front Country, some of which may be recommended as wilderness.

"Key Places" are valued for their biological value in supporting a rich diversity of native and sensitive plants and animals, wildlife corridors and linkage potential, cultural resources, and aesthetic properties. According to the 2005 ANFLMP, the Front Country Place is maintained as a natural appearing landscape that functions as a 'first impression' scenic backdrop for the Los Angeles/San Bernardino metropolitan area, and a national forest portal for its 15 million residents. Wildlife linkages connecting the southern San Gabriel Mountains to the Santa Ana, Santa Susana and Verdugo Mountains are established and functioning. Habitat conditions for threatened, endangered, proposed, candidate and sensitive species are improving over time. Exotic species are reduced and controlled over time.

In general, the study area occurs along the southernmost boundary of the Front Country Place and currently supports a variety of outdoor recreational activities such as horseback riding and hiking, as well as providing access to the landfill (and other parties) along existing dirt roads. Wildlife corridors and linkages to The Front Country Place are not impeded by current activities associated with landfill operations within the study area.

THIS PAGE INTENTIONALLY LEFT BLANK.

4 Direct and Indirect Impacts

Impacts to biological resources from the proposed project include direct and indirect impacts. Direct impacts are changes in the physical environment caused by the project that are immediately related to the project; they occur in the same time and place as the project (e.g., grading associated with construction of a project, etc.). Indirect impacts are changes to the physical environment that occur later in time or farther removed in distance than direct impacts (e.g., long term changes in water quality, off-site impacts from noise, dust, lighting, etc.). All direct impacts associated with construction of the trail and staging areas would be considered permanent as these areas will be maintained over time. Indirect impacts may be considered temporary or permanent depending upon the situation. Potential direct and indirect project impacts are discussed in further detail below. Avoidance and minimization measures are proposed for significant impacts to biological resources within the appropriate subsections.

4.1 Direct Impacts to Biological Resources

4.1.1 Vegetation Communities

Implementation of the project would result in permanent impacts to native and non-native vegetation communities and cover types (Figures 9a through 9e). Tables 6 and 7 summarize the impacts to vegetation communities and cover types within the proposed trail and staging areas for Phases 1 and 2, respectively. Tables 8 through 10 summarize the impacts to vegetation communities and cover types for Phase 3 with the three optional Future Connection 2 alignments. As shown in Tables 8 through 10, vegetation community impacts for the three optional Future Connection 2 alignments would be similar. Future Connection 2C would avoid impacts to coastal sage scrub, while impacts to coastal sage scrub would be 0.01 acre greater for Future Connection 2B than for 2A. Although all three alternative Future Connection 2 alignments show impacts to blue elderberry stands of approximately 0.1 acre, it is anticipated that the trail alignments can be slightly modified to avoid all impacts to individual blue elderberry trees.

Table 6. Phase 1 - Impacts to Vegetation Communities

Vegetation Community	Permanent Impacts (Acres)
EQUESTRIAN TRAIL VEGETATION IMPACTS	
Blue Elderberry Stands (*Sambucus nigra* Alliance)	0.01
Chaparral	
Chamise Chaparral (*Adenostoma fasciculatum* Alliance)	<0.01
Coastal Sage Scrub	
Black Sage Scrub (*Salvia mellifera* Alliance)	<0.01
California Brittle Bush Scrub (*Encelia californica* Alliance)	0.02
California Sagebrush Scrub (*Artemisia californica* Alliance)	0.08
California Sagebrush – Black Sage Scrub (*Artemisia californica – Salvia mellifera* Alliance)	0.12
California Sagebrush – Buckwheat Scrub (*Artemisia californica – Eriogonum fasciculatum* Alliance)	0.05
Native Riparian	
Arroyo Willow Thickets (*Salix lasiolepis* Alliance)	<0.01

Vegetation Community	Permanent Impacts (Acres)
Black Willow Thickets (*Salix gooddingii* Alliance)	<0.01
Mulefat Thickets (*Baccharis salicifolia* Alliance)	0.02
Non-native Communities	
Non-native Grassland	0.10
Ornamental	0.05
Disturbed/Developed Cover Types	
Disturbed Habitat	0.61
Urban/Developed	0.39
Subtotal	***1.45***
STAGING AREA VEGETATION IMPACTS	
Non-Native Communities	
Ornamental	0.71
Disturbed/Developed Cover Types	
Disturbed Habitat	3.25
Urban/Developed	<0.01
Subtotal	***3.96***
Total	**5.41**

Table 7. Phase 2 - Impacts to Vegetation Communities

Vegetation Community	Permanent Impacts (Acres)
EQUESTRIAN TRAIL VEGETATION IMPACTS	
Chaparral	
Chamise Chaparral (*Adenostoma fasciculatum* Alliance)	0.04
Coastal Sage Scrub	
California Buckwheat Scrub (*Eriogonum fasciculatum* Alliance)	0.02
California Sagebrush Scrub (*Artemisia californica* Alliance)	0.04
California Sagebrush – Black Sage Scrub (*Artemisia californica – Salvia mellifera* Alliance)	0.01
California Sagebrush – Buckwheat Scrub (*Artemisia californica – Eriogonum fasciculatum* Alliance)	<0.01
Non-Native Communities	
Non-native Grassland	0.10
Disturbed/Developed Cover Types	
Disturbed Habitat	0.13
Urban/Developed	0.73
Total	**1.07**

Table 8. Phase 3 with Future Connection Option 2A - Impacts to Vegetation Communities

Vegetation Community	Permanent Impacts (Acres)
EQUESTRIAN TRAIL VEGETATION IMPACTS	
Blue Elderberry Stands (*Sambucus nigra* Alliance)	<0.01
Chaparral	
Chamise Chaparral (*Adenostoma fasciculatum* Alliance)	0.02
Hoary Leaf Ceanothus Chaparral (*Ceanothus crassifolius* Alliance)	0.01
Coast Live Oak Woodland (*Quercus agrifolia Alliance*)	0.01
Coastal Sage Scrub	
California Buckwheat Scrub (*Eriogonum fasciculatum* Alliance)	0.02
California Sagebrush Scrub (*Artemisia californica* Alliance)	0.04
California Sagebrush – Black Sage Scrub (*Artemisia californica – Salvia mellifera* Alliance)	0.04
California Sagebrush – Buckwheat Scrub (*Artemisia californica – Eriogonum fasciculatum* Alliance)	0.10
Non-native Communities	
Non-native Grassland	0.11
Pepper Tree Groves (*Schinus molle* Semi-Natural Stands)	<0.01
Tree of Heaven (*Ailanthus altissima*) Stands	<0.01
Disturbed/Developed Cover Types	
Disturbed Habitat	1.28
SUBTOTAL	***1.64***
FUTURE CONNECTION 1 VEGETATION IMPACTS	
Coastal Sage Scrub	
California Brittle Bush Scrub (*Encelia californica* Alliance)	0.04
Chaparral	
Chamise Chaparral (*Adenostoma fasciculatum* Alliance)	0.01
Hoary Leaf Ceanothus Chaparral (*Ceanothus crassifolius* Alliance)	0.01
Non-native Communities	
Non-native Grassland	0.12
Disturbed/Developed Cover Types	
Disturbed Habitat	<0.01
Urban/Developed	<0.01
SUBTOTAL	***0.20***
FUTURE CONNECTION ALTERNATIVE 2A VEGETATION IMPACTS	
Blue Elderberry Stands (*Sambucus nigra* Alliance)	0.01
Coastal Sage Scrub	
Black Sage Scrub (*Salvia mellifera* Alliance)	0.03
Native Riparian	
Mulefat Thickets (*Baccharis salicifolia* Alliance)	0.01
Non-native Communities	
Non-native Grassland	0.33
Olive (*Olea europaea*) Stands	0.03
Disturbed/Developed Cover Types	
Disturbed Habitat	0.07
Subtotal	***0.48***
Total	***2.32***

Table 9. Phase 3 with Future Connection Option 2B - Impacts to Vegetation Communities

Vegetation Community	Permanent Impacts (Acres)
EQUESTRIAN TRAIL VEGETATION IMPACTS	
Blue Elderberry Stands (*Sambucus nigra* Alliance)	<0.01
Chaparral	
Chamise Chaparral (*Adenostoma fasciculatum* Alliance)	0.02
Hoary Leaf Ceanothus Chaparral (*Ceanothus crassifolius* Alliance)	0.01
Coast Live Oak Woodland (*Quercus agrifolia Alliance*)	0.01
Coastal Sage Scrub	
California Buckwheat Scrub (*Eriogonum fasciculatum* Alliance)	0.02
California Sagebrush Scrub (*Artemisia californica* Alliance)	0.04
California Sagebrush – Black Sage Scrub (*Artemisia californica – Salvia mellifera* Alliance)	0.04
California Sagebrush – Buckwheat Scrub (*Artemisia californica – Eriogonum fasciculatum* Alliance)	0.10
Non-native Communities	
Non-native Grassland	0.11
Pepper Tree Groves (*Schinus molle* Semi-Natural Stands)	<0.01
Tree of Heaven (*Ailanthus altissima*) Stands	<0.01
Disturbed/Developed Cover Types	
Disturbed Habitat	1.28
Subtotal	***1.64***
FUTURE CONNECTION 1 VEGETATION IMPACTS	
Coastal Sage Scrub	
California Brittle Bush Scrub (*Encelia californica* Alliance)	0.04
Chaparral	
Chamise Chaparral (*Adenostoma fasciculatum* Alliance)	0.01
Hoary Leaf Ceanothus Chaparral (*Ceanothus crassifolius* Alliance)	0.01
Non-native Communities	
Non-native Grassland	0.12
Disturbed/Developed Cover Types	
Disturbed Habitat	<0.01
Urban/Developed	<0.01
Subtotal	***0.20***
FUTURE CONNECTION ALTERNATIVE 2B VEGETATION IMPACTS	
Blue Elderberry Stands (*Sambucus nigra* Alliance)	<0.01
Coastal Sage Scrub	
California Sagebrush – Black Sage Scrub (*Artemisia californica – Salvia mellifera* Alliance)	0.04
Native Riparian	
Mulefat Thickets (*Baccharis salicifolia* Alliance)	0.01
Non-native Communities	
Non-native Grassland	0.33
Tree of Heaven (*Ailanthus altissima*) Stands	0.03
Disturbed/Developed Cover Types	
Disturbed Habitat	0.04
Subtotal	***0.46***
Total	**2.30**

Table 10. Phase 3 with Future Connection Option 2C - Impacts to Vegetation Communities

Vegetation Community	Permanent Impacts (Acres)
EQUESTRIAN TRAIL VEGETATION IMPACTS	
Blue Elderberry Stands (*Sambucus nigra* Alliance)	<0.01
Chaparral	
Chamise Chaparral (*Adenostoma fasciculatum* Alliance)	0.02
Hoary Leaf Ceanothus Chaparral (*Ceanothus crassifolius* Alliance)	0.01
Coast Live Oak Woodland (*Quercus agrifolia Alliance*)	0.01
Coastal Sage Scrub	
California Buckwheat Scrub (*Eriogonum fasciculatum* Alliance)	0.02
California Sagebrush Scrub (*Artemisia californica* Alliance)	0.04
California Sagebrush – Black Sage Scrub (*Artemisia californica – Salvia mellifera* Alliance)	0.04
California Sagebrush – Buckwheat Scrub (*Artemisia californica – Eriogonum fasciculatum* Alliance)	0.10
Non-native Communities	
Non-native Grassland	0.11
Pepper Tree Groves (*Schinus molle* Semi-Natural Stands)	<0.01
Tree of Heaven (*Ailanthus altissima*) Stands	<0.01
Disturbed/Developed Cover Types	
Disturbed Habitat	1.28
Subtotal	***1.64***
FUTURE CONNECTION 1 VEGETATION IMPACTS	
Coastal Sage Scrub	
California Brittle Bush Scrub (*Encelia californica* Alliance)	0.04
Chaparral	
Chamise Chaparral (*Adenostoma fasciculatum* Alliance)	0.01
Hoary Leaf Ceanothus Chaparral (*Ceanothus crassifolius* Alliance)	0.01
Non-native Communities	
Non-native Grassland	0.12
Disturbed/Developed Cover Types	
Disturbed Habitat	<0.01
Urban/Developed	<0.01
Subtotal	***0.20***
FUTURE CONNECTION ALTERNATIVE 2C VEGETATION IMPACTS	
Blue Elderberry Stands (*Sambucus nigra* Alliance)	0.01
Native Riparian	
Mulefat Thickets (*Baccharis salicifolia* Alliance)	0.01
Non-native Communities	
Non-native Grassland	0.49
Tree of Heaven (*Ailanthus altissima*) Stands	0.03
Disturbed/Developed Cover Types	
Disturbed Habitat	0.10
Subtotal	***0.64***
Total	**2.48**

4.1.2 Sensitive Vegetation Communities

Sensitive vegetation communities include those considered by the CDFW as highly imperiled in the state of California (State Ranking of S1-S3) as well as those communities that provide suitable habitat for sensitive plant or wildlife species. Implementation of the proposed project would result in impacts to the following sensitive vegetation communities, as identified in Tables 6 through 10, above: blue elderberry stands, chaparral (both alliances), coastal sage scrub (all alliances), mule fat thickets, and willow riparian (Arroyo Willow and Black Willow Thickets).

Construction

Construction related impacts to sensitive vegetation communities would involve the direct removal of vegetation through site clearing and grading associated with the equestrian trail and safety rail installation. Following the completion of Phase 3, the project would impact up to 0.03 acre of blue elderberry stands, 0.62 acre of coastal sage scrub, 0.12 acre of chaparral, and 0.05 acre of riparian. This impact acreage includes the maximum disturbance associated with the project (i.e., Phase 3 with Future Connection 2B). In Phase 3 of the project, Future Connection 2C would realize a reduction in impact to coastal sage scrub of 0.04 acre compared to Future Connection 2B and of 0.03 acre compared to Future Connection 2A. Although minimized under Option 2C, each of the trail connections under consideration for Future Connections 1 ad 2 would result in direct impacts to sensitive vegetation communities that would be considered significant in the absence of mitigation.

Implementation of the following avoidance and minimization measures would reduce construction-related direct impacts to sensitive vegetation communities to below a level of significance:

BIO-1 **Designate a Qualified Biologist.** Prior to commencement of construction activities, LASAN shall designate a qualified project biologist who shall be responsible for overseeing compliance with protective measures for biological resources during clearing and work activities within and adjacent to areas of native habitat. The project biologist shall be familiar with the local habitats, plants, and wildlife and shall maintain communications with the contractor to ensure that issues relating to biological resources are appropriately and lawfully managed. The project biologist shall review final plans, designate areas that need temporary fencing, and monitor construction. The biologist shall monitor activities within designated areas during critical times such as vegetation removal, the installation of Best Management Practices (BMPs) and fencing to protect native species, and ensure that all avoidance and minimization measures are properly constructed and followed. The project biologist shall conduct a training session for all construction personnel and biological monitors. At minimum, the training shall include: (1) a description of sensitive biological resources, including sensitive communities, plant species, and wildlife species; (2) avoidance measures being implemented for sensitive biological resources; and (3) identification of the boundaries of permitted access and work areas.

BIO-2 **Worker Awareness Training Program.** Project personnel and contractors that will be on-site during construction of the trail improvements shall complete environmental worker awareness training conducted by the project biologist. The training shall advise workers of potential impacts to sensitive habitat and

sensitive species and the potential penalties for impacts to such habitat and species. At a minimum, the program shall include the following topics: occurrences of the sensitive species and sensitive vegetation communities in the area, a physical description and their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and work features designed to reduce the impacts to these species.

Included in this program shall be color photos of the sensitive species, which shall be shown to the employees. Following the education program, the photos shall be posted in the contractor and resident engineer's office, where they shall remain through the duration of the work. Photos of the habitat in which sensitive species are found shall also be posted on-site. The contractor shall be required to provide LASAN with evidence of the employee training (e.g., sign-in sheet or stickers) upon request. Employees and contractors shall be instructed to immediately notify the project biologist of any incidents, such as construction vehicles that move outside of the work area boundary. The project biologist shall be responsible for notifying the appropriate regulatory agency within 72 hours of any similar incident.

BIO-3 **Management of Invasive Weeds.** The project biologist shall monitor the project site immediately prior to and during construction to identify the presence of invasive weeds (those identified by the California Invasive Plant Council [Cal-IPC] as having a moderate or high level of invasiveness or plants considered locally invasive) and recommend measures to avoid their inadvertent spread in association with the project. Such measures may include inspection and cleaning of construction equipment and use of eradication strategies. All heavy equipment shall be washed and cleaned of debris prior to entering sensitive habitat areas to minimize the spread of invasive weeds.

BIO-4 **Establish Project Limits.** All native or sensitive habitat areas outside and adjacent to the project limits shall be designated as Environmentally Sensitive Areas (ESAs) on project maps. Prior to construction, LASAN shall delineate the construction area and erect construction fencing along the perimeter of the identified construction area to protect adjacent sensitive habitats and sensitive plant populations. ESAs shall be temporarily fenced by the Contractor during construction with orange plastic snow fence, orange silt fencing, or, in areas of flowing water, with stakes and flagging. This fencing shall be marked clearly in the field and confirmed by the project biologist prior to any clearing, and the marked boundaries shall be maintained throughout the duration of construction work. Staging areas, including lay down areas and equipment storage areas, shall be flagged and fenced with ESA fencing. No personnel, equipment, or debris shall be allowed within the ESAs. Fencing and flagging shall be installed by the Contractor in a manner that does not impact habitats to be avoided and such that it is clearly visible to personnel on foot and operating heavy equipment. The Contractor shall submit to LASAN final plans for initial clearing and grubbing of habitat and project construction 10 days prior to initiating impacts. Temporary

construction fencing and markers shall be maintained in good repair by the Contractor until the completion of each phase of project construction and removed upon completion of each project phase.

No work activities, materials or equipment storage or access shall be permitted outside the identified work area without express written permission from LASAN. All parking and equipment storage related to the project shall be confined to the identified work area by the Contractor. Undisturbed areas and off-site sensitive habitat shall not be used for parking or equipment storage. Project-related vehicle traffic shall be restricted to the project limits, established roads and construction access points, and designated staging areas within the identified work area.

BIO-5 **Construction Staging and Vehicle Use.** All construction-related vehicles and equipment storage shall occur in the staging area and/or previously disturbed areas as approved by the project biologist. Project-related vehicle traffic shall be restricted to established roads, construction areas, and staging and parking areas. If construction activity extends beyond the construction fencing into sensitive vegetation communities, areas of disturbance shall be quantified and an appropriate restoration approach shall be developed in consultation with the appropriate resource agencies. For example, if construction extends beyond the limits of the construction fencing, temporarily disturbed areas shall be restored to the natural (preconstruction) conditions, which may include the following: salvage and stockpiling of topsoil, re-grading of disturbed sites with salvaged topsoil, and re-vegetation with native locally available plant species.

BIO-6 **Prepare Compensatory Restoration Plan.** Impacts to sensitive vegetation communities (blue elderberry stands, chaparral [both alliances], coastal sage scrub [all alliances], mule fat thickets, and willow riparian [Arroyo Willow and Black Willow Thickets]) shall be mitigated through the restoration or enhancement of habitat onsite at a 1:1 ratio. Restoration/enhancement shall be provided through the removal of non-native plant species onsite, including tree of heaven, pepper tree, olive tree, and non-native plants associated with non-native grasslands, and the replacement with native plant communities. If sufficient suitable area is not available within the vicinity of the project impact area, then offsite mitigation options will be pursued. A Restoration Plan shall be prepared for the project that will detail the communities to be restored, location for restoration, container plant palettes and/or seed mixes, and maintenance and monitoring requirements.

Operations

Direct impacts to sensitive vegetation communities associated with ongoing trail operations, maintenance, and use are anticipated to include inadvertent trampling and/or disturbance of native vegetation by hikers or equestrians wandering off of the designated trails. Implementation of the following measure would reduce operations-related direct impacts to sensitive vegetation communities to below a level of significance:

BIO-7 **Informational Signage.** Educational signage at the trailheads shall include information on the sensitivity of the vegetation communities (including jurisdictional resources) and native plant and animal species that naturally occur along the trail. Such signage shall include information reminding hikers and equestrians to stay on the designated trails. Periodic low stature signs shall be placed along the trails reminding hikers and equestrians of sensitive habitat areas and to please stay on the trails to help protect sensitive habitat, plants, and wildlife.

4.1.3 Sensitive Plant Species

Construction

Direct impacts to sensitive plant species within the project footprint would involve the physical removal of such plants associated with trail widening/creation.

One individual Plummer's mariposa lily plant is present within the proposed permanent impact area for Phase 3. This plant is located next to a California sagebrush plant that is growing on the flat area next to the existing dirt access road (Appendix A, Photo 12). Typical habitat that this species was found in along Phase 3 is shown in Appendix A, Photo 13.

Impacts to one Plummer's mariposa lily plant would not be considered significant. This plant is a perennial bulbiferous herb, indicating that the belowground portion of the plant will produce another individual in approximately the same location each year and can produce several flowers from the same bulb. New bulbs can form from seeds a few years after they germinate. Mariposa lily bulbs are fire-adapted, indicating that they can survive wildfires and often produce flowers after such events. Because the exact location and numbers of flowering individuals can vary from year to year depending on rainfall and other environmental factors, pre-construction surveys for each Phase are recommended during the flowering period (May through July) to determine the project impacts to this species for each Phase.

No other sensitive plant species were observed during focused plant surveys and are not expected to occur (Appendix D).

Implementation of the following avoidance and minimization measure would reduce construction-related direct impacts to Plummer's mariposa lily during construction of the project to below a level of significance:

BIO-8 **Pre-Construction Special Status Plant Surveys.** Prior to construction of each phase, a qualified biologist retained by LASAN shall conduct pre-construction surveys for special status plant species including Plummer's mariposa lily. If one or more species are detected, then LASAN shall consult with the appropriate resource agencies to develop additional minimization measures prior to project construction (if necessary). These additional measures may include construction monitoring, seed or bulb collection, and seeding or planting of bulbs.

Operations

Direct impacts to sensitive plant species associated with ongoing trail operations, maintenance, and use are anticipated to include inadvertent trampling and/or collection of wildflowers by hikers or equestrians wandering off of the designated trails. Implementation of measure BIO-8, above, would reduce operations-related direct impacts to sensitive plant species to below a level of significance.

4.1.4 Sensitive Wildlife Species

Construction

The study area supports suitable nesting and foraging habitat for the federally threatened coastal California gnatcatcher, federal and state endangered least Bell's vireo, state threatened Swainson's hawk, state fully protected white-tailed kite, and roosting and foraging habitat for the Townsend's big-eared bat, a state candidate for threatened. In addition, the study area supports suitable habitat for 12 non-listed federal and/or state sensitive wildlife species, including, silvery legless lizard, coast horned lizard, grasshopper sparrow, loggerhead shrike, pallid bat (foraging only), western mastiff bat (foraging only), western yellow bat (foraging only), San Diego black-tailed jackrabbit, San Diego woodrat, southern grasshopper mouse, Los Angeles pocket mouse and American badger.

The small quantity of habitat being lost (not to exceed 9.06 acres) relative to the quantity of available open space habitat remaining would not result in significant impacts to these species. In addition, implementation of Measure BIO-9 would reduce construction-related direct impacts to these species to below a level of significance.

Operations

The proposed trail is already in place and utilized for maintenance access and by the public for recreation with the exception of Trail Connections 1 and 2. Unmaintained foot trails already exist in these areas. Development of a single maintained trail will consolidate trail use to a single alignment and reduce potential for recreational users to inadvertently damage habitat or disturb nesting of sensitive wildlife species when creating their own paths through the open space.

There are not anticipated to be any direct impacts to sensitive wildlife species associated with ongoing trail operations, maintenance, and use. Measure BIO-8, above, would minimize any unanticipated impacts to sensitive wildlife species and would reduce operations-related direct impacts to these species to below a level of significance.

4.1.4.1 Coastal California Gnatcatcher and Least Bell's Vireo

Construction

The proposed project would remove small quantities of vegetation communities (coastal sage scrub and riparian scrub) with the potential to support CAGN and LBVI, see Table 11, below. If individuals are present during habitat removal, the resulting harassment would be considered a take pursuant to the Endangered Species Act and a significant impact requiring consultation with USFWS and CDFW.

Additionally, construction activities that would occur within 500 feet of these habitats during the CAGN breeding season (February 15 through August 31) and LBVI breeding season (March 15 through September 15), would have the potential to impact breeding CAGN and LBVI, if present. Potential indirect impacts on breeding CAGN and LBVI would be considered significant in the absence of mitigation.

Table 11. Proposed Impacts to Potential CAGN and LBVI Habitat by Project Phase

Project Phase	Impacted Potential CAGN Habitat[1] (acres)	Impacted Potential LBVI Habitat[2] (acres)
Phase 1	0.27	0.02
Phase 2	0.07	0.00
Phase 3 with Alternative Future Connection 2A	0.27	0.01
Phase 3 with Alternative Future Connection 2B	0.28	0.01
Phase 3 with Alternative Future Connection 2C	0.24	0.01

[1] CAGN habitat types includes all coastal sage scrub alliances.
[2] LBVI habitat includes mulefat thickets and willow riparian alliances.

Implementation of the following avoidance and minimization measures would reduce construction-related direct impacts to CAGN and LBVI during the breeding season, should they be present in the vicinity of the project, to below a level of significance:

BIO-9 **CAGN and LBVI Avoidance and Minimization Measures**. LASAN shall implement the following avoidance and minimization measures during prior to and during construction of the proposed project:

a. If feasible, construction activities including vegetation trimming or removal with CAGN habitat (all coastal sage scrub communities) shall occur outside of the CAGN breeding season. The breeding season for CAGN is defined as February 15 through August 31 each year).

b. If feasible, construction activities including vegetation trimming or removal with LBVI habitat (all willow riparian communities and mule fat thickets) shall occur outside of the LBVI breeding season. The breeding season for LBVI is defined as March 15 through September 15 each year).

c. Preconstruction clearance surveys shall be conducted in all coastal sage scrub habitat prior to habitat removal. A minimum of three focused surveys shall be conducted on separate days by a qualified biologist to determine the presence of CAGN. The surveys shall begin a maximum of 7 days prior to project construction and one survey shall be conducted by the project biologist the day immediately prior to the initiation of work. Should CAGN be detected, work shall be directed to unoccupied areas until the biologist determines that the CAGN has left the work area.

d. If an active CAGN or LBVI nest is found within 500 feet of project construction, the project biologist shall work with the contractor so as to maintain noise levels of less than 60 dBA Leq at the nest location. If infeasible, work shall be postponed within 500 feet of the nest(s) until the non-breeding season.

e. A qualified biologist shall conduct full-time monitoring during clearing of CAGN and LBVI habitat to ensure that work limits are not exceeded and that target species are not present during habitat removal.

f. Pets of project personnel will not be allowed on the project site.

Implementation of Mitigation Measure BIO-9 would ensure no inadvertent take of CAGN or LBVI should it be present in the vicinity of the project and no impact would occur.

Operations

The proposed trail is already in place and utilized for maintenance access and by the public for recreation with the exception of Trail Connections 1 and 2. Unmaintained foot trails already exist in these areas. Development of a single maintained trail will consolidate trail use to a single alignment and reduce potential for recreational users to inadvertently damage habitat or disturb nesting when creating their own paths through the open space. Implementation of BIO-7 would reduce potential operations-related impacts to CAGN and LBVI to below a level of significance.

4.1.4.2 Swainson's Hawk

Suitable foraging habitat for Swainson's hawk occurs within the project area and may be permanently impacted by project implementation. Disruption of nesting activities, should nesting occur adjacent to construction activities, would be considered significant. Preconstruction nest surveys recommended in BIO-10 would ensure no inadvertent take of Swainson's hawk should it be present in the vicinity of the project and would reduce potential impacts to less than significant. Loss of foraging habitat (not to exceed 9.06 acres) is insubstantial relative to available open space habitat (acres). Implementation of BIO-10 would reduce construction- and operations-related impacts to Swainson's hawk to below a level of significance.

BIO-10 **Pre-Construction Nesting Surveys.** Should clearing and grubbing be initiated during nesting season (February 15 through August 30), pre-construction nesting surveys shall be conducted within 7 days of construction commencement. Should a nest be found within or adjacent to the construction work area, a buffer shall be installed and the nest area shall be avoided until the young fledges or the nest becomes inactive. The size of the buffer shall be determined by a qualified biologist based on the topography, noise/activity in the vicinity, and bird behavior.

4.1.4.3 White-tailed Kite

Suitable foraging habitat for white-tailed kite occurs within the project area and may be permanently impacted by project implementation. Preconstruction nest surveys recommended in BIO-10 would ensure no inadvertent take of white tailed kite should it be present in the vicinity of the project. Loss of foraging habitat (not to exceed 9.06 acres) is insubstantial relative to available open space habitat (acres). No significant impact to the white-tailed kite is anticipated.

4.1.4.4 Townsend's Big-eared Bat

Suitable foraging habitat for the Townsend's big-eared bat occurs within the project area. However, suitable roosting habitat, such as mines, caves, bridges with crevices, does not. Therefore, project implementation would not result in a significant impact to this species.

4.1.4.5 Species of Special Concern

As noted above the study area supports suitable habitat for 16 non-listed federal and/or state sensitive wildlife species, including, silvery legless lizard, coast horned lizard, two-striped garter snake, grasshopper sparrow, Bell's sage sparrow, prairie falcon (foraging only), loggerhead shrike, pallid bat (foraging only), spotted bat, western mastiff bat, western yellow bat, San Diego black-tailed jackrabbit, San Diego woodrat, southern grasshopper mouse, Los Angeles pocket mouse and American badger. Impacts to these communities are minimal (<9.06 acre total). Therefore, project impacts to suitable habitat for these species would be less than significant and no mitigation is proposed.

4.1.4.6 Nesting Birds

Impacts to nesting birds are prohibited under the MBTA. Vegetation removal will occur outside of nesting season if feasible. However, should clearing and grubbing be initiated during nesting season (February 15 through August 30), BIO-10 shall be implemented, which would reduce potential impacts to nesting birds to below a level of significance.

4.1.5 Jurisdictional Resources

Construction

Implementation of the proposed project would result in permanent impacts to USACE, RWQCB, and CDFW jurisdictional areas, see Table 12, below, for a summary of impacts. Proposed impacts would occur at the two existing Arizona crossings during Phase 1 where existing crossings would be reinforced with a pervious material, such as articulated concrete block. The material would be placed at or below grade and, therefore, impacts would not result in a permanent loss of aquatic function for potential USACE, RWQCB, or CDFW jurisdictional areas. No impacts to potentially jurisdictional areas would occur during Phase 2.

Table 12. Impacts to USACE/RWQCB/CDFW Potentially Jurisdictional Areas

Jurisdiction	Permanent Impact (no loss) in Acres			
	Phase 1	Phase 3 With Alternative 2A	Phase 3 With Alternative 2B	Phase 3 With Alternative 2C
USACE / RWQCB Non-Wetland Waters of the U.S.	0.003	0.001	0.001	0.001
Total USACE	**0.003**	**0.001**	**0.001**	**0.001**
CDFW Riparian	0.013	0.002	0.002	0.002
CDFW Unvegetated Streambed	0.001	0.005	0.004	0.004
Total CDFW	**0.014**	**0.007**	**0.006**	**0.006**

Phase 3 would result in minor permanent impacts to USACE, RWQCB, and CDFW jurisdictional areas where the Future Connection 1 and either the alternative Future Connection 2A, 2B, or 2C would cross Tributary A.

Impacts to USACE, RWQCB and CDFW jurisdiction will require regulatory authorization as detailed in the regulatory framework section of this report. The net loss of riparian habitat would be considered significant prior to mitigation. Following implementation of BIO-6 (restoration or establishment of riparian habitat), impacts are reduced to less than significant.

Construction activities may result in indirect impacts to water quality. These impacts would be significant prior to mitigation. Implementation of the following avoidance and minimization measures would reduce construction-related impacts to jurisdictional areas to below a level of significance:

BIO-11 **Prepare and Implement Stormwater Pollution Presentation Plan.** LASAN shall require its construction contractor to prepare a SWPPP in accordance with the Clean Water Act. The SWPPP shall prohibit the disposal or temporary placement of excess fill, brush or other debris in USACE/RWQCB/CDFW jurisdictional areas or their banks.

The SWPPP shall require the storage of hazardous materials and equipment stored overnight, including small amounts of fuel to refuel hand-held equipment, to include secondary containment when within 50 feet of open water to the fullest extent practicable. Secondary containment shall consist of a ring of sand bags around each piece of stored equipment/structure. A plastic tarp/visqueen lining with no seams shall be placed under the equipment and over the edges of the sandbags, or a plastic hazardous materials (HazMat) secondary containment unit shall be utilized by the Contractor.

No fuel containers or hazardous materials shall be placed or stored outside of the designated staging areas. Vehicle and equipment refueling shall occur within the designated staging areas, but at least 50 feet away from open water areas and 25 feet from habitat with potential to support federally listed species to the fullest extent practicable.

Appropriate BMPs shall be used by the Contractor to control erosion and sedimentation to prevent deposition in waterways. No sediment or debris shall be allowed to enter drainages. Appropriate BMPs shall be used by the Contractor during construction to limit the spread of resuspended sediment and contain debris.

Construction and post-construction erosion and sediment control devices used for the proposed project, including fiber rolls and bonded fiber matrix, shall be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.

Implementation of BIO-11 would reduce potential indirect construction impacts to below a level of significance.

Operations

Ongoing trail use, operations, and maintenance may result in additional impacts to jurisdictional resources if hikers or equestrians wander off the trails. Future trail maintenance at drainage crossings would employ the use of porous materials so as to avoid the placement of materials that would be considered fill by USACE and CDFW. Implementation of mitigation measure BIO-11 would reduce operations-related impacts to jurisdictional areas to below a level of significance.

4.1.6 Migratory Birds and Raptors

Impacts to nesting migratory birds would be avoided following implementation of BIO-9. When feasible, removal of nesting habitat shall occur outside of the avian breeding season. The breeding season generally extends from February 15 through August 31. If nesting habitat must be removed during the breeding season, a qualified biologist shall conduct a nesting bird survey prior to habitat removal to verify that no migratory bird nests would be directly impacted and the impact would less than significant after mitigation.

4.1.7 Wildlife Dispersal Corridors or Linkages

The proposed project occurs within a relatively undeveloped area and supports habitat and vegetation likely used by wildlife as a dispersal corridor and linkage to the Angeles National Forest. However, the existing dirt access road has existed historically in the area and the proposed project would not modify the existing access and use of the site by wildlife. In addition, project implementation of the portion of the project occurring within the ANFLMP Front County Place would improve an existing trail system and would be consistent with current management of this National Forest area. Project implementation would not result in impacts to wildlife dispersal corridors or linkages.

4.2 Indirect Impacts to Biological Resources

4.2.1 Sensitive Vegetation Communities

Indirect impacts to sensitive vegetation communities may include sedimentation, changes in vegetation as a result of changes in land use and management practices, altered hydrology, habitat fragmentation, and the introduction of invasive species or noxious weeds from trail use by recreational users or maintenance trucks. Any disturbance of adjacent sensitive vegetation to the extent that the habitat cannot recover and/or transitions to a non-sensitive habitat type would be considered a significant impact. Additionally, construction activities occurring adjacent to sensitive vegetation communities may result in temporary indirect impacts such as dust, erosion/sedimentation, and ground disturbance from the intrusion of workers and equipment. These indirect impacts to sensitive vegetation communities would be considered significant. Implementation of BIO-7 and the following avoidance and minimization measure would reduce indirect impacts to sensitive vegetation communities to below a level of significance.

BIO-12 **Long-Term Management of Invasive Weeds.** Long-term trail maintenance shall include the removal of invasive weeds (those identified by the California Invasive Plant Council [Cal-IPC] as having a moderate or high level of invasiveness or plants considered locally invasive) immediately adjacent to the trails.

4.2.2 Sensitive Plant Species

Based on springtime focused rare plant surveys within the study area, approximately 50 individual Plummer's mariposa lilies may be indirectly impacted by project-related construction of Phase 3. Although no Plummer's mariposa lily plants were observed within the study area for Phases 1 and 2, suitable habitat is present and given that project construction for Phases 1 and 2 will not start until 2018 or later, there is the potential for Plummer's mariposa lily to inhabit the project area prior to construction. Indirect impacts to sensitive plants including dust, competition from invasive plant species or noxious weeds from trail use would be considered significant. Implementation of the avoidance and minimization measures listed in Section 4.2.1 would reduce indirect impacts to sensitive plant species to below a level of significance.

4.2.3 Sensitive Wildlife Species

Suitable habitat exists within the study area for CAGN and LBVI and therefore, these species have the potential to occur within the vicinity of project construction activities. Implementation of BIO-9 would reduce indirect impacts to CAGN and LBVI during their respective breeding seasons (February 15 – August 15 and March 15-September 31) to below a level of significance.

4.2.4 Jurisdictional Delineation

Construction of the proposed project is not anticipated to increase impermeable surface within the study area or otherwise contribute to changes in velocity, quality, flows, or volumes of storm discharge. Additionally, implementation of the standard storm water BMPs both within the trailhead staging area and trail network will protect downstream water quality during construction. Therefore, indirect impacts to USACE/RWQCB/CDFW jurisdictional areas are not anticipated.

5 References

American Ornithologists' Union (AOU). 2015. Fifty-sixth supplement to the American Ornithologists' Union *Check-list of North American Birds*. Auk 132:748-764.

Conservation Biology Institute (CBI). 2016. Critical Habitat Mapper, Final Critical Habitat for Threatened and Endangered Species, USFWS. Last modified June 06, 2016. http://databasin.org/datasets/d579d87eb54f4374a77ea53e7ef66449.

[County] County of Los Angeles Department of Parks and Recreation, 2013. County of Los Angeles Trails Manual. Available online at https://trails.lacounty.gov/Files/Documents/69/LA%20County%20Trails%20Manual%20(Revised%2006-20-13).compressed.pdf

[CNPS] California Native Plant Society, Rare Plant Program. 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org.

_____. 1983. Botanical Survey Guidelines. December 9, 1983 (Revised June 2, 2001).

Calflora. 2016. Information on California plants for education, research and conservation, based on data contributed by the Consortium of Calif. Herbaria and dozens of other public and private institutions and individuals. 2016. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/ (Accessed: May 2016).

[CDFW] California Department of Fish and Wildlife. 2016. California Natural Diversity Database Maps and Data. RareFind 5. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

_____. 2010. List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program, California Department of Fish and Game. Sacramento, CA. September 2010.

_____. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. November 24, 2009.

California Law. 2016. California Fish and Game Code. Viewed January 2016. http://www.leginfo.ca.gov/html/fgc_table_of_contents.html.

[LADPW] Department of Public Works, LA County. Los Angeles River Watershed https://dpw.lacounty.gov/wmd/watershed/la/. Viewed May 2016.

County of Los Angeles Department of Parks and Recreation, 2013. County of Los Angeles Trails Manual. https://trails.lacounty.gov/Files/Documents/69/LA%20County%20Trails%20Manual%20(Revised%2006-20-13).compressed.pdf. Viewed May 2016.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

Evens, J. and S. San. 2006. Vegetation alliances of the San Dieguito River Park region, San Diego County, California. Final report (August 2005) Version 2 (revised May 2006). Prepared by California Native Plant Society in cooperation with the California Natural Heritage Program of the California Department of Fish and Game and San Diego Chapter of the California Native Plant Society. Sacramento, CA. 271 pp.

Hickman, J.C., ed. 1993. The Jepson Manual, Higher Plants of California. University of California Press, Berkeley. 1400 pp.

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. State of California, Nongame-Heritage Program. 156p.

Klein, A. and J. Evens. 2005. Vegetation alliances of western Riverside County, California. Contract Number: P0185404. Final report prepared for The California Department of Fish and Game, Habitat Conservation Division. California Native Plant Society, Sacramento, CA. 332 pp. [http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/VegMappingRpt_Western_Riverside.pdf]

[LADPW] 2016a. Los Angeles Department of Public Works, LA County. Los Angeles River Watershed https://dpw.lacounty.gov/wmd/watershed/la/. Viewed May 2016a.

_____. 2016b. LADPW Storm Drain System http://www.arcgis.com/home/item.html?id=c62ae2f244f04e8086c89e8db3f530d8. Last Modified March 3, 2016. Viewed June 2016.

[LARWQCB] Los Angeles Regional Water Quality Control Board. Water Quality and Watersheds – Los Angeles River Watershed Summary http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/Water_Quality_and_Watersheds/los_angeles_river_watershed/LA_River_Watershed.pdf. Viewed website June 2016.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X

Los Angeles Department of Public Works (LADPW). 2016. *Santa Clara River Watershed.* Available online: http://www.dpw.lacounty.gov/wmd/watershed/sc/. Viewed June 2016.

Regents of the University of California. 2016. University and Jepson Herbaria (UC/JEPS), University of California, Berkeley. [http://ucjeps.berkeley.edu/IJM.html]. Website last updated May 13, 2016.

Reid, F.A. 2006. A Field Guide to Mammals of North America. Houghton-Mifflin Company, Boston. 579p.

Keeler-Wolf, T., and J. Evens. 2006. Vegetation classification of the Santa Monica Mountains National Recreation Area and environs in Ventura and Los Angeles counties, California. Unpublished report to National Park Service. California Department of Fish and Game and California Native Plant Society, Sacramento, Calif.

Sawyer, Keeler-Wolf and Evens. 2009. A Manual of California Vegetation Second Edition. California Native Plant Society Press, Sacramento, CA. 1300p.

Schweiger, E.W., J.E. Diffendorfer, R.D. Holt, R. Pierotti, and M.S. Gaines. 2000. The interaction of habitat fragmentation, plant, and small mammal succession in an old field. Ecological Monographs 70:383-400.

Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians. Houghton Mifflin Company, Boston. 336p.

[USACE] U.S. Army Corps of Engineers (USACE). 2007. Regulatory Guidance Letter No. 07-01: Practices for Documenting Jurisdiction under Sections 9 & 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. June 5. http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl07-01.pdf. Viewed May 2016.

_____. 2008a. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0),ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center. http://www.spl.usace.army.mil/Portals/17/docs/regulatory/JD/RegionalSupplements/AridWestSupplementV2_092008.pdf. Viewed May 2016.

_____. 2008b. Regulatory Program CWA Guidance to Implement the U.S. Supreme Court Decision for the Rapanos and Carabell Cases. http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/cwa_juris_2dec08.pdf. Viewed May 2016.

_____. 2008c. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. Viewed May 2016. http://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary_High_Waterm ark_Manual_Aug_2008.pdf.

[USEPA]. 2015a. United States Environmental Protection Agency (USEPA). “Section 404 of the Clean Water Act”. http://www.epa.gov/cwa-404/clean-water-act-section-404. Webpage last updated October 28, 2015. Viewed May 2016.

_____. 2015b. Clean Water Act, Section 401 Certification and Wetlands. Available online: http://water.epa.gov/lawsregs/guidance/wetlands/sec401.cfm.
Webpage last updated October 27, 2015. Viewed May 2016.

[USDA] United States Department of Agriculture. 2005. Land Management Plan: Part 2 Angeles National Forest Strategy. September. http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5166877.pdf. Viewed June 2016.

[USDA NRCS] 2016. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed [06/15/2016]

U.S. Fish and Wildlife Service (USFWS). 2013. *Federal Endangered Species Act*. http://www.fws.gov/endangered/laws-policies/esa.html. Website last updated July 15, 2013. Viewed June, 2016.

_____.1996. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants http://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/Listed_plant_survey_guidelines.pdf. Viewed May 2016.

APPENDIX A

Site Photographs

Appendix A Site Photographs

Photo 1: Mulefat Thickets in the foreground, Blue Elderberry Stands (middle of photo), Poison Oak Scrub (right), and Coastal Sage Scrub (left) in the background. Photo taken on 5/25/16.

Photo 2: Chamise Chaparral (*Adenostoma fasciculatum* Alliance) along Phase 3. Photo taken on 5/26/16.

Photo 3: Mulefat Thickets and Willow Riparian (foreground), Coastal Sage Scrub and Poison Oak Scrub on slope, and Coast Live Oak Woodland (dark trees on right) along Phase 1. Photo taken on 5/25/16.

Photo 4: Coastal Sage Scrub (*Eriogonum fasciculatum* Alliance) adjacent existing trail along Phase 3. Photo taken on 5/26/16.

Photo 5: Coastal Sage Scrub (*Artemisia californica – Salvia mellifera* Alliance) along Phase 2. Photo taken on 5/25/16.

Photo 6: Coastal sage scrub (*Artemisia californica – Eriogonum fasciculatum* Alliance) interspersed with Non-native Grassland on slope by Future Connection 2A. Photo taken on 5/25/16.

Photo 7: Disturbed Coastal Sage Scrub growing in the middle of the existing Phase 3 access road northeast of Future Connection 1. Photo taken on 5/26/16.

Photo 8: Disturbed Habitat along Phase 1. Photo taken on 5/25/16.

Photo 9: Sandbar Willow Thickets (*Salix exigua* Alliance) along Phase 1. Photo taken on 5/25/16.

Photo 10: Pepper Tree Stands (*Schinus molle* Alliance) (background) and Non-native Grassland (foreground) along Phase 1. Photo taken on 5/25/16.

Photo 11: Ornamental vegetation in proposed Staging Area for Phase 1. Photo taken on 5/25/16.

Photo 12: Plummer's mariposa lily (*Calochortus plummerae*, CRPR 4.2) along Phase 3. Photo taken on 5/26/16.

Photo 13: Plummer's mariposa lily (*Calochortus plummerae*, CRPR 4.2) habitat along Phase 3. Photo taken on 5/26/16.

Photo 14. Southernmost Arizona crossing of Tributary A. View looking southwest towards proposed Phase 1 Staging Area. Photo taken on 5/25/16.

Photo 15. Northernmost reach of Tributary A within the study area. Photo taken on 5/25/16.

Photo 16. Evidence of an OHWM in Tributary A. View looking west. Photo taken on 5/25/16.

Photo 17. Mulefat thickets associated with Tributary A along the southwestern portion of the study area. View looking north. Photo taken on 5/25/16.

Photo 18. Future Connection 2A crossing location at Tributary A. View looking northeast. Photo taken on 5/25/16.

APPENDIX B

Floral Compendium

Appendix B
Inventory of Floral Species

Scientific Name	Common Name	Status Federal/State/CRPR
CONIFEROPHYTA - CONE-BEARING PLANTS		
Pinaceae – Pine Family		**-**
**Pinus canariensis*	Canary Island pine	**-**
DICOTYLEDONES – "DICOTS"		
Adoxaceae – Elderberry Family		
Sambucus nigra subsp. *caerulea*	blue elderberry	**-**
Anacardiaceae – Sumac Family		
Rhus integrifolia	lemonade berry	-
Rhus ovata	sugar bush	-
**Schinus molle*	pepper tree	-
Toxicodendron diversilobum	western poison oak	-
Asteraceae – Sunflower Family		
Ambrosia psilostachya	western ragweed	-
Artemisia californica	California sagebrush	-
Artemisia douglasiana	mugwort	-
Baccharis pilularis	coyote brush	-
Baccharis salicifolia subsp. *salicifolia*	mule fat	-
**Centaurea melitensis*	Maltese star-thistle	-
Deinandra fasciculata	fascicled tarplant	-
Encelia californica	California encelia	-
Encelia farinosa	brittlebush	-
Erigeron canadensis	horseweed	-
Erigeron foliosus	leafy fleabane	-
Eriophyllum confertiflorum var. *confertiflorum*	golden-yarrow	-
Hazardia squarrosa	saw-toothed goldenbush	-
Helianthus annuus	western sunflower	-
Heterotheca grandiflora	telegraph weed	-
Isocoma menziesii var. *vernonioides*	coastal goldenbush	-
**Lactuca serriola*	prickly lettuce	-
Malacothrix saxatilis var. *tenuifolia*	short leaved cliff aster	-
Pseudognaphalium californicum	California cudweed	-
Boraginaceae – Borage Family		
Phacelia cicutaria var. *hispida*	caterpillar phacelia	-
Brassicaceae – Mustard Family		
**Hirschfeldia incana*	shortpod mustard	-
**Brassica nigra*	black mustard	-

Scientific Name	Common Name	Status Federal/State/CRPR
Cactaceae – Cactus Family		
Cylindropuntia californica	California cholla	-
Opuntia littoralis	coastal prickly pear	-
Celastraceae – Staff-Tree Family		
**Euonymus japonica*	Japanese spindle	-
Chenopodiaceae – Goosefoot Family		
**Atriplex semibaccata*	Australian saltbush	-
**Chenopodium album*	lambs quarters	-
**Chenopodium murale*	nettle leaf goosefoot	-
**Salsola tragus*	Russian thistle	-
Convolvulaceae – Morning-Glory Family		
Calystegia macrostegia subsp. *intermedia*	South coast morning glory	-
Cuscuta californica var. *californica*	California witch's hair	-
Cucurbitaceae – Gourd Family		
Cucurbita foetidissima	calabazilla	-
Marah macrocarpa	chilicothe	-
Euphorbiaceae – Spurge Family		
Croton setigerus	doveweed	-
Euphorbia melanadenia	red-gland spurge	-
**Ricinus communis*	castor-bean	-
Fabaceae – Pea Family		
Acmispon glaber	deerweed	-
**Melilotus albus*	white sweet-clover	-
**Trifolium hirtum*	rose clover	-
Fagaceae – Oak Family		
Quercus agrifolia var. *agrifolia*	coast live oak	-
Geraniaceae – Geranium Family		
**Erodium botrys*	long-beaked filaree	-
**Erodium cicutarium*	red-stemmed filaree	-
Grossulariaceae – Gooseberry Family		
Ribes aureum	golden currant	-
Lamiaceae – Mint Family		
**Marrubium vulgare*	white horehound	-
Salvia mellifera	black sage	-
Trichostema lanceolatum	vinegar weed	-
Malvaceae – Mallow Family		
Malacothamnus fasciculatus	chaparral mallow	-
**Malva parviflora*	cheeseweed	-
Moraceae – Mulberry Family		
**Ficus macrophylla*	Australian banyan	-

Scientific Name	Common Name	Status Federal/State/CRPR
Nyctaginaceae – Four-O'clock Family		
Mirabilis laevis var. *crassifolia*	wishbone bush	-
Oleaceae – Olive Family		
**Olea europaea*	common olive	-
Onagraceae – Evening Primrose Family		
Clarkia unguiculata	woodland clarkia	-
Eulobus californicus	California primrose	-
Papaveraceae – Poppy Family		
Eschscholzia californica	California poppy	-
Phrymaceae – Lopseed Family		
Mimulus aurantiacus	sticky monkeyflower	-
Plumbaginaceae – Leadwort Family		
**Plumbago auriculata*	cape leadwort	-
Polemoniaceae – Phlox Family		
Gilia angelensis	chaparral gilia	-
Polygonaceae – Buckwheat Family		
Eriogonum fasciculatum	California buckwheat	-
Eriogonum sp.	buckwheat	-
Rhamnaceae – Buckthorn Family		
Ceanothus crassifolius var. *crassifolius*	hoary leaved ceanothus	-
Rhamnus crocea	redberry	-
Rhamnus ilicifolia	holly-leaved redberry	-
Rosaceae – Rose Family		
Adenostoma fasciculatum var. *fasciculatum*	chamise	-
Cercocarpus betuloides var. *betuloides*	birch leaf mountain mahogany	-
Heteromeles arbutifolia	toyon	-
Rubiaceae – Madder Family		
Galium angustifolium subsp. *angustifolium*	narrow-leaved bedstraw	-
Salicaceae – Willow Family		
Salix exigua	narrow-leaved willow	-
Salix gooddingii	black willow	-
Salix lasiolepis	arroyo willow	-
Simaroubaceae – Quassia Family		
**Ailanthus altissima*	tree of heaven	-
Solanaceae – Nightshade Family		
Datura wrightii	jimsonweed	-
**Nicotiana glauca*	tree tobacco	-
Solanum douglasii	Douglas' nightshade	-
Tamaricaceae – Tamarisk Family		
**Tamarix ramosissima*	tamarisk	-

Scientific Name	Common Name	Status Federal/State/CRPR
MONOCOTS		
Agavaceae – Century Plant Family		
Hesperoyucca whipplei	chaparral yucca	-
Liliaceae – Lily Family		
Calochortus plummerae	Plummer's mariposa lily	-/-/4.2
Chlorogalum pomeridianum	amole	-
Poaceae – Grass Family		
**Avena* sp.	oats	-
**Bromus diandrus*	ripgut grass	-
**Bromus hordeaceus*	soft chess	-
**Bromus madritensis*	foxtail chess	-
Elymus condensatus	giant wildrye	-
Elymus glaucus	blue wild-rye	-
**Hordeum murinum*	foxtail barley	-
**Lamarckia aurea*	goldentop	-
**Pennisetum setaceum*	fountain grass	-
**Schismus barbatus*	Mediterranean schismus	-
Stipa lepida	foothill needlegrass	-
**Stipa miliacea* var. *miliacea*	smilograss	-
Stipa pulchra	purple needlegrass	-
Polemoniaceae – Phlox Family		
Eriastrum sapphirinum	sapphire woolly-star	-
Themidaceae – Brodiaea Family		
Bloomeria crocea	common goldenstar	-

FE = Federally Endangered, FT = Federally Threatened
SE = State Endangered, ST = State Threatened

CRPR = California Rare Plant Ranking
List 1B = Plants rare, threatened or endangered in California and elsewhere.
List 2B = Plants rare, threatened or endangered in California but more common elsewhere.
List 3 = more information needed about this plant (Review List)
List 4 = Plants of limited distribution (Watch List)

CRPR Threat Ranks:
0.1 Seriously endangered in California
0.2 Fairly endangered in California
0.3 Not very endangered in California

*Non-native species

APPENDIX C

Faunal Compendium

Appendix C
Inventory of Wildlife Species

Common Name	Scientific Name	Status
CLASS: AVES (Birds)		
Order: Accipitriformes		
Cathartidae		
Turkey Vulture	*Cathartes aura*	-
Accipitridae		
Red-shouldered Hawk	*Buteo lineatus*	-
Red-tailed Hawk	*Buteo jamaicensis*	-
Order: Apodiformes		
Apodidae		
White-throated Swift	*Aeronautes saxatalis*	-
Trochilidae		
Costa's Hummingbird	*Calypte costae*	BCC
Allen's hummingbird	*Selasphorus sasin*	-
Order: Falconiformes		
Passeriformes		
Tyrannidae		
Fluvicolinae		
Black Phoebe	*Sayornis nigricans*	-
Say's Phoebe	*Sayornis saya*	-
Tyranninae		
Western Kingbird	*Tyrannus verticalis*	-
Corvidae		
Western Scrub-Jay	*Aphelocoma californica*	-
American Crow	*Corvus brachyrhynchos*	-
Common Raven	*Corvus corax*	-
Hirundinidae		
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	-
Aegithalidae		
Bushtit	*Psaltriparus minimus*	-
Sylviidae		
Wrentit	*Chamaea fasciata*	-
Mimidae		
Northern Mockingbird	*Mimus polyglottos*	-
Ptiliogonatidae		
Phainopepla	*Phainopepla nitens*	-
Emberizidae		
California Towhee	*Melozone crissalis*	-
Song Sparrow	*Melospiza melodia*	-
Spotted Towhee	*Pipilo maculatus*	-
Cardinalidae		
Black-headed Grosbeak	*Pheucticus melanocephalus*	-
Fringillidae		
Carduelinae		

Common Name	Scientific Name	Status
House Finch	*Haemorphous mexicanus*	-
Passeridae		
House Sparrow	*Passer domesticus*	-
CLASS: MAMMALIA (MAMMALS)		
Carnivora (Carnivores)		
Canidae(Dogs)		
Coyote	*Canis latrans*	-
Lagomorpha (Pikas, Rabbits, and Hares)		
Leporidae (Rabbits and Hares)		
Desert Cottontail	*Sylvilagus audubonii*	-
Rodentia (Rodents)		
Sciuridae (Squirrels, Chipmunks, Marmots, Prairie Dogs)		
California Ground Squirrel	*Otospermophilus beecheyii*	-
CLASS: REPTILIA (REPTILES)		
Squamata (Lizards and Snakes)		
Phrynosomatidae (Zebra-tailed, Earless, Fringe-toed, Spiny, Tree, Side-blotched, and Horned Lizards)		
Side-blotched Lizard	*Uta stansburiana*	-
Colubridae (Colubrids)		
California Striped Racer	*Coluber lateralis lateralis*	
CLASS: INSECTA (INSECTS)		
Lepidoptera (Moths and Butterflies)		
Funereal duskywing	*Erynnis funeralis*	-
Western tiger swallowtail	*Papilio rutulus*	-
Cabbage white	*Pieris rapae*	-
American painted lady	*Vanessa virginiensis*	-

FE = Federally Endangered, FT = Federally Threatened, FD = Federally Delisted,
FPT = Federally Proposed Threatened

SE = State Endangered, ST = State Threatened, SD = State Delisted, SCE = State Candidate Endangered,
SCT = State Candidate Threatened

SSC = Species of Special Concern (California)

CDFW FP = California Department of Fish and Wildlife Fully Protected Species

USFWS BCC = Bird of Conservation Concern

APPENDIX D

Sensitive Plant Species with Potential to Occur in the Project Study Area

Appendix D

Potential for Rare Plant Species to Occur within the Project Study Area

Species	Status (USFWS/ CDFW/CRPR)	Habitat and Distribution	Blooming Period	Observed On-Site?	Potential for Occurrence
ASTERACEAE (Sunflower Family)					
Centromadia parryi subsp. *australis* **Southern tarplant**	-/-/1B.1	Annual herb. Margins of salt marshes, in vernally mesic grasslands, and vernal pools below 1,575 ft. (480 m) AMSL.	May through November	No	Not Expected. The study area does not contain suitable soils or habitat to support this species and this species was not observed during focused surveys.
Deinandra minthornii **Santa Susana tarplant**	-/CR/1B.2	Perennial deciduous shrub. Rocky soils, often on sandstone, in chaparral and coastal scrub from 915-2,495 ft. (280-760 m) AMSL.	July through November	No	Not Expected. Although suitable habitat is present within the study area for Phase 3, this perennial species was not observed during focused surveys.
Helianthus inexpectatus **Newhall sunflower**	-/-/1B.1	Perennial rhizomatous herb. Known from only one location in spring-fed marsh in willow woodland at 1,000 ft. (305 m) AMSL.	August through November	No	Not Expected. The study area occurs above the known elevation range of the species and does not contain suitable habitat.
Lasthenia glabrata subsp. *coulteri* **Coulter's goldfields**	–/–/1B.2	Annual herb. Traver, Domino, or (usually) Willows soils in alkali scrub, alkali playas, vernal pools, and alkali grasslands from 3 to 4,022 ft. (1 to 1,220 m) AMSL.	February through June	No	Not Expected. The study area does not contain suitable soils or habitat to support this species and this species was not observed during focused surveys.
Pseudognaphalium leucocephalum **white rabbit-tobacco**	-/-/2B.2	Perennial herb. Sandy or gravelly soils on benches, dry stream bottoms, and canyon bottoms in chaparral, cismontane woodland, coastal scrub, and riparian woodland below 6,890 ft. (2,100 m) AMSL.	July through December	No	Not Expected. The study area supports marginally suitable habitat and soils along the eastern part of Phase 1 near the drainage and at the base of Future Connection 2. However, the nearest CNDDB occurrence is approximately 10 miles southeast from a 1932 collection (CNDDB 2016). The closest Calflora occurrences are from the early 1900s. There are no known current occurrences of this species in Los Angeles County (Calflora 2016).

Species	Status (USFWS/ CDFW/CRPR)	Habitat and Distribution	Blooming Period	Observed On-Site?	Potential for Occurrence
Senecio aphanactis **chaparral ragwort**	-/-/2B.2	Annual herb. Sometimes found in alkaline soils on flats and in dry open rocky areas in chaparral, cismontane woodland, and coastal scrub from 50-2,625 ft. (15-800 m) AMSL.	January through April	No	Not Expected. The study area does not contain suitable soils and microhabitat, and this species was not observed during focused surveys.
Symphyotrichum greatae **Greata's aster**	-/-/1B.3	Perennial rhizomatous herb. Mesic soils in broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland from 985-6,595 ft. (300-2,010 m) AMSL.	June through October	No	Not Expected. The study area does not contain suitable soils.
BERBERIDACEAE (Barberry Family)					
Berberis nevinii **Nevin's barberry**	FE/CE/1B.1	Perennial evergreen shrub. Species is found in varied topography from nearly flat sandy washes, terraces, benches, and canyon floors to gravelly wash margins, steeply-sloped banks of drainages, steep rocky slopes, ridges, and mountain summits. Strongly associated with alluvial soils or soils derived from sandstone/granitic material. Generally occurs in sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub from 230-2,705 ft. (70-825 m) AMSL.	February through June	No	Not Expected. The study area contains suitable soils in coastal sage scrub at the upper end of Phase 1, but this evergreen shrub was not observed during focused surveys. The nearest known occurrence of this species is from 1998 along Lopez Canyon Road in alluvial scrub within the Angeles National Forest (Calflora 2016, CNDDB 2016).
BORAGINACEAE (Borage Family)					
Harpagonella palmeri **Palmer's grapplinghook**	-/-/4.2	Annual herb. Clay, open grassy areas within in chaparral, coastal sage scrub, and grassland from 66-3,133 ft. (20-955 m) AMSL.	March through May	No	Not Expected. The study area does not contain suitable soils, and this species was not observed during focused surveys.

Species	Status (USFWS/ CDFW/CRPR)	Habitat and Distribution	Blooming Period	Observed On-Site?	Potential for Occurrence
BRASSICACEAE (Mustard Family)					
Lepidium virginicum subsp. *menziesii* **Robinson's pepper-grass**	-/-/4.3	Annual herb. Dry, disturbed areas in chaparral and coastal sage scrub from 3-2,903 ft. (1-885 m) AMSL.	January through July	No	Not Expected. Although suitable habitat is present within the study area for Phases 1 and 3, this species was not observed during focused surveys. The closest known occurrence of this species (2008) is approximately 7 miles to the southeast on an alluvial terrace north of Big Tujunga Creek (Calflora 2016, CNDDB 2016).
Nasturtium gambelii **Gambel's watercress**	FE/CT/1B.1	Perennial rhizomatous herb. Freshwater or brackish marshes or swamps from 16-1,083 (5-330 m) AMSL.	April through October	No	Not Expected. The study area does not contain suitable habitat for this species.
CACTACEAE (Cactus Family)					
Opuntia basilaris var. *brachyclada* **Short-joint beavertail**	-/-/1B.2	Perennial stem succulent. Chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon-juniper woodland from 1,395-5,905 ft. (425-1,800 m) AMSL.	April through August	No	Not Expected. Although suitable habitat is present within the study area of Phases 2 and 3, this perennial species was not observed during focused surveys.
CHENOPODIACEAE (Goosefoot Family)					
Atriplex parishii **Parish's brittlescale**	-/-/1B.1	Annual herb. Alkali vernal pools, alkali annual grassland, alkali playa, and alkali scrub components of alkali vernal plains from 82 to 6,233 ft. (25 to 1,900 m) AMSL.	June through October	No	Not Expected. The study area does not contain suitable soils or habitat to support this species and this species was not observed during focused surveys.
CONVOLVULACEAE (Morning-glory Family)					
Calystegia peirsonii **Peirson's morning-glory**	-/-/4.2	Perennial rhizomatous herb. Chaparral, chenopod scrub, cismontane woodland, coastal sage scrub, coniferous forest, and grassland from 98-4,921 ft. (30-1,500 m) AMSL.	April through June	No	Not Expected. Although suitable habitat is present within the study area for all Phases, this species was not observed during focused surveys. Only South Coast morning glory, *C. macrostegia intermedia*, was observed. The nearest known occurrence of this species (1992) is approximately 5 miles to the northwest (Calflora 2016, CNDDB 2016).

Species	Status (USFWS/ CDFW/CRPR)	Habitat and Distribution	Blooming Period	Observed On-Site?	Potential for Occurrence
CRASSULACEAE (Stonecrop Family)					
Dudleya blochmaniae subsp. *blochmaniae* **Blochman's dudleya**	-/-/1B.1	Perennial herb. Rocky, often clay or serpentinite soils in coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland from (5-45 m) AMSL.	April through June	No	Not Expected. Suitable soils and microhabitat are not present in the study area and this perennial species was not observed during focused surveys.
Dudleya multicaulis **Many-stemmed dudleya**	–/–/1B.2	Perennial herb. Associated with openings in chaparral, coastal sage scrub, and grasslands underlain by clay and cobbly clay soils from 49 to 2,591 ft. (20 to 790 m) AMSL.	April through July	No	Not Expected. Although suitable habitat is present within the study area for Phase 1, this perennial species was not observed during focused surveys.
FABACEAE (Pea Family)					
Astragalus brauntonii **Braunton's milk-vetch**	FE/-1B.1	Perennial herb. Found in recent burn or disturbed areas, usually shallow calcium carbonate soils derived from marine substrates in chaparral, valley grassland, and coastal sage scrub from 10-2,100 ft. (4-640 m) AMSL.	January through August	No	Not Expected. Suitable soils not present within the study area and this perennial species was not observed during focused surveys.
GERANIACEAE (Geranium Family)					
California macrophylla **Round-leaved filaree**	–/–/1B.2	Annual herb. Clay soils in valley grassland and foothill woodland from 50-3,940 ft. (15-1,200 m) AMSL.	March through May	No	Not Expected. Suitable soils not present within the study area and this species was not observed during focused surveys.
LAMIACEAE (Mint Family)					
Monardella hypoleuca subsp. *hypoleuca* **white-veined monardella**	-/-/1B.3	Perennial herb. Chaparral and cismontane woodland from 164-5,003 ft. (50-1,525 m) AMSL.	April through December	No	Not Expected. Although suitable habitat is present within the study area for Phases 2 and 3, this perennial species was not observed during focused surveys. The nearest known occurrence of this species (2008) is approximately 16 miles to the southwest in Santa Ynez Canyon (Calflora 2016, CNDDB 2016).

Species	Status (USFWS/ CDFW/CRPR)	Habitat and Distribution	Blooming Period	Observed On-Site?	Potential for Occurrence
LILIACEAE (Lily Family)					
Calochortus clavatus var. *gracilis* **Slender mariposa lily**	-/-/1B.2	Perennial bulbiferous herb. Chaparral, coastal scrub, and valley and foothill grassland from 1,050-3,280 ft. (320-1,000 m) AMSL.	March through November	No	Not Expected. Although suitable habitat is present within the study area for all Phases, this species was not observed during focused surveys. The nearest occurrence (2001) of this species is approximately 6 miles to the southeast in the Verdugo Mountains (Calflora 2016, CNDDB 2016).
Calochortus plummerae **Plummer's mariposa lily**	-/-/4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, coniferous forest, and valley and foothill grassland from 328-5,577 ft. (100 -1,700 m) AMSL.	May through July	Yes	Present. 2 occurrences totaling 51 individuals were observed within openings in chaparral and coastal sage scrub within the study area along Phase 3 (See BTR Figures 9a and 9b for locations). Suitable habitat is also present within Phases 1 and 2; however, this species was not observed with the study area for those Phases.
MALVACEAE (Mallow Family)					
Malacothamnus davidsonii **Davidson's bush-mallow**	-/-/1B.2	Perennial deciduous shrub. Chaparral, cismontane woodland, coastal scrub, and riparian woodland from 600-2,805 ft. (185-855 m) AMSL.	June through January	No	Not Expected. Although suitable habitat is present within the study area for all Phases, all *Malacothamnus* shrubs within the study area were in flower and identifiable to species at the time of survey. Only chaparral mallow, *M. fasciculatus*, was found within the study area. The nearest known occurrences of *M. davidsonii* are along a dry streambed next to Lopez Canyon Road and at the bottom of a creek channel along Kagel Canyon Road (Calflora 2016, CNDDB 2016).

Species	Status (USFWS/ CDFW/CRPR)	Habitat and Distribution	Blooming Period	Observed On-Site?	Potential for Occurrence
POACEAE (Grass Family)					
Orcuttia californica **California Orcutt grass**	FE/CE/1B.1	Annual grass. Southern basaltic claypan and alkaline vernal pools, valley grassland, vernal pool freshwater wetlands, and wetland-riparian from 49 to 2,165 ft. (15 to 660 m) AMSL.	April through August	No	Not Expected. The study area does not contain suitable soils or habitat to support this species and this species was not observed during focused surveys.
POLEMONIACEAE (Phlox Family)					
Navarretia fossalis **Spreading navarretia**	FT/–/1B.1	Annual herb. Saline alkaline soils of vernal pools and depressions and ditches in areas that once supported vernal pools from 98 to 2,148 ft. (30 to 655 m) AMSL.	April through June	No	Not Expected. The study area does not contain suitable soils or habitat to support this species and this species was not observed during focused surveys.
Navarretia setiloba **Piute Mountains navarretia**	-/-/1B.1	Annual herb. Depressions in clay or gravelly loam soils in valley grassland, foothill woodland, and pinyon-juniper woodland from 935-6,900 ft. (285-2,100 m) AMSL.	April through July	No	Not Expected. The study area does not contain suitable soils to support this species and this species was not observed during focused surveys.
POLYGONACEAE (Buckwheat Family)					
Chorizanthe parryi var. *fernandina* **San Fernando Valley spineflower**	FC/CE/1B.1	Annual herb. Sandy, sparsely vegetated, thin or highly mineralized soils in coastal sage scrub and valley and foothill grassland from 490-4,000 ft. (150-1,220 m) AMSL.	April through July	No	Not Expected. Although marginally suitable habitat is present within the study area for Phase 3, this species was not observed during focused surveys. The nearest known occurrence of San Fernando Valley spineflower is from a collection in 1920 approximately 2.5 miles to the southeast of the study area in the Lower Tujunga Wash (Calflora 2016, CNDDB 2016).
Dodecahema leptoceras **Slender-horned spineflower**	FE/CE/1B.1	Annual herb. Sandy soils and drought prone alluvial benches subject to rare flood events in chaparral, coastal sage scrub (alluvial fan), and cismontane woodland from 660-2,495 ft. (200-760 m) AMSL.	April through June	No	Not Expected. The study area does not contain suitable soils or habitat to support this species and this species was not observed during focused surveys.

Species	Status (USFWS/ CDFW/CRPR)	Habitat and Distribution	Blooming Period	Observed On-Site?	Potential for Occurrence
ROSACEAE (Rose Family)					
Horkelia cuneata var. *puberula* **mesa horkelia**	-/-/1B.1	Perennial herb. Sandy or gravelly soils in maritime chaparral, cismontane woodland, and coastal scrub from 230-2,657 ft. (70-810 m) AMSL.	February through September	No	Not Expected. Although suitable soils and habitat are present within the study area at the upper end of Phase 1, this species was not observed during focused surveys. The nearest known occurrence is from a 1929 collection from the Angeles National Forest approximately 8 miles northeast of the study area (Calflora 2016, CNDDB 2016).

Legend

FE Federally Endangered
FT Federally Threatened
FC Federal Candidate for Listing
CE Endangered in California
CT Threatened in California
CR Rare in California

*CNPS Rare Plant Ranks (California Rare Plant Ranks are assigned by a committee of government agency and non-governmental botanical experts and are not official State designations of rarity status):
1B Rare, threatened, or endangered in CA and elsewhere
2B Rare, threatened, or endangered in CA but more common elsewhere
4 Plants of limited distribution (Watch List)

Threat Ranks
- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

APPENDIX E

CNDDB, iPaC, and CNPS Records Searches

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Agua Dulce (3411843) OR Burbank (3411823) OR Canoga Park (3411825) OR Mint Canyon (3411844) OR Newhall (3411845) OR Oat Mountain (3411835) OR San Fernando (3411834) OR Sunland (3411833) OR Van Nuys (3411824))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Accipiter cooperii Cooper's hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	1,075 1,075	103 S:1	0	1	0	0	0	0	0	1	1	0	0
Agelaius tricolor tricolored blackbird	G2G3 S1S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	895 895	675 S:1	0	0	0	0	0	1	0	1	1	0	0
Aimophila ruficeps canescens southern California rufous-crowned sparrow	G5T3 S2S3	None None	CDFW_WL-Watch List	1,516 1,516	194 S:4	0	2	2	0	0	0	0	4	4	0	0
Ammodramus savannarum grasshopper sparrow	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	1,752 1,752	18 S:1	0	1	0	0	0	0	0	1	1	0	0
Anaxyrus californicus arroyo toad	G2G3 S2S3	Endangered None	CDFW_SSC-Species of Special Concern IUCN_EN-Endangered	825 1,910	135 S:3	0	0	0	0	1	2	2	1	2	1	0
Anniella pulchra pulchra silvery legless lizard	G3G4T3T4Q S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	570 1,500	94 S:3	1	0	1	0	1	0	0	3	2	0	1
Antrozous pallidus pallid bat	G5 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	600 1,230	402 S:3	0	0	0	0	0	3	3	0	3	0	0
Artemisiospiza belli belli Bell's sage sparrow	G5T2T4 S2?	None None	CDFW_WL-Watch List USFWS_BCC-Birds of Conservation Concern	1,530 1,729	57 S:5	0	5	0	0	0	0	0	5	5	0	0
Aspidoscelis tigris stejnegeri coastal whiptail	G5T3T4 S2S3	None None		1,200 1,790	114 S:9	0	7	0	0	0	2	1	8	9	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Astragalus brauntonii Braunton's milk-vetch	G2 S2	Endangered None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden		34 S:1	0	0	0	0	1	0	1	0	0	1	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	280 1,400	1882 S:4	0	0	2	1	0	1	1	3	4	0	0
Atriplex parishii Parish's brittlescale	G1G2 S1	None None	Rare Plant Rank - 1B.1 USFS_S-Sensitive	525 525	16 S:1	0	0	0	0	0	1	1	0	1	0	0
Berberis nevinii Nevin's barberry	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden	1,050 1,637	31 S:6	0	0	3	0	2	1	2	4	4	1	1
Bombus crotchii Crotch bumble bee	G3G4 S1S2	None None		550 1,600	232 S:7	0	0	0	0	0	7	7	0	7	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	1,700 2,200	750 S:2	1	0	0	0	0	1	0	2	2	0	0
Buteo swainsoni Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	770 1,300	2392 S:4	0	0	0	0	4	0	4	0	0	4	0
California macrophylla round-leaved filaree	G3? S3?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden	1,500 1,500	162 S:2	0	0	0	0	1	1	1	1	1	1	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
California Walnut Woodland	G2	None		520	76	0	7	0	0	6	11	24	0	18	1	5
California Walnut Woodland	S2.1	None		3,400	S:24											
Calochortus clavatus var. gracilis	G4T2T3	None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	1,180	105	5	9	5	1	3	9	2	30	29	0	3
slender mariposa-lily	S2S3	None		2,600	S:32											
Calochortus plummerae	G4	None	Rare Plant Rank - 4.2 SB_RSABG-Rancho Santa Ana Botanic Garden	500	230	0	4	5	3	0	13	5	20	25	0	0
Plummer's mariposa-lily	S4	None		3,100	S:25											
Calystegia peirsonii	G4	None	Rare Plant Rank - 4.2	1,300	26	0	1	0	0	0	2	3	0	3	0	0
Peirson's morning-glory	S4	None		2,100	S:3											
Catostomus santaanae	G1	Threatened	AFS_TH-Threatened IUCN_VU-Vulnerable	650	27	0	1	1	1	0	2	2	3	5	0	0
Santa Ana sucker	S1	None		2,000	S:5											
Centromadia parryi ssp. australis	G3T2	None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	3,200	87	0	0	0	0	0	1	1	0	1	0	0
southern tarplant	S2	None		3,200	S:1											
Chorizanthe parryi var. fernandina	G2T1	Candidate	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	300	21	0	2	4	0	6	0	6	6	6	6	0
San Fernando Valley spineflower	S1	Endangered		1,370	S:12											
Coccyzus americanus occidentalis	G5T2T3	Threatened	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	1,100	155	0	0	0	0	1	0	1	0	0	0	1
western yellow-billed cuckoo	S1	Endangered		1,100	S:1											
Corynorhinus townsendii	G3G4	None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	1,510	622	0	0	0	0	0	2	2	0	2	0	0
Townsend's big-eared bat	S2	Candidate Threatened		2,570	S:2											
Danaus plexippus pop. 1	G4T2T3	None	USFS_S-Sensitive	1,350	378	0	0	0	0	0	1	1	0	1	0	0
monarch - California overwintering population	S2S3	None		1,350	S:1											

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Deinandra minthornii Santa Susana tarplant	G2 S2	None Rare	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	1,250 1,600	35 S:6	0	0	0	0	0	6	6	0	6	0	0
Dodecahema leptoceras slender-horned spineflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	1,260 1,800	35 S:6	0	2	0	0	4	0	4	2	2	4	0
Dudleya blochmaniae ssp. blochmaniae Blochman's dudleya	G3T2 S2	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden		79 S:1	0	0	0	0	0	1	1	0	1	0	0
Dudleya multicaulis many-stemmed dudleya	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive		147 S:1	0	0	0	0	1	0	1	0	0	1	0
Elanus leucurus white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	1,075 1,075	160 S:1	0	1	0	0	0	0	0	1	1	0	0
Empidonax traillii extimus southwestern willow flycatcher	G5T2 S1	Endangered Endangered	NABCI_RWL-Red Watch List	280 2,040	70 S:2	0	1	0	0	0	1	1	1	2	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	340 3,300	1153 S:8	0	2	3	0	1	2	4	4	7	1	0
Eremophila alpestris actia California horned lark	G5T3Q S3	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	1,700 1,700	83 S:1	0	1	0	0	0	0	0	1	1	0	0
Euderma maculatum spotted bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	1,000 1,000	68 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Eumops perotis californicus western mastiff bat	G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern WBWG_H-High Priority		293 S:4	0	0	0	0	0	4	4	0	4	0	0
Falco mexicanus prairie falcon	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	2,300 2,300	458 S:1	0	0	0	0	0	1	1	0	1	0	0
Gasterosteus aculeatus williamsoni unarmored threespine stickleback	G5T1 S1	Endangered Endangered	AFS_EN-Endangered CDFW_FP-Fully Protected	300 2,440	16 S:9	0	1	4	1	1	2	0	9	8	1	0
Gila orcuttii arroyo chub	G2 S2	None None	AFS_VU-Vulnerable CDFW_SSC-Species of Special Concern USFS_S-Sensitive	300 2,060	49 S:6	0	3	1	0	0	2	1	5	6	0	0
Harpagonella palmeri Palmer's grapplinghook	G4 S3	None None	Rare Plant Rank - 4.2 SB_RSABG-Rancho Santa Ana Botanic Garden	1,300 1,300	57 S:1	0	0	0	0	0	1	1	0	1	0	0
Helianthus inexpectatus Newhall sunflower	G1 S1	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	1,000 1,000	1 S:1	0	0	1	0	0	0	0	1	1	0	0
Horkelia cuneata var. puberula mesa horkelia	G4T1 S1	None None	Rare Plant Rank - 1B.1 USFS_S-Sensitive		103 S:5	0	0	0	0	4	1	5	0	1	2	2
Lanius ludovicianus loggerhead shrike	G4 S4	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	1,400 1,847	97 S:3	0	0	3	0	0	0	0	3	3	0	0
Lasionycteris noctivagans silver-haired bat	G5 S3S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		138 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasiurus cinereus hoary bat	G5 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		235 S:3	0	0	0	0	0	3	3	0	3	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Lasiurus xanthinus western yellow bat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	2,650 2,650	57 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasthenia glabrata ssp. coulteri Coulter's goldfields	G4T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden		97 S:1	0	0	0	0	0	1	1	0	1	0	0
Lepidium virginicum var. robinsonii Robinson's pepper-grass	G5T3 S3	None None	Rare Plant Rank - 4.3	1,738 1,738	142 S:2	0	0	0	0	0	2	1	1	2	0	0
Lepus californicus bennettii San Diego black-tailed jackrabbit	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	1,160 1,790	97 S:2	2	0	0	0	0	0	0	2	2	0	0
Macrotus californicus California leaf-nosed bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	1,280 1,280	45 S:1	0	0	0	0	1	0	1	0	0	0	1
Mainland Cherry Forest Mainland Cherry Forest	G1 S1.1	None None		1,200 1,225	3 S:3	0	0	0	0	3	0	3	0	0	0	3
Malacothamnus davidsonii Davidson's bush-mallow	G2 S2	None None	Rare Plant Rank - 1B.2	600 4,500	63 S:39	2	6	11	1	1	18	15	24	38	0	1
Monardella hypoleuca ssp. hypoleuca white-veined monardella	G4T2T3 S2S3	None None	Rare Plant Rank - 1B.3		29 S:1	0	0	0	0	0	1	1	0	1	0	0
Navarretia fossalis spreading navarretia	G2 S2	Threatened None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	1,850 2,160	74 S:2	0	1	0	0	0	1	0	2	2	0	0
Navarretia setiloba Piute Mountains navarretia	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive USFS_S-Sensitive	1,850 2,200	22 S:3	0	0	0	0	0	3	0	3	3	0	0
Neotoma lepida intermedia San Diego desert woodrat	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	800 1,800	115 S:4	0	1	3	0	0	0	2	2	4	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Nyctinomops macrotis big free-tailed bat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_MH-Medium-High Priority	600 600	32 S:1	0	0	0	0	0	1	1	0	1	0	0
Onychomys torridus ramona southern grasshopper mouse	G5T3 S3	None None	CDFW_SSC-Species of Special Concern	1,300 2,100	26 S:2	0	0	0	0	0	2	2	0	2	0	0
Opuntia basilaris var. brachyclada short-joint beavertail	G5T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	1,400 2,000	131 S:4	0	0	1	0	0	3	2	2	4	0	0
Orcuttia californica California Orcutt grass	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	1,900 2,160	37 S:3	0	1	0	0	0	2	1	2	3	0	0
Perognathus longimembris brevinasus Los Angeles pocket mouse	G5T1T2 S1S2	None None	CDFW_SSC-Species of Special Concern	650 650	49 S:1	0	0	0	0	0	1	1	0	1	0	0
Phrynosoma blainvillii coast horned lizard	G3G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	830 4,091	728 S:25	3	6	2	2	1	11	12	13	24	1	0
Polioptila californica californica coastal California gnatcatcher	G4G5T2Q S2	Threatened None	CDFW_SSC-Species of Special Concern NABCI_YWL-Yellow Watch List	800 2,150	813 S:11	0	4	1	1	1	4	3	8	10	1	0
Pseudognaphalium leucocephalum white rabbit-tobacco	G4 S2	None None	Rare Plant Rank - 2B.2		15 S:1	0	0	0	0	0	1	1	0	1	0	0
Rana muscosa southern mountain yellow-legged frog	G1 S1	Endangered Endangered	CDFW_SSC-Species of Special Concern IUCN_EN-Endangered USFS_S-Sensitive	1,288 2,300	186 S:3	0	0	0	0	3	0	3	0	0	0	3
Rhinichthys osculus ssp. 3 Santa Ana speckled dace	G5T1 S1	None None	AFS_TH-Threatened CDFW_SSC-Species of Special Concern USFS_S-Sensitive	1,100 1,100	14 S:2	0	0	0	0	1	1	1	1	1	1	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Riversidian Alluvial Fan Sage Scrub Riversidian Alluvial Fan Sage Scrub	G1 S1.1	None None		880 2,000	30 S:9	0	0	2	0	3	4	9	0	6	0	3
Senecio aphanactis chaparral ragwort	G3 S2	None None	Rare Plant Rank - 2B.2		47 S:1	0	0	0	0	0	1	1	0	1	0	0
Southern California Arroyo Chub/Santa Ana Sucker Stream Southern California Arroyo Chub/Santa Ana Sucker Stream	GNR SNR	None None		400 400	4 S:1	0	0	0	1	0	0	1	0	1	0	0
Southern California Threespine Stickleback Stream Southern California Threespine Stickleback Stream	GNR SNR	None None		950 2,440	5 S:2	0	0	1	0	0	1	2	0	2	0	0
Southern Coast Live Oak Riparian Forest Southern Coast Live Oak Riparian Forest	G4 S4	None None		560 2,800	246 S:40	0	1	0	0	2	37	40	0	38	0	2
Southern Cottonwood Willow Riparian Forest Southern Cottonwood Willow Riparian Forest	G3 S3.2	None None		480 2,320	111 S:14	0	0	0	0	3	11	14	0	11	0	3
Southern Mixed Riparian Forest Southern Mixed Riparian Forest	G2 S2.1	None None		1,380 2,000	14 S:4	0	1	0	0	1	2	4	0	3	0	1
Southern Riparian Scrub Southern Riparian Scrub	G3 S3.2	None None		1,175 2,360	56 S:17	0	0	0	0	5	12	17	0	12	0	5
Southern Sycamore Alder Riparian Woodland Southern Sycamore Alder Riparian Woodland	G4 S4	None None		560 4,080	230 S:37	0	0	0	0	3	34	37	0	34	0	3
Southern Willow Scrub Southern Willow Scrub	G3 S2.1	None None		1,200 1,600	45 S:4	0	0	1	0	1	2	4	0	3	0	1
Spea hammondii western spadefoot	G3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	1,120 2,490	426 S:16	2	2	5	5	1	1	1	15	15	1	0
Symphyotrichum greatae Greata's aster	G2 S2	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive	1,700 2,800	56 S:5	0	1	0	0	1	3	4	1	4	1	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Taxidea taxus	G5	None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	280	487	0	0	0	0	0	1	1	0	1	0	0
American badger	S3	None		280	S:1											
Thamnophis hammondii	G4	None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	1,410	147	0	2	3	0	0	0	1	4	5	0	0
two-striped garter snake	S3S4	None		3,156	S:5											
Valley Oak Woodland	G3	None		1,275	91	0	0	0	0	1	2	3	0	2	0	1
Valley Oak Woodland	S2.1	None		2,580	S:3											
Vireo bellii pusillus	G5T2	Endangered	IUCN_NT-Near Threatened NABCI_YWL-Yellow Watch List	55	468	0	3	0	0	2	5	5	5	8	2	0
least Bell's vireo	S2	Endangered		1,310	S:10											

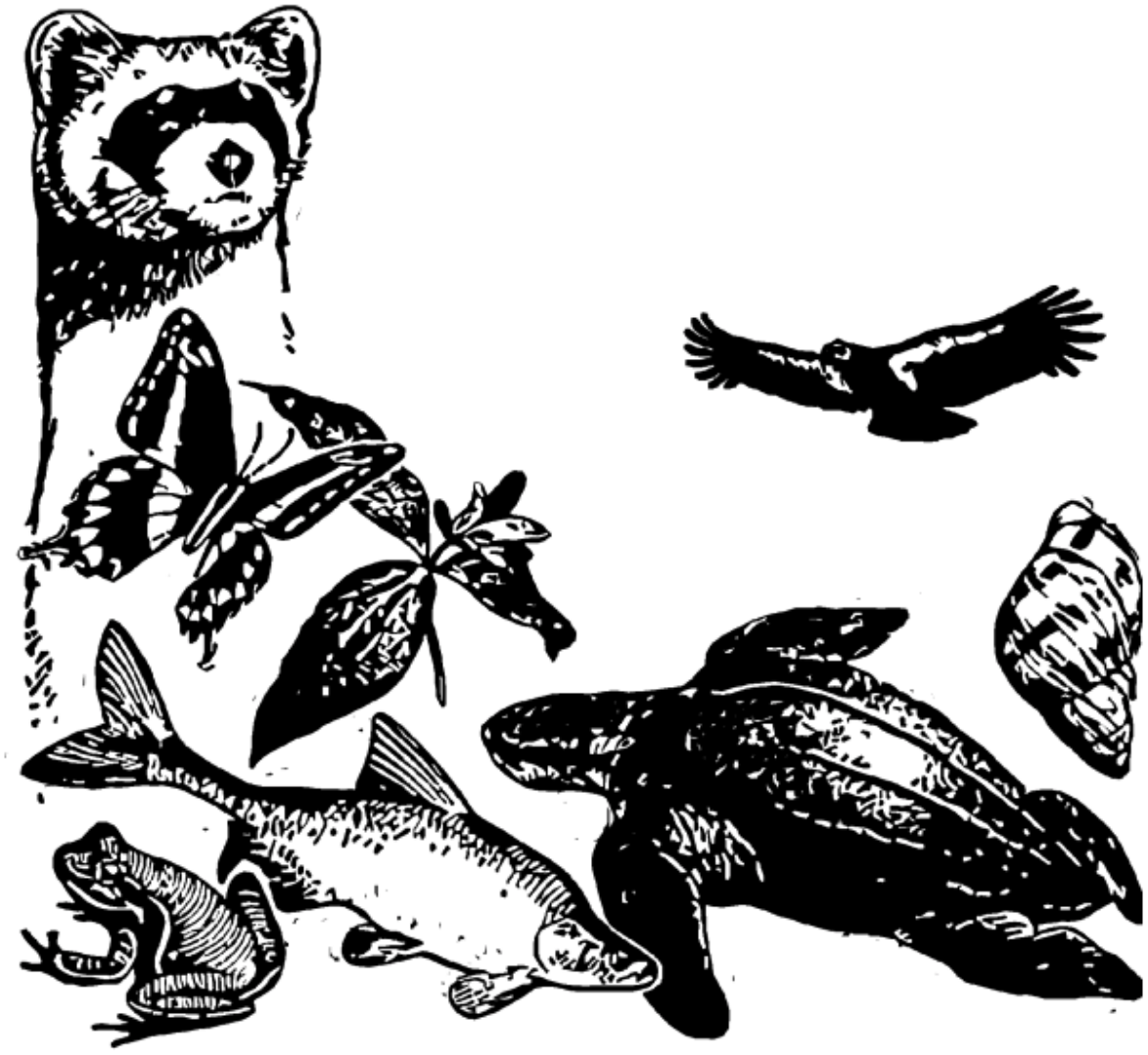
U.S. Fish & Wildlife Service

Lopez Canyon

IPaC Trust Resources Report

Generated June 28, 2016 01:06 PM MDT, IPaC v3.0.8

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

Table of Contents

U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

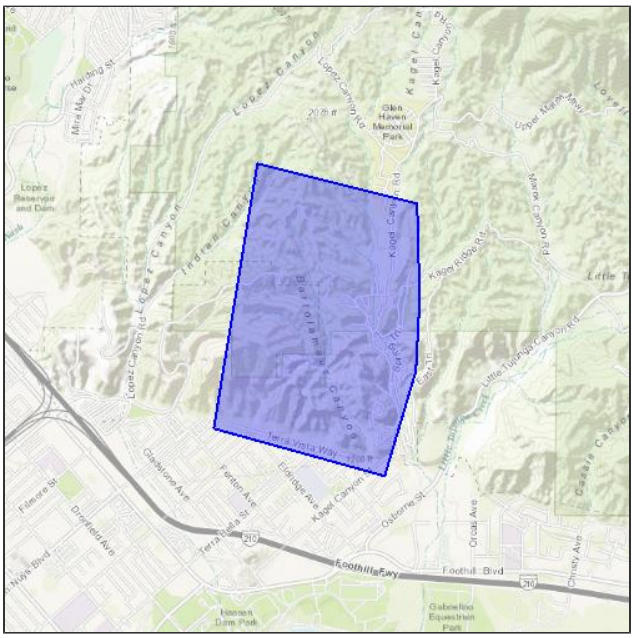
Lopez Canyon

LOCATION

Los Angeles County, California

IPAC LINK

https://ecos.fws.gov/ipac/project/A5YKC-X2DER-AR3JE-7CDXN-FQX5PA



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Amphibians

Arroyo (=arroyo Southwestern) Toad Anaxyrus californicus — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D020

Birds

California Condor Gymnogyps californianus — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B002

Coastal California Gnatcatcher Polioptila californica californica — Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B08X

Least Bell's Vireo Vireo bellii pusillus — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B067

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B094

Fishes

Santa Ana Sucker Catostomus santaanae — Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E07W

Flowering Plants

Braunton's Milk-vetch Astragalus brauntonii — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q05E

Gambel's Watercress Rorippa gambellii — Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q38L

Nevin's Barberry Berberis nevinii — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q08G

Slender-horned Spineflower Dodecahema leptoceras — Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q2T6

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

---

1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The following species of migratory birds could potentially be affected by activities in this location:

Allen's Hummingbird Selasphorus sasin — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0LI

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Bell's Vireo Vireo bellii — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JX

Black-chinned Sparrow Spizella atrogularis — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IR

Brewer's Sparrow Spizella breweri — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HA

Burrowing Owl Athene cunicularia — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Cactus Wren Campylorhynchus brunneicapillus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FZ

California Spotted Owl Strix occidentalis occidentalis — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B08L

Calliope Hummingbird Stellula calliope — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0K3

Costa's Hummingbird Calypte costae — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JE

Fox Sparrow Passerella iliaca — Bird of conservation concern
Season: Wintering

Green-tailed Towhee Pipilo chlorurus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IO

Least Bittern Ixobrychus exilis
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B092

Lesser Yellowlegs Tringa flavipes — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MD

Lewis's Woodpecker Melanerpes lewis — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HQ

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

Long-billed Curlew Numenius americanus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S

Marbled Godwit Limosa fedoa — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JL

Nuttall's Woodpecker Picoides nuttallii — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HT

Oak Titmouse Baeolophus inornatus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MJ

Olive-sided Flycatcher Contopus cooperi — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0AN

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Rufous-crowned Sparrow Aimophila ruficeps — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MX

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Tricolored Blackbird Agelaius tricolor — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06P

Western Grebe aechmophorus occidentalis — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

Williamson's Sapsucker Sphyrapicus thyroideus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FX

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

This location overlaps all or part of the following wetlands:

Freshwater Forested/shrub Wetland

PSSAh

Freshwater Pond

PUSAr
PUSCh

Riverine

R3UBF
R4SBA
R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website: http://107.20.228.18/decoders/wetlands.aspx

CNPS California Native Plant Society — Rare and Endangered Plant Inventory

Plant List

44 matches found. *Click on scientific name for details*

Search Criteria

Found in 9 Quads around **34118C4**

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Astragalus brauntonii	Braunton's milk-vetch	Fabaceae	perennial herb	1B.1	S2	G2
Atriplex parishii	Parish's brittlescale	Chenopodiaceae	annual herb	1B.1	S1	G1G2
Berberis nevinii	Nevin's barberry	Berberidaceae	perennial evergreen shrub	1B.1	S1	G1
California macrophylla	round-leaved filaree	Geraniaceae	annual herb	1B.2	S3?	G3?
Calochortus catalinae	Catalina mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	S4	G4
Calochortus clavatus var. clavatus	club-haired mariposa lily	Liliaceae	perennial bulbiferous herb	4.3	S3	G4T3
Calochortus clavatus var. gracilis	slender mariposa lily	Liliaceae	perennial bulbiferous herb	1B.2	S2S3	G4T2T3
Calochortus plummerae	Plummer's mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	S4	G4
Calystegia peirsonii	Peirson's morning-glory	Convolvulaceae	perennial rhizomatous herb	4.2	S4	G4
Camissoniopsis lewisii	Lewis' evening-primrose	Onagraceae	annual herb	3	S4	G4
Canbya candida	white pygmy-poppy	Papaveraceae	annual herb	4.2	S3S4	G3G4
Centromadia parryi ssp. australis	southern tarplant	Asteraceae	annual herb	1B.1	S2	G3T2
			perennial			

Cercocarpus betuloides var. blancheae	island mountain-mahogany	Rosaceae	evergreen shrub	4.3	S4	G5T4
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	Polygonaceae	annual herb	1B.1	S1	G2T1
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	4.2	S4	G4
Deinandra minthornii	Santa Susana tarplant	Asteraceae	perennial deciduous shrub	1B.2	S2	G2
Deinandra paniculata	paniculate tarplant	Asteraceae	annual herb	4.2	S4	G4
Delphinium parryi ssp. purpureum	Mt. Pinos larkspur	Ranunculaceae	perennial herb	4.3	S4	G4T4
Dodecahema leptoceras	slender-horned spineflower	Polygonaceae	annual herb	1B.1	S1	G1
Harpagonella palmeri	Palmer's grapplinghook	Boraginaceae	annual herb	4.2	S3	G4
Helianthus inexpectatus	Newhall sunflower	Asteraceae	perennial rhizomatous herb	1B.1	S1	G1
Heuchera caespitosa	urn-flowered alumroot	Saxifragaceae	perennial rhizomatous herb	4.3	S3	G3
Hordeum intercedens	vernal barley	Poaceae	annual herb	3.2	S3S4	G3G4
Horkelia cuneata var. puberula	mesa horkelia	Rosaceae	perennial herb	1B.1	S1	G4T1
Hulsea vestita ssp. gabrielensis	San Gabriel Mountains sunflower	Asteraceae	perennial herb	4.3	S4	G5T4
Hulsea vestita ssp. parryi	Parry's sunflower	Asteraceae	perennial herb	4.3	S4	G5T4
Juglans californica	Southern California black walnut	Juglandaceae	perennial deciduous tree	4.2	S3	G3
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Asteraceae	annual herb	1B.1	S2	G4T2
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	Brassicaceae	annual herb	4.3	S3	G5T3
Lilium humboldtii ssp. ocellatum	ocellated Humboldt lily	Liliaceae	perennial bulbiferous herb	4.2	S3	G4T3
Linanthus concinnus	San Gabriel linanthus	Polemoniaceae	annual herb	1B.2	S3	G3
	Davidson's bush-		perennial			

Malacothamnus davidsonii	mallow	Malvaceae	deciduous shrub	1B.2	S2	G2
Monardella hypoleuca ssp. hypoleuca	white-veined monardella	Lamiaceae	perennial herb	1B.3	S2S3	G4T2T3
Navarretia fossalis	spreading navarretia	Polemoniaceae	annual herb	1B.1	S2	G2
Navarretia setiloba	Piute Mountains navarretia	Polemoniaceae	annual herb	1B.1	S2	G2
Opuntia basilaris var. brachyclada	short-joint beavertail	Cactaceae	perennial stem succulent	1B.2	S3	G5T3
Orcuttia californica	California Orcutt grass	Poaceae	annual herb	1B.1	S1	G1
Phacelia hubbyi	Hubby's phacelia	Boraginaceae	annual herb	4.2	S4	G4
Phacelia mohavensis	Mojave phacelia	Boraginaceae	annual herb	4.3	S4	G4Q
Pseudognaphalium leucocephalum	white rabbit-tobacco	Asteraceae	perennial herb	2B.2	S2	G4
Quercus durata var. gabrielensis	San Gabriel oak	Fagaceae	perennial evergreen shrub	4.2	S3	G4T3
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	2B.2	S2	G3
Spermolepis lateriflora	western bristly scaleseed	Apiaceae	annual herb	2A	SH	G5
Symphyotrichum greatae	Greata's aster	Asteraceae	perennial rhizomatous herb	1B.3	S2	G2

Suggested Citation

CNPS, Rare Plant Program. 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed 07 July 2016].

APPENDIX F

Sensitive Plant Faunal Species with Potential to Occur in the Project Study Area

Appendix F

Potential for Sensitive Wildlife Species to Occur within the Project Study Area

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
ANIMALS			
FISH			
Santa Ana sucker *Catostomus santaanae*	Federal: FT State: SSC	South coast flowing waters.	No potential. Suitable breeding and foraging habitat does not occur within the Study Area.
Unarmored threespine stickleback *Gasterosteus aculeatus williamsoni*	Federal: FE State: SE	Occurs in slow-moving reaches or quiet-water microhabitats in streams and rivers. Favorable habitats are usually shaded by dense and abundant vegetation provides refuge.	No potential. Suitable breeding and foraging habitat does not occur within the Study Area.
Arroyo chub *Gila orcuttii*	Federal: None State: SSC	South coast flowing waters.	No potential. Suitable breeding and foraging habitat does not occur within the Study Area.
Santa Ana speckled dace *Rhinichthys osculus* ssp. *3*	Federal: None State: SSC	South coast flowing waters.	No potential. Suitable breeding and foraging habitat does not occur within the Study Area.
AMPHIBIANS			
Arroyo toad *Anaxyrus californicus*	Federal: FE State: SSC	Sandy banks of washes, streams, and arroyos with shallow gravelly pools along riparian woodlands.	No potential. Suitable breeding habitat (e.g., high order streams, shallow ponded areas, and well developed floodplain and stream terraces) does not occur within the Study Area.
Western spadefoot *Spea hammondii*	Federal: None State: SSC	Foothills, grasslands, open chaparral, pine-oak woodlands. Favors areas with sandy or gravelly soil with breeding in temporary pools and streams which are slow moving.	No potential. Suitable breeding habitat (e.g., pools with evidence of ponding for a duration that would support the species [3+ weeks]) does not occur within the Study Area.
REPTILES			
Silvery legless lizard *Anniella pulchra pulchra*	Federal: None State: SSC	Prefers moist warm loose soils with plant cover. Found in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or	Potential. Suitable habitat occurs within the study area, primarily associated with Tributary A.

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
		oaks. Leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather often indicate suitable habitat. Often can be found under surface objects such as rocks, boards, driftwood, and logs. Sometimes found in suburban gardens in Southern California.	
Western pond turtle *Emys marmorata*	Federal: None State: SSC	Occurs in south coast flowing waters, marsh and swamp, and wetland habitats.	No potential. Suitable habitat does not occur within the study area.
Coast horned lizard *Phrynosoma blainvillii*	Federal: None State: SSC	Primarily in sandy soil in open areas, especially washes and floodplains, in many plant communities. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants or other insects. Occurs west of the deserts from northern Baja California north to Shasta County below 2,400 meters (8,000 feet) elevation.	Potential. Suitable habitat occurs throughout the study area.
Southern mountain yellow-legged frog *Rana muscosa*	Federal: FE State: SE	Sunny riverbanks, meadow streams, isolated pools, lake edges, and rocky stream courses. Permanent water sources found between 1,214 to 7,546 feet in elevation and riparian and upland vegetation adjacent to water courses are required.	No potential. Suitable habitat (i.e., permanent water source) does not occur within the study area.
Two-striped garter snake *Thamnophis hammondii*	Federal: None State: SSC	Marsh and swamp, riparian scrub, riparian woodland, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest.	No potential. Suitable habitat occurs does not occur within the study area.
BIRDS			
Tricolored blackbird *Agelaius tricolor*	Federal: None State: SSC	Emergent marshes, freshwater marshes, typically nesting in marshes, thickets or non-native vegetation.	No potential. Suitable nesting and foraging habitat does not occur within the study area.
Grasshopper sparrow *Ammodramus savannarum*	Federal: None State: SSC	Open grasslands and prairies with patches of bare ground	Potential. Suitable nesting and foraging habitat occurs throughout the study area.
Burrowing owl	Federal: BCC	Open country in much of North and South	No potential. Suitable foraging habitat occurs

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
Athene cunicularia	State: SSC	America. Usually occupies ground squirrel burrows in open, dry grasslands, agricultural and range lands, railroad rights-of-way, and margins of highways, golf courses, and airports. Often utilizes man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. They avoid thick, tall vegetation, brush, and trees.	within the study area but suitable burrow habitat was not observed.
Swainson's hawk *Buteo swainsoni*	Federal: BCC State: ST	Inhabits open habitats such as grasslands, sage flats, and even swaths of agriculture intermixed with native habitat. Nests in solitary trees or in a small grove of trees along a stream.	Potential. Suitable nesting and foraging habitat occurs throughout the study area.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	Federal: FT State: SE	Occupies riparian forest habitats.	No potential. Suitable nesting habitat (i.e., large contiguous patches of mature riparian woodland) does not occur within the study area.
White-tailed kite *Elanus leucurus*	Federal: None State: FP	Savanna, open woodlands, marshes, partially cleared lands, and cultivated fields.	Potential. Suitable nesting and foraging habitat occurs throughout the study area.
Southwestern willow flycatcher *Empidonax traillii extimus*	Federal: FE State: SE	Breeds in riparian woodland habitats. Specifically in relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands including lakes and reservoirs	No potential. Suitable nesting and foraging habitat does not occur within the study area. However, the species could potentially use onsite riparian areas for migration or dispersal.
Loggerhead shrike *Lanius xanthinus*	Federal: BCC State: SSC	Inhabits open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries.	Potential. Suitable nesting and foraging habitat occurs throughout the study area.
Coastal California gnatcatcher	Federal: FT State: SSC	Year-round resident that occurs in coastal sage scrub and valleys up to about 500 meters (1,640 feet).	Potential. Suitable nesting and foraging habitat occurs throughout the study area.

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
Polioptila californica californica			
Least Bell's vireo *Vireo bellii pusillus*	Federal: FE State: SE	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Potential. Suitable nesting and foraging habitat occurs throughout the study area.
MAMMALS			
Pallid bat *Antrozous pallidus*	Federal: None State: SSC	Occurs in coastal scrub, riparian woodland, and valley and foothill grassland habitats, mostly near rocky outcrops and water. Roosts in rock crevices.	Potential. The study area supports potential foraging habitat but no roosting habitat.
Townsend's big-eared bat *Corynorhinus townsendii*	Federal: None State: CT, SSC	Coniferous forests and woodlands, deciduous riparian woodland, semi-desert and montane shrublands.	Potential. Suitable foraging habitat occurs within the study area.
Spotted bat *Euderma maculatum*	Federal: None State: SSC	Arid forests, marshlands, and open habitats.	No potential. Suitable habitat does not occur within the study area.
Western mastiff bat *Eumops perotis californicus*	Federal: None State: SSC	Occurs in coastal scrub, valley and foothill grassland, and chaparral habitats.	Potential. The study area supports potential foraging habitat but no roosting habitat.
Western yellow bat *Lasiurus xanthinus*	Federal: None State: SSC	Inhabits savannas, secluded woodlands, pasture or croplands, and even residential areas.	Potential. Suitable foraging habitat occurs within the study area.
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	Federal: None State: SSC	Open or semi-open habitats including grasslands, agricultural fields or sparse coastal scrub.	No potential. Suitable habitat does not occur within the study area.
San Diego desert woodrat *Neotoma lepida intermedia*	Federal: None State: SSC	Coastal scrub, sagebrush, chaparral, and desert habitats.	Potential. Suitable habitat occurs within the study area.
Southern grasshopper mouse *Onychomys torridus ramona*	Federal: None State: SSC	Coastal sage scrub, mixed chaparral, low sagebrush, riparian scrub, and annual grassland with scattered shrubs.	Potential. Suitable habitat occurs within the study area.
Los Angeles pocket mouse	Federal: None State: SSC	Found in open landscapes associated with alluvial, aeolian, or well-drained upland	Potential. Suitable habitat occurs within the study area.

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
Perognathus longimembris brevinasus		deposits of sandy soils. Prefers lower elevation grassland, alluvial sage scrub, and coastal sage scrub habitats.	
American badger *Taxidea taxus*	Federal: None State: SSC	A variety of habitats including coastal scrub, marsh, valley and foothill grassland, riparian forest, riparian woodland, and riparian scrub.	Potential. Suitable habitat occurs within the study area.

Legend:

FE Federally Endangered
FT Federally Threatened
FC Federal Candidate for Listing
SE Endangered in California
ST Threatened in California
CR Rare in California
SSC State Species of Concern
FP State Fully Protected
BCC Bird of Conservation Concern
CT Candidate for Threatened Status

APPENDIX G

Preliminary Jurisdictional Determination Form

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office: Los Angeles District | File/ORM #: | PJD Date: Jul 18, 2016

State: CA | City/County: Los Angeles/ Los Angeles

Nearest Waterbody: Hansen Dam Flood Control Basin

Location: TRS, LatLong or UTM: 34 16 7.70 N, 118 22 56.39 W

Name/ Address of Person Requesting PJD: Adriana Borrayo
2714 Media Center Drive
Los Angeles, CA 90065

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters: 3,618 linear ft | 5 width | 0.45 acres | Stream Flow: Ephemeral

Wetlands: 0 acre(s) | Cowardin Class: Riverine

Name of Any Water Bodies on the Site Identified as Section 10 Waters: Tidal: n/a | Non-Tidal: n/a

☐ Office (Desk) Determination
☑ Field Determination: Date of Field Trip: May 24, 2016

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- ☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☐ U.S. Geological Survey Hydrologic Atlas:
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☑ U.S. Geological Survey map(s). Cite quad name: San Fernando
- ☑ USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Staff, Natural Resources Conservation
- ☐ National wetlands inventory map(s). Cite name:
- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation is:
- ☑ Photographs: ☐ Aerial (Name & Date): ☑ Other (Name & Date): 5/23 and 5/24/2016
- ☐ Previous determination(s). File no. and date of response letter:
- ☑ Other information (please specify): Attached Biological Technical Report

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and Date of Regulatory Project Manager (REQUIRED)

Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office	Los Angeles District	File/ORM #		PJD Date:	Jul 18, 2016
State	CA	City/County	Los Angeles/ Los Angeles	Person Requestinq PJD	Adriana Borrayo

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
1	34 17 2.08N	118 22 42.06W	Riverine	0.45 ac	Non-Section 10 non-wetlanc

Notes:

A detailed description of potentially jurisdictional non-wetland waters of the U.S. and supporting maps are provided in the attached Biological Technical Report prepared for the project.