
APPENDIX B

BIOLOGICAL RESOURCES EVALUATION



APPENDICES

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**BIOLOGICAL RESOURCE EVALUATION FOR
SOUTH HILLS BIKE PARK PROJECT
CITY OF GLENDORA, LOS ANGELES COUNTY, CALIFORNIA**



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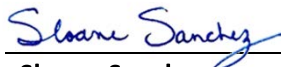
August 8, 2025

CERTIFICATION STATEMENT

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

August 8, 2025

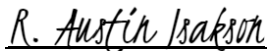
Date



Sloane Sanchez
Senior Biologist

August 8, 2025

Date



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August 8, 2025

Date



Ash Walker
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SECTION 1. INTRODUCTION

HANA Resources, Inc. (HANA) was retained by PlaceWorks, on behalf of the City of Glendora, to prepare this Biological Resources Evaluation (BRE) report for the Glendora South Hills Bike Park. Following completion of the reconnaissance-level biological surveys, HANA prepared this study report that: 1) summarized existing conditions; 2) assessed the potential presence of sensitive biological resources; 3) analyzed the potential impacts on those resources; 4) recommended, as appropriate, best management practices (BMPs), avoidance and protection measures, and mitigation measures to avoid, eliminate and/or reduce environmental impacts to less than significant levels; and 5) identified biological permits or approvals needed. The study includes: 1) methods and results of the literature review and field surveys; 2) figures depicting the size and location of plant communities and other sensitive biological resources; 3) a complete flora and fauna compendium; and 4) site photographs.

1.1. SITE LOCATION

The site covers 318 acres in the City of Glendora, Los Angeles County, CA (**Exhibit I, Project Vicinity**) and is located north of Interstate 210, east of South Glendora Avenue, and south of Big Dalton Wash. The site is comprised of 19 parcels, APNs 8644-013-905, 8644-013-906, 8644-014-901, 8644-014-902, 8644-014-904, 8644-014-905, 8644-014-907, 8644-014-909, 8644-014-910, 8644-014-911, 8644-015-914, 8644-015-915, 8644-027-900, 8644-027-901, 8644-027-902, 8644-027-905, 8644-027-906, 8644-027-908, 8644-027-913 and includes a Los Angeles Department of Water and Power Easement (**Exhibit II, Project Area**). The site is located on the United States Geological Survey (USGS) San Dimas and Glendora Quadrangles, 7.5-Minute Topographic map. The surface elevation of the site ranges from approximately 715 to 1215 feet above mean sea level (MSL). The site is located within Sections 31 and 32 of Township 1 North-Range 9 West, and Sections 5 and 6 of Township 1 South-Range 9 West, San Bernardino Meridian.

1.2. Project Description

The proposed project is for the construction of a bike park and a 6-mile cross country style trail encompassing the entire South Hills Wilderness area (**Exhibit III, Site Plan**). The development will have the following:

- Bike Park: 1 acre with bi-directional downhill trails and pedal up trails.
- Parking lot: 17 spots in main lot, 7 parallel parking spots on west side of access road.
- Cross-country trail: 6 miles encompassing the entire South Hills Wilderness area.
- Trail head: 36-48" wide full bench cut trail.
- Trails will be constructed using native soil surface with some areas including; a soil stabilizer to reduce dust and erosion or onsite borrow for stabilization and occasional grading.

Exhibit I. Project Vicinity



Glendora South Hills Bike Park
Exhibit II: Project Area

Legend:

- South Hills Wilderness Park
- Proposed Trails (50ft Corridor)
- Proposed Bike Park

Scale: 1 inch = 603 feet
 0 437.5 875 Feet

Inset Map Labels: Glendora, Los Angeles, Long Beach, Angeles National Forest

Exhibit III. Site Plan



SECTION 2. REGULATORY OVERVIEW

2.1. Federal Statutes, Regulations and Executive Orders

Endangered Species Act (ESA)

The federal Endangered Species Act of 1973 (Title 16, United States Code [U.S.C.] §§ 1531-1543) (ESA), as amended, designates and provides for protection of listed threatened and endangered plant and animal species, and their critical habitat. The US Fish and Wildlife Service (USFWS), in the Department of the Interior, and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS), in the Department of Commerce, share responsibility for administration of the ESA. These responsibilities include listing and delisting species, designating critical habitat, and formulating recovery plans. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife.

Section 9 (Prohibited Acts)

Once a species is listed, section 9 of the ESA makes it unlawful for any person, including private and public entities, to "take" species listed as endangered or without a permit issued pursuant to section 10 or an incidental take statement issued pursuant to section 7. Section 9 defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The term "harm" is defined as "an act which actually kills or injures wildlife. Such an act may include substantial habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering."

ESA section 9's take prohibitions apply to listed wildlife and fish species, but not to plants. Endangered plants are not protected from take, although it is unlawful to remove, possess, or maliciously damage or destroy them on federal lands. Removing or damaging listed plants on state and private lands in knowing violation of state law, or in the course of violating a state criminal trespass law, also is illegal under the ESA.

Section 10 (Incidental Take Permits and Habitat Conservation Plans)

An incidental take permit pursuant to section 10(a)(1)(B) is required when non-Federal, otherwise lawful activities, including lawful project development, will result in take of threatened or endangered wildlife. Under this provision, the USFWS and/or NMFS may, where appropriate, authorize the taking of federally listed wildlife or fish if such taking occurs incidentally during otherwise legal activities. Section 10(a)(2)(B) requires an application for an incidental take permit to include a Habitat Conservation Plan (HCP). The purpose of the habitat conservation planning process associated with the permit is to ensure there is adequate avoidance, minimization and mitigation measures to address the effects of the authorized incidental take. Section 10 provides a clear regulatory mechanism to permit the incidental take of federally listed fish and wildlife species by private interests and non-Federal governmental agencies.

Migratory Bird Treaty Act (MBTA)

The Migratory Bird Treaty Act (MBTA) of 1918 (Title 16, U.S.C. sections 703 - 712), as amended, implements various treaties and conventions between the United States (U.S.) and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. The MBTA makes it unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird, unless authorized under a permit issued by the Secretary of the Interior. Some regulatory exceptions apply. Take is defined in regulations implementing the MBTA as "to

pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to carry out these activities.” The MBTA prohibits the collection and destruction of a migratory bird, its nest, and birds or eggs contained in the nest. The USFWS’ Migratory Bird Permit Memorandum (MBPM-2) dated April 15, 2003, clarifies that destruction of most unoccupied bird nests is permissible under the MBTA; exceptions include nests of federally listed threatened or endangered migratory birds, bald eagles, and golden eagles. Take under the MBTA does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The USFWS has statutory authority and responsibility for enforcing the MBTA.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Section 668) provides for the protection of the bald eagle (the national emblem) and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession and commerce of such birds. If compatible with the preservation of bald and golden eagles, the Secretary of the Interior may permit the taking, possession and transportation of bald and golden eagles and nests for scientific or religious purposes, or for the protection of wildlife, agricultural or other interests. The Secretary of the Interior may authorize the take of golden eagle nests, which interfere with resource development or recovery operations. Bald eagles may not be taken for any purpose unless the Secretary issues a permit prior to the taking.

Clean Water Act (CWA)

The federal Clean Water Act (33 U.S.C. §§ 1251-1376) (CWA) is the principal federal law governing pollution control and water quality of the nation's waterways. It establishes the basic structure for regulating discharges of pollutants into “Waters of the United States” (Waters of the U.S.) and for regulating water quality and establishing water quality standards for surface waters. Sections 401, 402, and 404 of the CWA are pertinent to surface and coastal, Waters of the U.S. For purposes of Section 404 permitting under the CWA, “Waters of the U.S.”, are comprised of those wetland and non-wetland bodies of water that meet the criteria set forth in 33 Code of Federal Regulations (CFR) § 328.3, as interpreted by a number of court opinions and guidance, including Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001) (SWANCC), consolidated cases Rapanos v. United States (Rapanos), and Carabell v. United States (Carabell), 547 U.S. 715 (2006), and joint guidance issued by U.S. Army Corps of Engineers (USACE) and United States Environmental Protection Agency (EPA) in light of judicial decisions, including the joint guidance memorandum regarding Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in Rapanos v. United States and Carabell v. United States (December 12, 2008)(2008 Regulatory Guidance).

Section 404 – Discharge of Dredge and Fill Requirements

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into Waters of the U.S. The USACE implementing regulations define “dredged material” as material that is excavated or dredged from Waters of the U.S. The CWA implementing regulations define “fill material” as material placed in Waters of the U.S. where the material has the impact of either replacing any portion of Waters of the U.S. with dry land or changing the bottom elevation of any portion of a Waters of the U.S. Examples include discharges of rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure for development projects in Waters of the U.S.

Section 401 – Water Quality Certification

Although the CWA is a federal law, Section 401 of that law recognizes that states have the primary authority and responsibility for setting surface water quality standards and requires the U.S. Army Corps

of Engineers to obtain a state certification that their permits for discharge or dredge and fill material do not violate state water quality standards. Section 401 of the CWA requires every applicant for a Section 404 permit resulting in any discharge of dredge or fill material into Waters of the U.S. to provide a certification that any discharges will comply with the applicable state water quality standards set pursuant to the CWA and applicable state law.

2.2. State Statutes and Regulations

California Endangered Species Act (CESA)

The California Endangered Species Act (CESA) (California Fish and Game Code § 2050 et seq.) was enacted in 1984 to parallel the federal ESA and allows the Fish and Game Commission to designate species, including plants, as “threatened” or “endangered.” The CESA states that all native species of fishes, amphibians, reptiles, birds, mammals, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. Unlike the ESA, the CESA does not include listing provisions for invertebrate species.

CESA makes it illegal to import, export, take, possess, purchase, sell, or attempt to do any of those actions to species that are designated as threatened, endangered, or candidates for listing, unless permitted by the California Department of Fish and Wildlife (CDFW). Section 2080 of the California Fish and Game Code prohibits take of any species that the Commission determines to be an endangered species or a threatened species. “Take” is defined in section 86 of the California Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.”

Under section 2081 of CESA, CDFW may permit take or possession of threatened, endangered, or candidate species for scientific, educational, or management purposes, and may also permit take of these species that is incidental to otherwise lawful activities if certain conditions are met. Some of the conditions for issuance of permits allowing incidental take are that the adverse effects of the take must be minimized and fully mitigated, adequate funding must be ensured for implementation of identified mitigation, and that the activity shall not jeopardize the continued existence of the listed species. CESA emphasizes early consultation to avoid potential impacts on candidate and listed endangered and threatened species, and to develop appropriate mitigation to offset project-caused losses of listed species populations and their essential habitats.

California Fish and Game Code §§ 1600-1616

Pursuant to §§ 1600–1616 of the California Fish and Game Code, the CDFW regulates all substantial diversions, obstructions, or changes to the natural flow or the bed, channel, or bank of any river, stream, or lake, which provides habitat and supports fish or wildlife. CDFW defines a “stream” (including creeks and rivers) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation” (California Code of Regulations, Title 14, Division 1, Subdivision 1, Chapter 1, § 1.72). “Bank” means the slope or elevation of land that bounds the bed of the stream in a permanent or longstanding way, and that confines the stream water up to its highest level. “Lake” includes “natural lakes or man-made reservoirs.”

Rivers, streams, lakes, and riparian vegetation that provide habitat for fish and wildlife species are subject to jurisdiction by the CDFW under §§ 1600-1616 of the California Fish and Game Code. Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Section 2785(e) defines “riparian

habitat" as lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source. CDFW regulates the bed, bank to bank, as well as associated riparian vegetation, and fish and wildlife resources. CDFW has interpreted jurisdictional boundaries to be defined by the tops of stream banks (i.e., the limit of stream influence) and/or the limit of the canopy of riparian vegetation (outer drip line) that is hydrologically connected to river, stream, or lake, whichever is greatest. As a result, the area of CDFW jurisdiction is usually greater than the active channel and overlaps and extends beyond the USACE jurisdiction. Isolated wetlands not associated with a river, stream or lake are not protected under §§ 1600 et seq. of the California Fish and Game Code. In addition, CDFW does not have regulatory authority on Tribal Lands.

2.3. Regional and Local Ordinances, Plans and Policies

Los Angeles County Flood Control District Encroachment

The Los Angeles County Flood Control District's (LACFCD) core responsibilities are to provide flood protection and water conservation in over 3,000 square miles within the County of Los Angeles. Pursuant to Los Angeles County Code, any work, encroachment, or activity within or affecting the LACFCD right-of-way, facilities, interests, or jurisdiction requires a Flood Control Permit. These areas include a number of major dams, debris basins, open channels, underground storm drains, catch basins, spreading grounds, and sea water barrier projects among other facilities, and the associated rights of way.

SECTION 3. METHODOLOGY

3.1. LITERATURE REVIEW

Prior to performing the field surveys, a desktop literature review was performed to review existing documentation relevant to the Biological Study Area (BSA). The BSA is defined as the site and a 500-foot buffer zone outside of but contiguous with the site. The most recent records of the Information for Planning and Consultation (IPaC) database, managed by the U.S. Fish and Wildlife Service (USFWS 2025a); California Natural Diversity Database (CNDDDB), managed by the California Department of Fish and Wildlife (CDFW 2025); and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2025b) were reviewed for the quadrangles containing (i.e., San Dimas, California USGS 7.5 minute quadrangles) and surrounding the Survey Area (i.e., Prado Dam, Ontario, Mt. Baldy, Baldwin Park, Azusa, Glendora, La Habra, and Yorba Linda; California USGS 7.5 minute quadrangles). These databases contain records of reported occurrences of federal- or state-listed as endangered or threatened species, proposed endangered or threatened species, former Federal Special of Concern (FSC), California Species of Special Concern (CSC), or otherwise special-status species or sensitive habitat that may occur within or in the immediate vicinity of the BSA.

3.2. SOILS

Soil maps for the site were referenced online to determine the types of soil found on the site from the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2025). Soils are determined in accordance with categories set forth by the U.S. Department of Agriculture (USDA) Soil Conservation Service and by referencing the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2025).

3.3. WETLANDS

The project boundary and its 500-foot buffer were referenced online to determine presence or absence of wetlands through USFWS's Natural Wetland Inventory (NWI) Wetland Mapper and the EPA & USGS joint National Hydrology Dataset Plus (NHDPlus) (EPA and USGS 2025, USFWS 2025b). The USFWS is the principal federal agency tasked with monitoring and providing information on the extent, status, characteristics, and functions of the country's wetlands, deepwater, and other aquatic habitats (USFWS 2025b). The NWI follows the national standard definition of wetlands as outlined in Cowardin et al. 2nd edition (2013). Wetlands are then categorized based upon landscape, substrate, vegetation cover, and hydrologic regime and is known as the Cowardin system (Cowardin et al. 2013). The NHDPlus is a joint product of the EPA and USGS and is part of the national data repository with differing conventions and classifications than NWI. Both are utilized to ensure accurate identification of potential wetlands on site.

3.4. POTENTIAL FOR OCCURRENCE

3.4.1. Criteria

A vegetation community or special-status species is considered to potentially occur in a BSA if its known geographic range includes part of the BSA or an adjacent USGS 7.5-minute quadrangle and/or if the general habitat or environmental conditions (e.g., soil type, etc.) required for the species are present. The

criteria for evaluating the potential for occurrence (PFO) on a site is presented in **Table 1, Criteria for Evaluating Special-Status Species Occurrences.**

Table 1. Criteria for Evaluating Special-Status Species Occurrences

Potential for Occurrence	Criteria
Absent	Species was not observed during focused surveys conducted at an appropriate time for identification of the species, or species is restricted to habitats or environmental conditions that do not occur within the site.
Low	Historical records for this species do not exist within the immediate vicinity of the site (approximately 5 miles), and/or habitats or environmental conditions needed to support the species are of poor quality.
Moderate	Either a historical record exists of the species within the immediate vicinity of the site (approximately 5 miles) and marginal habitat exists on the site, or the habitat requirements or environmental conditions associated with the species occur within the site, but no historical records exist within 5 miles of the site.
High	Both a historical record exists of the species within the site or its immediate vicinity (approximately 5 miles), and the habitat requirements and environmental conditions associated with the species occur within the site.
Present	Species was detected within the site at the time of the survey.

3.4.2. Status Codes

A list of abbreviations used to help determine the significance of biological resources potentially occurring in the BSA is provided in **Table 2, Abbreviations for Federal- and State-listed Special-Status Species.**

Table 2. Abbreviations for Federal- and State-listed Special-Status Species

Designation	Abbreviation	Explanation
Federal	FE	Federally listed; Endangered
	FT	Federally listed; Threatened
	FC	Federal Candidate for listing
	BGEPA	Bald and Golden Eagle Protection Act
State	SE	State listed; Endangered
	ST	State listed; Threatened
	SC-T	State Candidate for Threatened listing
	SC-E	State Candidate for Endangered listing
	RARE	State listed; Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
	SC-RARE	State Candidate for Rare listing
	SSC	State Species of Special Concern
	SNC	State Natural Communities rarity ranking: 1-3 are considered sensitive, R is Rare.
	BCC	Bird of Conservation Concern
CNPS CRPR	List 1A	Plants presumed to Extinct in California
	List 1B	Plants Rare and Endangered in California and throughout their range
	List 2	Plants Rare, Threatened or Endangered in California but more common elsewhere in their range
	List 3	Plants about which we need more information; a review list
	List 4	Plants of limited distribution; a watch list
CNPS CRPR Extensions	0.1	Seriously Endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat)

Designation	Abbreviation	Explanation
	0.2	Fairly Endangered in California (20-80 percent of occurrences threatened)
	0.3	Not Very Endangered in California (less than 20 percent of occurrences threatened)

3.5. BIOLOGICAL RECONNAISSANCE-LEVEL SURVEY

The field survey was conducted in the BSA to identify any potential for occurrence of sensitive species, vegetation communities, or habitats to support sensitive wildlife species. The survey was conducted on foot between 0715 and 1230 hours from October 29-31, 2024. Photographs of the BSA were also recorded to document existing conditions from October 29-31, 2024 (**Appendix A, Site Photographs**). Weather conditions during the survey included temperatures ranging from approximately 46 to 72 degrees Fahrenheit, 20 to 60 percent cloud cover, no precipitation, and varying wind speeds. The Biological Reconnaissance Survey Field Forms can be found in **Appendix B, Biological Reconnaissance Survey Field Forms**.

3.5.1. Field Surveys

Our field surveys consisted of vegetation mapping and plant identification, opportunistic bird and wildlife observations. Each field survey is described below. **Table 3, Schedule of Field Surveys** presents the dates the site was visited, by whom, and the focus for each visit. HANA Staff Biologists, Mr. R. Austin Isakson and Ms. Ash Walker conducted the field surveys.

Table 3. Schedule of Field Surveys

Survey Dates	Observers	Purpose of visit
October 29, 2024	AW, AI	Initial recon survey to map vegetation and make observations of plants and wildlife. The area scouted included the future site of the proposed bike park bordering Glendora Ave. and all park trails from the northwest boundary of the project site to Bonnie Cove Trail.
October 30, 2024	AW, AI	Initial recon survey to map vegetation and make observations of plants and wildlife. The area scouted included the future site of the proposed bike park bordering Glendora Ave. and all remaining park trails in the eastern portion of the project site.
October 31, 2024	AW, AI	Initial recon survey to map vegetation and make observations of plants and wildlife. Survey efforts were focused on the vicinity of the proposed bike park, with additional point count bird surveys conducted in this area.

3.5.2. Vegetation

Plant communities in the BSA were identified, qualitatively described, and mapped onto an aerial photograph. Plant communities were determined in accordance with the categories set forth in Holland (1986) or CNPS (2025a). Plant nomenclature follows that of *The Jepson Manual: Higher Plants of California* (Hickman 2012, Jepson 2025). A comprehensive list of the plant species observed during the survey is presented in **Appendix C, Plant & Wildlife Species Observed/Detected Onsite**.

3.5.3. Wildlife

All wildlife and wildlife signs observed or detected, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in those habitats most likely to be utilized by wildlife (undisturbed native habitat, wildlife trails, etc.) or in habitats with the potential to support state- and/or federal-listed or proposed listed species. Notes were made on the general habitat types, species observed, and the conditions of the site. A list of the wildlife species observed during the site visit is included as **Appendix C, Plant & Wildlife Species Observed/Detected Onsite**.

3.5.4. USACE, SWRQCB, and CDFW Preliminary Jurisdictional Assessment

Prior to beginning the field preliminary delineation, a 50-foot-to-the-inch scaled topographic map, scaled aerial photograph, and the San Dimas/Glendora 7.5-minute USGS topographic quadrangle map were examined to determine the locations of potential areas of USACE, California State Water Resources Quality Control Board (SWRQCB), and/or California Department of Fish and Wildlife (CDFW) jurisdiction. This includes potential USACE jurisdiction pursuant to Section 404 and 401 of the Clean Water Act and CDFW jurisdiction pursuant to Section 1602 of the State of California Fish and Game Code. A preliminary jurisdictional delineation (PJD) was conducted to determine the potential for, and possible extent of, jurisdictional resources associated with the project site. The PJD included surveying all potential jurisdictional features within the project site utilizing the USACE Wetland Delineation Manual with Arid West Regional Supplement (USACE 1987, USACE 2008). These methods are further detailed in HANA's *Preliminary Jurisdictional Delineation Report for the South Hills Bike Park* (2025).

SECTION 4. RESULTS

4.1. LITERATURE REVIEW

4.1.1. Soils

After review of the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2025) (**Appendix D, USDA Natural Resources Conservation Service Web Soil Survey**), it was determined that the BSA is composed of the following four (4) soil types:

Urban land-Palmview-Tujunga, gravelly complex, 2 to 9 percent slopes

The Urban land-Palmview-Tujunga, gravelly complex is split into three groups: Urban land, Palmview, and Tujunga, Gravelly. The complex has a mean annual precipitation of 17 to 27 inches and mean annual air temperature of 63 to 66°F. These soils can be found at elevations of 200 to 2,240 feet. The Urban land has a very high runoff class. The Palmview soil is a sandy loam, and the parent material is discontinuous human-transported material over alluvium derived from granite. The soil is well drained and has a very low runoff class. The Tujunga soil is composed of loamy sand, gravelly loamy sand, and gravelly sand and the parent material is discontinuous human-transported material over alluvium derived from granite. The soil is somewhat excessively drained and has a low runoff class. The soils are not hydric.

Zaca-Apollo, warm complex, 20 to 55 percent slopes

The Zaca-Apollo, warm complex is split into two groups: Zaca and Apollo, warm. The complex has a mean annual precipitation of 14 to 21 inches and mean annual air temperature of 62 to 66°F. These soils can be found at elevations of 20 to 1,630 feet. The Zaca soil is clay, and the parent material is colluvium and/or residuum weather from sandstone and siltstone. The soil is well drained and has a very high runoff class. The Apollo, Warm soil is clay loam, and the parent material is colluvium and/or residuum weather from sandstone and siltstone. The soil is well drained and has a very high runoff class. The soils are not hydric.

Lithic Haploxerolls-Lithic Argixerolls complex, 20 to 55 percent slopes

The Lithic Haploxerolls-Lithic Argixerolls complex is split into two groups: Lithic Haploxerolls and Lithic Argixerolls. The complex has a mean annual precipitation of 17 to 25 inches and mean annual air temperature of 62 to 65°F. These soils can be found at elevations of 720 to 2,380 ft. The Lithic Haploxerolls soil is slightly decomposed plant material and loam, and the parent material is residuum weathered from volcanic rock. The soil is well drained and has a high runoff class. The Lithic Argixerolls soil is slightly decomposed plant material and sandy loam, and the parent material is residuum weathered from volcanic rock. The soil is well drained and has a high runoff class. The soils are not hydric.

Urban land, frequently flooded, 0 to 5 percent slopes

The Urban land, frequently flooded has a mean annual precipitation of 12 to 24 inches and mean annual air temperature of 63 to 66°F. It can be found at elevations of 0 to 1,190 feet. The Urban land is a manufactured layer that has a very high runoff class and is not hydric.

4.1.2. Wetlands

After reviewing the USFWS NWI Wetland Mapper and the EPA/USGS NHDPlus it was determined that multiple nameless wetlands occurred within the project site (**Exhibit IV, Wetlands**).

NWI Wetlands:**Palustrine Forested Temporarily Flooded (PFOA)**

This wetland is classified as a Palustrine (P) type of wetland, meaning that it is non-tidal and dominated by trees, shrubs, and other emergent vegetation. In this case it is forested (FO) or dominated by woody vegetation 6 meters or taller. Its water regime is Temporary Flooded (A), defined as surface water being present for brief periods (days to weeks) during growing season with a water table generally lying well below ground surface for most of the season.

Palustrine Forested Seasonally Saturated (PFOB)

This wetland is classified as a Palustrine (P) type of wetland, meaning that it is non-tidal and dominated by trees, shrubs, and other emergent vegetation. In this case it is forested (FO) or dominated by woody vegetation 6-meters or taller. Its water regime is Seasonally Saturated (B), defined as lacking surface water, and instead having saturated substrate at or near the surface for an extended period during the growing season but is otherwise unsaturated the rest of the year.

Palustrine Scrub-shrub Temporarily Flooded (PSSA)

This wetland is also a Palustrine (P) wetland, as described above, but its dominant vegetation is Scrub-Shrub (SS) or vegetation less than 6-meters in height and includes shrubs, saplings, and small or stunted trees or shrubs. It also has the same Temporary Flooded (A) water regime as listed above.

Riverine Intermittent Streambed Temporarily Flooded (R4SBA)

This wetland is classified as a Riverine (R) type of wetland, in this case meaning non-tidal, not dominated by trees, shrubs, or emergent vegetation, and contains flowing water. The flow is Intermittent (4), or present only part of the year, with small pools forming when not flowing. The Streambed (SB) classification is a term associated with intermittent riverine wetlands, described as a collection of substrates and forms who vary greatly depending on gradient of the channel, velocity of water, and sediment being carried by water. The water regime here also is Temporary Flooded (A), as seen above.

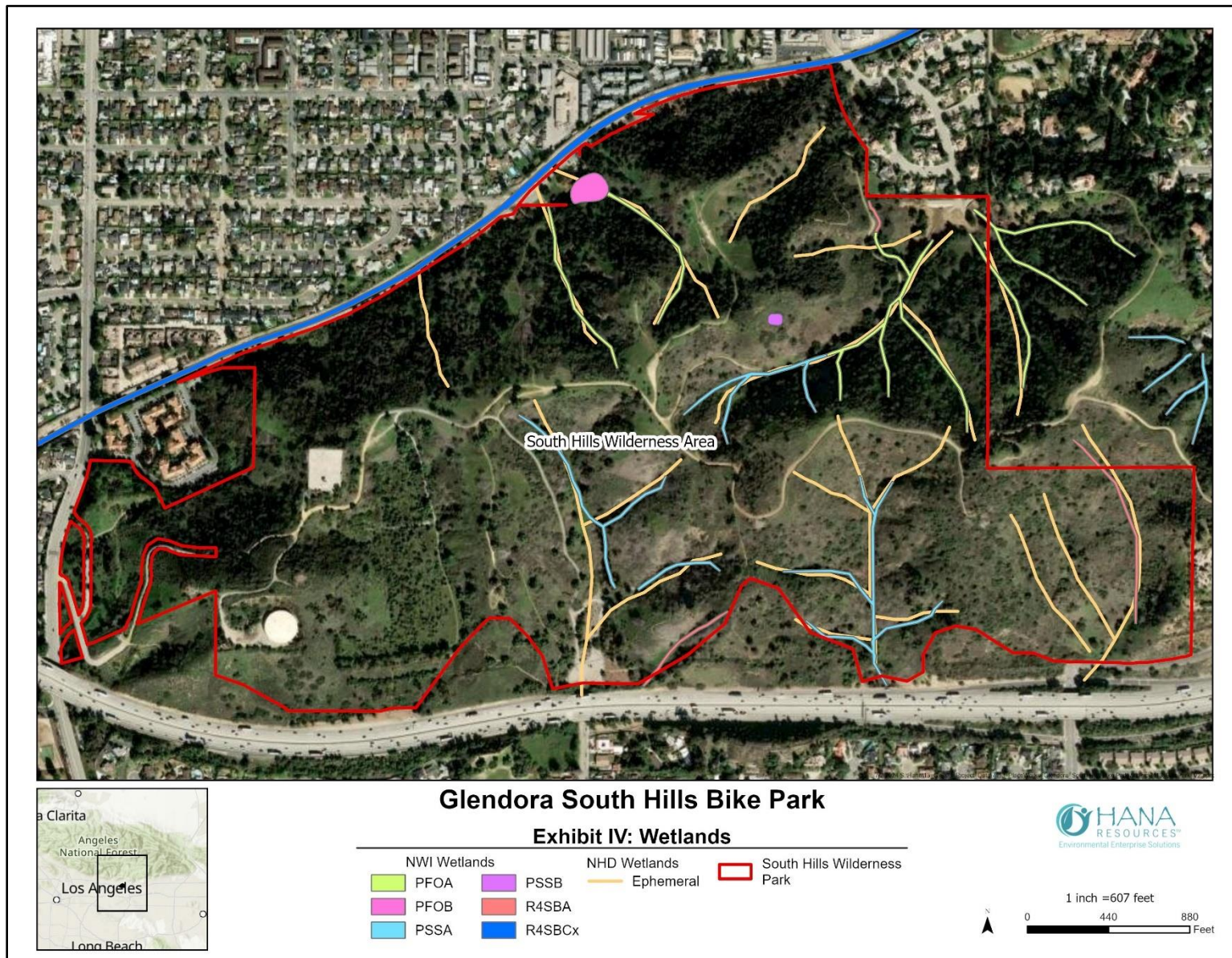
Riverine Intermittent Streambed Temporarily Flooded (R4SBCx)

This wetland, identified as Big Dalton Wash, is classified as a Riverine (R) type of wetland, in this case meaning non-tidal, not dominated by trees, shrubs, or emergent vegetation, and contains flowing water. The flow is Intermittent (4), or present only part of the year, with small pools forming when not flowing. The Streambed (SB) classification is a term associated with intermittent riverine wetlands, described as a collection of substrates and forms who vary greatly depending on gradient of the channel, velocity of water, and sediment being carried by water. The water regime is seasonally flooded (C), defined as surface water being present for extended periods of time during the growing season and becoming absent by the end of the growing season. This also contains the special modifier of excavated (x) which is used to identify wetland basins or channels excavated by humans.

NHDPlus Wetlands:

These wetlands are identified as ephemeral, this is defined as a stream that contains flowing water during, and for a short time after, precipitation events. Ephemeral streams are located above the water table with no groundwater involved, source water typically occurs from runoff.

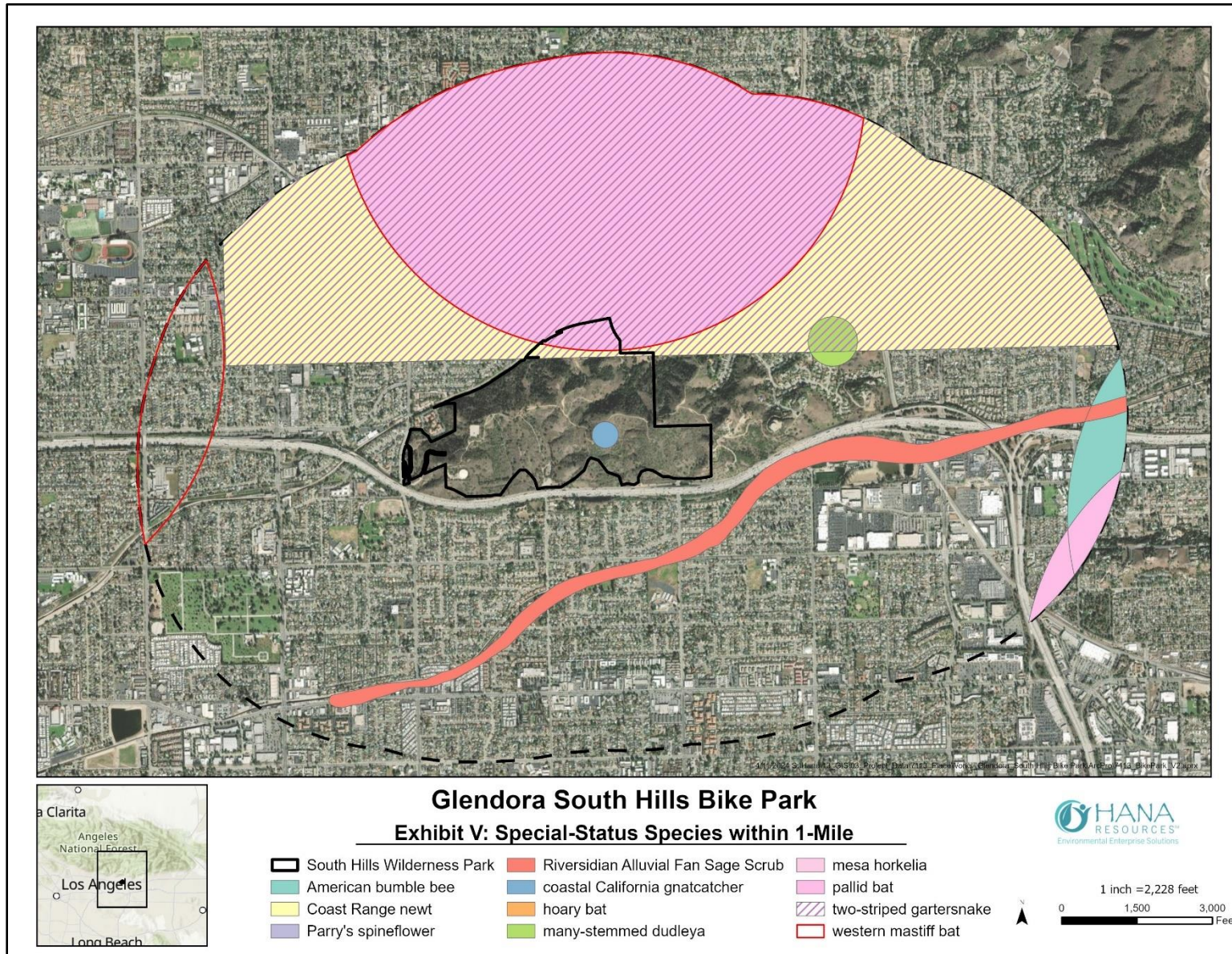
Exhibit IV. Wetlands



4.2. POTENTIAL FOR OCCURRENCE

A map of the CNDDDB database occurrences is included in **Exhibit V**, *Special-Status Species within 1 Mile*.

Exhibit V. Special-Status Species within 1 Mile



4.2.1. Vegetation

Vegetation

Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable. These communities may or may not contain special-status plants or their habitat.

The literature review resulted in a list of six (6) vegetation communities that have been known to occur within the five-mile area, which is presented in **Table 4, Sensitive Vegetation Communities**. One (1) of the sensitive vegetation community types was present within the BSA, one (1) has a high probability of occurring, and the remaining four (4) communities having a moderate and low probability of occurrence.

Table 4. Sensitive Vegetation Communities

Plant Community Name	PFO	Description	Site Factors
South Coast Live Oak Riparian Forest	High Potential	Dense riparian woodland dominated by coast live oak (<i>Quercus agrifolia</i>). Other tree species occurring in this community include California sycamore (<i>Platanus racemosa</i>), Fremont's cottonwood (<i>Populus fremontii</i>), black willow (<i>Salix gooddingii</i>), and arroyo willow (<i>Salix lasiolepis</i>). Species that occur in the understory include poison-oak (<i>Toxicodendron diversilobum</i>), mulefat (<i>Baccharis salicifolia</i>), and California goldenrod (<i>Solidago californica</i>).	Valley bottoms and outer floodplains along larger streams, in sandy soils or alluvium.
Walnut Forest	Low	A denser walnut woodland with a much more closed canopy. More often found in riparian corridors, shrub to herbaceous layer. Associated species of California bay, willow, ash, alder, oak, and elderberry.	More often located in riparian corridors than on hillsides when compared to walnut woodlands, same tree associations as walnut woodland.
Canyon Live Oak Ravine Forest	Low	A dense montane riparian community dominated by or co-occurring with canyon live oak (<i>Quercus chrysolepis</i>). Other species include bigleaf maple (<i>Acer macrophyllum</i>), coast live oak (<i>Quercus agrifolia</i>), California bay (<i>Umbellularia californica</i>), bigcone douglas-fir (<i>Pseudotsuga macrocarpa</i>), and Coulter pine (<i>Pinus coulteri</i>).	Steep headwaters and drainages can occupy outer floodplains along northerly slope-aspects particularly in association with <i>Pseudotsuga macrocarpa</i> .
California Walnut Woodland	Present	Woodland locally dominated by Southern California black walnut or co-dominant with coast live oak but with a more open canopy than a coast live oak. Often occurring in riparian corridors and hillslopes where non-native grasses occupy the herb layer. Commonly associated tree species include California bay, willow, ash, and alder with shrub/sub-tree species like toyon and elderberry frequently present.	Riparian corridors and shaded hillslopes, often associated with coast live oak.
Southern Sycamore Alder	Low	A tall, open, broad-leafed, winter-deciduous streamside woodland dominated by California sycamore (<i>Platanus racemosa</i>) and often also white	Very rocky streambeds subject to seasonally high-intensity flooding.

Plant Community Name	PFO	Description	Site Factors
Riparian Woodland		alder (<i>Alnus rhombifolia</i>). These stands seldom form closed canopy forests and may even appear as trees scattered in a shrubby thicket of sclerophyllous and deciduous species. Lianas include pacific blackberry (<i>Rubus ursinus</i>) and poison oak (<i>Toxicodendron diversilobum</i>).	<i>Alnus</i> increases in abundance on more perennial streams, while <i>Platanus</i> favors more intermittent hydrographs.
Riversidean Alluvial Fan Sage Scrub	Low	Desert subshrub species with a mixture of scale broom (<i>Lepidospartum squamatum</i>), white sage (<i>Salvia apiana</i>), buckwheat (<i>Eriogonum</i> spp.) and <i>Encelia</i> spp. In disturbed areas, <i>Opuntia</i> spp., chaparral yucca (<i>Yucca whipplei</i>), <i>Rhus</i> spp. may be present.	Alluvial fans and dry washes in interior areas of the Mojave Desert Section, found near developed areas and often have a history of ground disturbance. Mapped sparsely in the High Desert Plains and Hills Subsection on low-gradient slopes.

4.2.2. Plants

The literature review resulted in a list of twenty-nine (29) special-status plant species that have been known to occur within the BSA and surrounding five miles, presented in **Table 5, Special-Status Plant Species**. One (1) plant species was present, two (2) species were considered to have *high* potential, four (4) to have *moderate* potential, fourteen (14) to have *low* potential, and eight (8) to have *no* potential to occur in the BSA. Factors used to determine potential for occurrence include quality of habitat, soil type, impact from previous land use, and the date and location of prior CNDDDB and Jepson eFlora occurrence records. Reconnaissance plant surveys were conducted to determine if they are present or absent in the BSA.

4.2.3. Wildlife

The literature review resulted in a list of twenty-seven (27) special-status wildlife species that have been known to occur within the BSA and surrounding five miles, which is presented in **Table 6, Special-Status Wildlife Species**. Three (3) of these special-status species were present, three (3) were considered to have *high* potential, five (5) were considered to have *moderate* potential, and sixteen (16) were considered to have *low* to *no* potential to occur in the BSA. Factors used to determine potential for occurrence include quality of habitat, soil type, impact from previous land use, and the date and location of prior CNDDDB occurrence records. Reconnaissance wildlife surveys will be conducted to determine if they are present or absent in the BSA.

Table 5. Special-Status Plant Species

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Description in California	BSA Contains Potential Suitable Habitats	Plant Elevation Range (feet amsl)	BSA is Located Within the Plant Species' Known:		Potential For Occurrence in the BSA
						Elevation Range	General Distribution	
Listed Endangered, Threatened, Candidate and State Rare Plants: Plants with official status under the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and/or the Native Plant Protection Act (NPPA). A species may have other sensitive designations in addition to their federal or state listing.								
<i>Brodiaea filifolia</i>	thread-leaved brodiaea (=threadleaf clusterlily)	FT, SE, CRPR: 1B.1	Thread-leaved brodiaea is a perennial bulbiferous herb that typically occurs on gentle hillsides, valleys, and floodplains in semi-alkaline mudflats, vernal pools, mesic southern needlegrass grasslands, mixed native/non-native grasslands and alkali grasslands plant communities in association with clay, loamy sand, or alkaline silty-clay soils. This plant grows on various substrates ranging from clay to fine sand. It occurs in open valley and foothill grasslands, at the edge of vernal pools, flood plains, playas and openings in chaparral, cismontane woodlands or coastal scrub. This listed plant flowers from March to June.	No	82 – 3,674	Yes	Yes	Low Potential for occurrence in the BSA. The BSA lacks suitable geographic and habitat conditions for which this species is associated.
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	FE, CRPR: 1B.1	Braunton's milk-vetch is a rare species of milkvetch known by the common name Braunton's milk-vetch. It is endemic to California, where it is known from fewer than 20 extant occurrences in the hills and mountains surrounding the Los Angeles Basin in Southern California. This is a federally listed endangered species in the United States. <i>Astragalus brauntonii</i> is a plant of the coastal prairie grasslands, coastal sage scrub, and chaparral plant communities of the region that blooms from January to August. It is often found growing in disturbed areas, especially in carbonate soils areas. The 16 known remaining populations are found in the southwestern Transverse Ranges (eastern Santa Monica Mountains, east end Simi Hills, south base San Gabriel Mountains), northern Peninsular Ranges (northwest side Santa Ana Mountains) - within Los Angeles, Orange, and Ventura Counties. They appear to be extirpated from the southern Channel Islands. Braunton's milk-vetch is a large perennial herb which grows from a woody caudex and reaches up to 1. 5-meter (4. 9 ft) tall.	Yes	18 - 3026	Yes	Yes	Low Potential for occurrence in the BSA. The BSA contains suitable habitat for this species, however the species is limited to 16 known populations across Southern California with the closest population over 5 miles away.
<i>Dodecahema leptoceras</i>	slender-horned spineflower	FE, State CE, CRPR: 1B.1,	Slender-horned spineflower is an annual herb that grows on sandy soil of alluvium in flood plains and in washes. This spineflower is associated with the eastern-most occurrence of coastal sage scrub, known as alluvial fan sage scrub. Cryptogammic crusts are frequently present in areas occupied by this plant. This listed plant flowers from April to June.	No	656 – 2,493	Yes	No	No Potential for occurrence in the BSA. The BSA does not contain suitable habitat for this species and the distribution of the species in the area limits recruitment.
Sensitive Plants: These plants have no official status under the ESA, the CESA, and/or the NPPA; however they are designated as sensitive or locally important by federal agencies, state agencies, and/or local conservation agencies and organizations.								
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily	CRPR: 1B.2	Slender mariposa lily is a perennial bulbiferous herb that is found on shaded foothill canyons often on grassy slopes within other habitat such as chaparral and coastal scrub. This plant can be found after fire. This sensitive plant flowers from March to June.	Yes	1,050 – 3,280	Yes	Yes	Low Potential for occurrence in the BSA. The BSA contains minimal habitat within the suitable elevation range for this species.
<i>Calochortus plummerae</i>	Plummer's mariposa lily	CRPR: 4.2	Plummer's mariposa lily is a perennial bulbiferous herb that prefers openings in chaparral, cismontane woodlands, coastal scrub, valley and foothill grasslands, and lower montane coniferous forests. It is found on dry, rocky slopes and soils and brushy areas and can be very common after fire. This sensitive plant flowers from May to July.	Yes	328 – 5,576	Yes	Yes	Moderate Potential for occurrence in the BSA. The BSA contains suitable habitat for this species and has been documented nearby.
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	CRPR: 1B.1	Parry's spineflower is an annual herb that is found in sandy or rocky soils and openings in coastal scrub, chaparral, cismontane woodlands, and valley and foothill grasslands. Sometimes it is found at an interface of two vegetation types such as chaparral and oak woodlands. Often it is associated with alluvial conditions. This sensitive plant flowers from April to June.	No	902 – 4,002	Yes	Yes	No Potential for occurrence in the BSA. The BSA, while containing basic habitat types associated with this species, lacks the alluvial conditions for which the species is typically found with no documentation in the immediate area.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Description in California	BSA Contains Potential Suitable Habitats	Plant Elevation Range (feet amsl)	BSA is Located Within the Plant Species' Known:		Potential For Occurrence in the BSA
						Elevation Range	General Distribution	
<i>Cladium californicum</i>	California sawgrass	CRPR: 2B.2	California sawgrass is a perennial rhizomatous herb that is found in meadows and seeps and alkaline or freshwater marshes and swamps. This sensitive plant flowers from June to September.	No	197 – 2,837	Yes	Yes	No Potential for occurrence in the BSA. The BSA lacks the necessary riparian habitat for which is species is associated.
<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>	San Gabriel River dudleya	CRPR: 1B.2	San Gabriel River dudleya is a perennial herb that is found on steep cliff faces in granitic soils within chaparral. This sensitive plant flowers from April to July.	Yes	902 – 1,499	Yes	Yes	Low Potential for occurrence in the BSA. The BSA contains minimal cliff face required to support this species which is endemic to the area.
<i>Dudleya densiflora</i>	San Gabriel Mountains dudleya	CRPR: 1B.1	San Gabriel Mountains dudleya is a perennial herb that is found on steep rocky, granitic cliffs and canyon walls within chaparral, cismontane woodlands, coastal scrub, lower montane coniferous forests, and riparian woodlands. This sensitive plant flowers from March to June.	Yes	800 – 2,001	Yes	Yes	Low Potential for occurrence in the BSA. The BSA contains minimal cliff face required to support this species which is endemic to the area.
<i>Dudleya multicaulis</i>	many-stemmed dudleya	CRPR: 1B.2	Many-stemmed dudleya is a perennial herb that is often associated with clay soils in barrens, rocky places, and ridgelines as well as thinly vegetated openings in chaparral, valley and foothill grasslands, and coastal sage scrub in heavy soils, often clay. This sensitive plant flowers from April to July.	Yes	49 – 2,591	Yes	Yes	Low Potential for occurrence in the BSA. The BSA contains habitat typically associated with dudleya sp., however it lacks the clay soils within these areas of the BSA. Historical data places the BSA at the edge of its known range.
<i>Galium grande</i>	San Gabriel bedstraw	CRPR: 1B.2	San Gabriel bedstraw is a perennial deciduous shrub that occurs in broad leafed upland forests, chaparral, cismontane woodlands, and lower montane coniferous forests. This sensitive plant flowers from January to July.	Yes	1,394 – 4,920	No	Yes	Low Potential for occurrence in the BSA. The BSA contains suitable habitat to support this species; however, this species has no modern occurrences in the immediate area.
<i>Galium angustifolium</i> ssp. <i>habriense</i>	San Antonio Canyon Bedstraw	CRPR: 4.3	San Antonio Canyon bedstraw is a perennial deciduous shrub that occurs in high chaparral, slopes, ridges, and lower montane coniferous forests. This sensitive plant flowers from April to August.	No	3935 – 8695	No	No	No Potential for occurrence in the BSA. The BSA falls outside of its known elevation range.
<i>Horkelia cuneata</i> var. <i>puberula</i> (= <i>Horkelia cuneata</i> ssp. <i>puperula</i>)	mesa horkelia	CRPR: 1B.1	Mesa horkelia is a perennial herb that is found in sandy or gravelly sites of maritime chaparral, coastal scrub, and cismontane woodlands. This sensitive plant flowers from February to September.	Yes	230 – 2,657	Yes	Yes	Moderate Potential for occurrence in the BSA. The BSA contains sandy loams within the associated habitats for this species. While records are limited in the area, observations around the BSA have occurred.
<i>Imperata brevifolia</i>	California satintail	CRPR: 2B.1	California satintail is a perennial rhizomatous herb that occurs in mesic sites within chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), and riparian scrub. This sensitive plant flowers from September to May.	Yes	0 – 3,985	Yes	Yes	No Potential for occurrence in the BSA. The BSA has suitable habitat for this species, however, no modern sighting occur in the area for this species.
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	CRPR: 4.3	Robinson's pepper-grass is an annual herb that is found in dry soils on chaparral and coastal sage scrub often around rock outcrops. This sensitive plant flowers from January to July.	Yes	3 – 2,903	Yes	Yes	Low Potential for occurrence in the BSA. The BSA contains suitable habitat for this species. This species has limited sightings in the area, but other species in this genus are widely observed in the surrounding area.
<i>Aphyllon validum</i> ssp. <i>validum</i>	Rock Creek broomrape	CRPR: 1B.2	Rock Creek broomrape is a parasitic perennial herb that is found in granitic soils within chaparral and pinyon and juniper woodlands. This sensitive plant flowers from May to September.	No	4,100 – 6,560	No	No	No Potential for occurrence in the BSA. The BSA falls outside of this species known elevation range.
<i>Pseudognaphalium leucocephalum</i> (= <i>Gnaphalium leucocephalum</i>)	white rabbit-tobacco	CRPR: 2B.2	White rabbit-tobacco is a perennial herb that occurs in chaparral, cismontane woodlands, coastal scrub and riparian woodlands in sandy and gravelly sites. This sensitive plant flowers from (July) August to November (December). Months in parentheses are uncommon.	Yes	0 – 6,888	Yes	Yes	Low Potential for occurrence in the BSA. The BSA has suitable habitat for this species; however, no modern sighting occur in the immediate area for this species.
<i>Senecio aphanactis</i>	chaparral ragwort (=rayless	CRPR: 2B.2	Chaparral ragwort is an annual herb that is found in chaparral, cismontane woodlands, coastal scrub (sometimes alkaline) and drying alkaline flats. This sensitive plant flowers from January to April.	Yes	49 – 2,624	Yes	Yes	Low Potential for occurrence in the BSA. The BSA has limited habitat with little to no historical and modern records in the area. Numerous species within the genus occur in the area.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Description in California	BSA Contains Potential Suitable Habitats	Plant Elevation Range (feet amsl)	BSA is Located Within the Plant Species' Known:		Potential For Occurrence in the BSA
						Elevation Range	General Distribution	
	ragwort)							
<i>Symphyotrichum greatae</i> (= <i>Aster greatae</i>)	Greata's aster	CRPR: 1B.3	Greata's aster is a perennial rhizomatous herb that is found in mesic canyons of broad-leafed upland forests, chaparral, cismontane woodlands, lower montane coniferous forests, and riparian woodlands. This sensitive plant flowers from June to October.	Yes	984 – 6,593	Yes	Yes	No Potential for occurrence in the BSA. The BSA contains suitable habitat for this species but has no modern sightings outside of higher elevation sites within the San Gabriel Mountains.
<i>Pelazoneuron puberulum</i> var. <i>sonorense</i>	Sonoran maiden fern	CRPR: 2B.2	Sonoran maiden fern is a perennial rhizomatous herb that is found in meadows and seeps along streams and seepage areas. This sensitive plant flowers from January to September.	Yes	164 – 2,001	Yes	Yes	Low Potential for occurrence in the BSA. The BSA contains suitable habitat with other fern species present; however, there are no modern occurrences in the immediate area.
<i>Asplenium vespertinum</i>	western spleenwort	CRPR: 4.2	Western spleenwort is a rhizomatous fern that grows in moist, shady, rocky places, such as the shadows of overhanging boulders in chaparral, cismontane woodlands, and coastal sage scrub. This plant reproduces from February to June.	Yes	590—3,280	Yes	Yes	Low Potential for occurrence in the BSA. The BSA contains suitable habitat with other fern species present; however, there are no modern occurrences in the immediate area.
<i>Calochortus clavatus</i> var. <i>clavatus</i>	club-haired mariposa lily	CRPR: 4.3	Club-haired mariposa lily is a perennial bulbiferous herb that is usually found in serpentine, clay, rocky soils within chaparral, cismontane woodlands, coastal scrub, and valley and foothill grasslands. This sensitive plant flowers from May to June.	Yes	246 – 4,264	Yes	Yes	Low Potential for occurrence in the BSA. The BSA contains adequate habitat but lies at the edge of the species range. A single record exists within the 7.5-minute quad that the BSA falls within.
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily (=Weeds mariposa lily)	CRPR: 1B.2	Intermediate mariposa lily is a perennial bulbiferous herb that occurs on dry, rocky open slopes and rock outcrops in coastal scrub and chaparral. Intermediate mariposa lily occurs in valley and foothill grasslands only after burns. This sensitive plant flowers from May to July.	Yes	344 – 2,804	Yes	Yes	Low Potential for occurrence in the BSA. The BSA contains adequate habitat but lies at the edge of the species range; few modern and historic records within the San Gabriel Mountains and basin.
<i>Heuchera caespitosa</i> (= <i>Heuchera elegans</i>)	urn-flowered alumroot	CRPR: 4.3	Urn-flowered alumroot is a perennial rhizomatous herb that is found on sandstone cliffs, sandstone outcrops, or other rocky areas, often near creeks or waterfalls, within cismontane woodlands, montane riparian forests, and lower and upper montane coniferous forests. This sensitive plant flowers from May to August.	No	3,788 – 8,692	No	No	No potential for occurrence in the BSA. The BSA falls outside of the species' elevation range and contains little habitat associated with the species.
<i>Juglans californica</i> var. <i>californica</i>	Southern California Black Walnut	CRPR: 4.2	This plant is a species of deciduous tree that occurs in woodlands and forests below 2,000 feet in elevation. In riparian corridors, this species prefers dryer slopes that are not prone to flooding, but they still require access to groundwater and seasonal surface water. This tree flowers from March through May.	Yes	0 - 2000	Yes	Yes	Present. This species was regularly documented along the ridgeline and amongst the mixed woodlands of the BSA.
<i>Lepechinia fragrans</i>	fragrant pitcher sage	CRPR: 4.2	Fragrant pitcher sage is a perennial shrub that is found within chaparral and woodlands. This sensitive plant flowers from March to October.	Yes	66 – 4,297	Yes	Yes	Moderate Potential for occurrence in the BSA. The BSA contains suitable habitat for this species and has modern local occurrences.
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i> (= <i>Lilium fairchildii</i>)	Ocellated Humboldt lily	CRPR: 4.2, WRCMSHCP: Covered (a, f)	Ocellated Humboldt lily is a perennial bulbiferous herb that grows along streamside's in lower montane coniferous forests, cismontane woodlands, riparian woodlands, coastal scrub and chaparral. It can grow on relatively dry slopes beneath dense coniferous canopy. This sensitive plant flowers from March to August.	Yes	98 – 5,904	Yes	Yes	Moderate Potential for occurrence in the BSA. The BSA contains suitable habitat and has modern sightings in the surrounding area.
<i>Quercus engelmannii</i>	Engelmann oak	CRPR: 4.2, WRCMSHCP: Covered (a)	Engelmann oak is a perennial deciduous tree that occurs in the foothills, slopes and in arroyos and dry fans, cismontane woodlands, chaparral, riparian woodlands, and valley and foothill grasslands. Oak woodlands and southern mixed chaparral are both utilized by this tree. Larger oaks sometimes occur in vast savannah grasslands. In the foothills it may also occur as a shrubby element within the chaparral. Typically in such a situation the understory is relatively dense and the small oaks (even mature oaks in this habitat usually remain stunted) are concentrated on the periphery of watercourses or mesic slope	Yes	164 – 4,264	Yes	Yes	High Potential for occurrence in the BSA. The BSA contains suitable habitat and commonly associated species with modern occurrences in the immediate area.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Description in California	BSA Contains Potential Suitable Habitats	Plant Elevation Range (feet amsl)	BSA is Located Within the Plant Species' Known:		Potential For Occurrence in the BSA
						Elevation Range	General Distribution	
			aspects. Along larger creeks coast live oak usually predominates. This sensitive plant flowers from March to June.					
<i>Quercus durata</i> var. <i>gabrielensis</i>	San Gabriel Oak	CRPR: 4.2	San Gabriel Oak is an evergreen shrub that occurs in chaparral slopes and ridges often forming dense thickets and can be found in cismontane and oak woodlands. It is endemic to the Transverse Ranges, namely the San Gabriel mountains. This sensitive plant flowers from March to June.	Yes	1475 – 3280	No	Yes	High Potential for occurrence in the BSA. The BSA, while falling outside of the typical elevation range for this species, has had several sightings on this species in the greater South Hills Park area.

Legend and Notes

Notes:

- The BSA contains approximate elevations of 715 to 1215 feet above mean sea level (amsl).
- The BSA encompasses native chaparral, sage scrub, and woodland habitats. Disturbed habitat with non-native grassland and includes a number of non-native tree, shrub, and herb species were also present.
- Yes** = the BSA is located within the plant species' known distribution, elevation range, and/or the BSA contains suitable habitats and/or soils to support the plant species. The plant species has a potential to occur within the BSA. Further evaluation is needed.
- No** = the BSA is located outside the plant species' known distribution, elevation range, and/or the BSA lacks suitable habitats and/or soils to support the plant species. It is highly unlikely for the plant species to have a potential to occur within the BSA. No further evaluation is needed.
- A CNPS elevation range is provided for each taxon in feet. The stated range is for the California portion of a plant's range only (if the taxon also occurs outside the state). These CNPS elevation range data are accumulated from literature, herbarium specimens, and field survey information.

Federal Endangered Species Act (ESA) Listing Codes: the ESA is administered by the USFWS and NMFS. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments. The official federal listing of Endangered and Threatened plants is published in 50 CFR § 17.12.

- FE = federally listed as endangered:** any species of plant or animal that is in danger of extinction throughout all or a significant portion of their range.
- FT = federally listed as threatened:** any species of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.
- FC = federal candidate for listing:** candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them for listing as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by higher priority listing actions to address species in greater need. A proposed regulation has not yet been published in the Federal Register for these species.
- FPE = federally proposed for listing as endangered:** a candidate species that has been proposed by USFWS for listing as endangered and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- FPT = federally proposed for listing as threatened:** a candidate species that has been proposed by USFWS for listing as threatened and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- FPD = federally proposed for delisting:** a species that has been proposed by USFWS for delisting (or down listing from endangered to threatened) and the proposed rule to delist has been published in the Federal Register.

California Endangered Species Act (CESA) and California Native Plant Protection Act (NPPA) Listing Codes: the CESA and NPPA are administered by CDFW. The official listing of *Plants of California Declared to Be Endangered, Threatened or Rare* is contained in the California Code of Regulations, Title 14, § 670.2. Species, subspecies and varieties of California native plants are declared to be endangered, threatened as defined by § 2062 and § 2067 of the Fish and Game Code or rare as defined by § 1901 of the Fish and Game Code.

- SE = state-listed as endangered:** "endangered species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease (Fish and Game Code § 2062).
- ST = state-listed as threatened:** "threatened species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts (Fish and Game Code § 2067).
- SCE = state candidate for listing as endangered:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for addition to the list of endangered species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- SCT = state candidate for listing as threatened:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for addition to the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- SCD = state candidate for delisting:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for removal from either the list of endangered species or the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to remove the species to either list.
- SR = state rare:** A species, subspecies, or variety of native plant is rare when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens (Fish and Game Code § 1901).

California Rare Plant Ranks (Formerly known as CNPS Lists): the CNPS is a statewide, nonprofit organization that maintains, with CDFW, an Inventory of Rare and Endangered Plants of California. In the spring of 2011, CNPS and CDFW officially changed the name "CNPS List" or "CNPS Ranks" to "California Rare Plant Rank" (or CRPR). This was done to reduce confusion over the fact that CNPS and CDFW jointly manage the Rare Plant Status Review Groups and the rank assignments are the product of a collaborative effort

Legend and Notes

and not solely a CNPS assignment.

- **CRPR: 1A = California Rare Plant Rank 1A - plants presumed extirpated in California and either rare or extinct elsewhere:** the plants with a CRPA of 1A are presumed extirpated because they have not been seen or collected in the wild in California for many years. This rank includes plants that are both presumed extinct as well as those plants which are presumed extirpated in California. All of the plants constituting CRPR 1A meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 1B = California Rare Plant Rank 1B - plants rare, threatened, or endangered in California and elsewhere:** plants with a CRPR of 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. All of the plants constituting CRPR 1B meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 2A = California Rare Plant Rank 2A - plants presumed extirpated in California, but more common elsewhere:** the plant taxa of CRPR 2A are presumed extirpated because they have not been observed or documented in California for many years. This list includes only those plant taxa that are presumed extirpated in California, but more common elsewhere in their range. All of the plants on List 2A meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 2B = California Rare Plant Rank 2B - plants rare, threatened, or endangered in California, but more common elsewhere:** except for being common beyond the boundaries of California, plants with a CRPR of 2B would have been ranked 1B. From the federal perspective, plants common in other states or countries are not eligible for consideration under the provisions of the ESA. All of the plants constituting CRPR 2B meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 3 = California Rare Plant Rank 3 - plants about which more information is needed - a review list:** the plants that comprise CRPR 3 are united by one common theme – CNPS and CDFW lack the necessary information to assign them to one of the other ranks or to reject them. Nearly all of the plants constituting CRPR 3 are taxonomically problematic. Some of the plants constituting CRPR 3 meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. CNPS strongly recommends that CRPR 3 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.
- **CRPR 4 = California Rare Plant Rank 4 - plants of limited distribution - a watch list:** the plants in this category are of limited distribution or infrequent throughout a broader area in California. While CNPS and CDFW cannot call these plants "rare" from a statewide perspective, they are uncommon enough that their status should be monitored regularly. Should the degree of endangerment or rarity of a CRPR 4 plant change, CNPS and CDFW will transfer it to a more appropriate rank. Some of the plants constituting CRPR 4 meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and few, if any, are eligible for state listing. Nevertheless, many of them are significant locally, and CNPS strongly recommends that CRPR 4 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.
- **Considered But Rejected** = plants that have been considered for inclusion into the CNPS Inventory, but were not included for various reasons.

California Native Plant Society (CNPS) Threat Ranks: The CNPS Threat Rank is an extension added onto the California Rare Plant Rank (CRPR) (as a decimal code) and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. A Threat Rank is present for all CRPR 1B's, 2B's, 4's, and the majority of CRPR 3's. CRPR 4 plants are seldom assigned a Threat Rank of .1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a CRPR. In addition, all CRPR 1A and 2A (presumed extirpated in California), and some CRPR 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension.

- .1 = seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 = moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- .3 = not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Other:

- **Annual:** grows from seed and reproduce within a single year.
- **Perennial:** lives more than one year.
- **Deciduous:** plants shed their leaves for part of the year.
- **Evergreen:** plants retain their leaves for an entire year.
- **Mesic habitat:** a habitat with a moderate or well-balanced supply of moisture.
- **Hemiparasitic:** plants that are connected to host plants and derive energy, water, and minerals from them, but also maintain their own functional root systems or photosynthetic surfaces.
- **Parasitic:** plants that are connected to host plants and rely solely on them for energy, water, and nutritional requirements.
- **Carnivorous:** plants that trap insects and other small animals and derive nourishment from them.
- **Herbs:** plants that are herbaceous and lack above-ground woody tissue.
 - **Bulbiferous herb:** plants that have fleshy underground storage organs typically derived from scale leaves (this category includes coniferous and other similar plants in which storage organs have other origins).
 - **Rhizomatous herb:** plants that have underground stems (rhizomes), typically bearing shoots which develop into new plants.
 - **Stoloniferous herb:** plants that have above-ground runners (stolons) which typically root and produce new plants.
- **Shrubs:** smaller woody perennials that retain most of their above-ground woody tissue and are typically many-stemmed.
 - **Leaf succulents:** succulents with thick, fleshy leaves.
 - **Stem succulents:** succulents with thick, fleshy stems and reduced or absent leaves.
- **Trees:** larger woody perennials that retain all of their above-ground wood tissue and are typically single-stemmed.
- **Vines:** twining woody perennials requiring external support for growth.
- **Mosses:** small green plants (one of three groups of bryophytes) with structures that resemble miniature leaves and stems. The leaves generally have a midrib called a costa. The sporophyte (the spore-bearing structure) is persistent for weeks.
- **Liverworts:** small green plants (one of three groups of bryophytes). There are both leafy and thalloid types - leafy liverworts lack a midrib on the leaves, while thalloid liverworts have no leaves. The sporophyte is short-lived.

Table 6. Special-Status Wildlife Species

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA:		Potential For Occurrence in the BSA
				Located Within Species' Distribution and/or Elevation Range (if known)	Contains Suitable Foraging, Roosting, and/or Breeding Habitats	
Listed Endangered, Threatened, and Candidate Wildlife:						
Wildlife with official status under the federal Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA). A species may have other sensitive designations in addition to their federal or state listing.						
Listed Fish						
<i>Catostomus santaanae</i>	Santa Ana sucker	FT, SSC	The Santa Ana sucker generally lives in small, shallow streams, less than 25 feet in width, with currents ranging from swift in the canyons to sluggish in the bottom lands. They are found in permanent streams in water ranging in depth from a few centimeters to a meter or more. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae, but occasionally they are found on sand/mud substrates. It appears to be most abundant where the water is cool, clean, and clear, although the species can tolerate seasonally turbid water. Streams in which the species is found are subject to periodic, severe flooding.	Yes	No	No potential for occurrence in the BSA. The BSA does not contain suitable aquatic habitats to support this species.
Listed Amphibians						
<i>Spea hammondii</i>	western spadefoot	FPT, G2G3, S3S4	May be found in coastal sage scrub, open chaparral, pine-oak woodlands, and grassland habitats, but is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas. Within these habitats, they require rain pools/vernal pools in which to reproduce, and that persist with more than three weeks of standing water in which to metamorphose successfully. They can also breed in slow-moving streams (e.g., areas flooded by intermittent streams). Water breeding sites must lack fish, bullfrogs, and crayfish in order to successfully reproduce and metamorphose. They estivate in sandy, gravelly soil in upland habitats adjacent to potential breeding sites in burrows approximating 1 meter in depth.	Yes	Yes	Low potential for occurrence in the BSA. The BSA contains minimally suitable breeding habitat. Due to the cryptic nature and specific environmental conditions required to emerge and breed, a focused survey would be required.
Listed Reptiles						
<i>Actinemys pallida</i> (= <i>Actinemys marmorata pallida</i>)	Southwestern pond turtle	FPT, SSC, BLMS, G3G4, S3	Inhabits slow moving permanent or intermittent streams, small ponds, small lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and sewage treatment lagoons. Pools are the preferred habitat within streams. Abundant logs, rocks, submerged vegetation, mud, undercut banks, and ledges are necessary habitat components for cover as well as a water depth greater than 2 meters.	Yes	No	No potential for occurrence in the BSA. The BSA does not contain suitable aquatic habitats or basking sites to support this species.
Listed Birds						
<i>Empidonax traillii extimus</i>	Southwestern willow flycatcher	FE, SE, Season of Concern: nesting	Southwestern willow flycatchers (SWFLs) breed and forage in relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands, including lakes (e.g., reservoirs). SWFL suitable habitat contains: surface water, saturated soil, or herbaceous wetland plants present during the early summer months; woody riparian vegetation is present and covers a minimum aerial extent of 20 percent over a 0.5-acre section of floodplain or adjacent streamside terrace; dense clumps or stands of woody vegetation are present. SWFLs also nests in thickets dominated by the non-native tamarisk and Russian olive and in habitats where native and non-native trees and shrubs are present in essentially even mixtures. The SWFL arrives in spring usually in early May and in the fall, the adults depart mainly during the last half of August. Juveniles remain later in September, but all have departed by October 1st.	Yes	No	Low potential for occurrence in the BSA. The BSA does not contain suitable breeding and foraging dense riparian and aquatic habitats to support this species.
<i>Polioptila californica californica</i>	Coastal California gnatcatcher	FT, SSC	The coastal California gnatcatcher (CAGN) is a small, non-migratory, permanent resident of coastal sage scrub habitat, which is a broad category of vegetation that includes the following plant communities; Venturan coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. In addition to coastal sage scrub, CAGNS use chaparral, grassland and riparian habitats next to coastal sage scrub, but these habitats are used for dispersal and foraging, especially in the non-breeding season.	Yes	Yes	Present. This species was documented within the coastal sage scrub habitat of the southeastern edge of the BSA. Occurrence within the project site is likely restricted to foraging opportunities.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA:		Potential For Occurrence in the BSA
				Located Within Species' Distribution and/or Elevation Range (if known)	Contains Suitable Foraging, Roosting, and/or Breeding Habitats	
<i>Vireo bellii pusillus</i>	Least Bell's vireo	FE, SE Season of Concern: nesting	The least Bell's vireo (LBV) is a migratory songbird restricted to willow dominated riparian woodlands. LBVs primarily occupy willow-dominated riverine riparian habitats with well-developed overstories, understories, and low densities of aquatic and herbaceous cover. The understory frequently contains dense subshrub or shrub thickets 3-6 feet off the ground. LBV are associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, but also inhabits thickets along dry, intermittent streams. On the desert slopes mesquite (<i>Prosopis</i> sp.) and sandbar willow in canyon locations may be occupied. From their wintering ground in southern Baja California, Mexico, LBVs migrate between mid-March and early April to southern California, where they remain until July or August.	Yes	No	Low potential for occurrence in the BSA. The BSA does not contain suitable breeding and foraging riparian and aquatic habitats to support this species.
<i>Haliaeetus leucocephalus</i>	Bald eagle	FDR, SE, fully protected, BLM: S, CDF: S, CDFW: FP IUCN: LC USFS: S BCC Season of Concern: nesting & wintering	The bald eagle is federally delisted. Range-wide, bald eagles occur primarily in or near seacoasts, rivers, wetlands swamps, and large lakes. Requires large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches and nesting sites to support them. Perching sites need to be composed of large trees or snags with heavy limbs or broken tops. It roosts communally in winter in dense, sheltered, remote conifer stands. The State's breeding habitats are mainly in mountain and foothill forests and woodlands near reservoirs, lakes, and rivers. Large nests are normally built in the upper canopy of large trees, usually conifers.	Yes	Yes	Moderate potential for occurrence in the BSA. The BSA contains moderate foraging and perching habitat but does not contain adequate roosting and breeding site requirements.
<i>Aquila chrysaetos</i>	Golden eagle	fully protected, WL, BLMS, BCC, CDF:S, Season of Concern: nesting and wintering	Golden eagles occur primarily in mountainous canyon land, rimrock terrain of open desert and grassland areas. Habitat typically includes open rolling foothills of grasslands, oak savannas, oak and juniper woodlands, chaparral, mountain areas, and desert. They usually avoid heavily forested areas and extensive croplands. They may be found in coniferous habitat when open space is available (e.g. fire breaks, clear-cuts, burned areas, pasture-land, etc.). Golden eagles are typically not found in heavily forested areas, extensive croplands, or on the immediate coast and are almost never detected in urbanized environments. Golden eagles usually nest on cliffs. Nesting is primarily restricted to rugged, mountainous country and open habitats with canyons and escarpments. Golden eagles will also nest in trees, on ground, clay cliffs, riverbanks, and human-made structures, including windmills, observation towers, powerline poles, electricity transmission towers, nesting platforms, abandoned gold dredges, and electrical transmission towers. Many nests have an unobstructed wide view of the surrounding area or are on prominent escarpments. These eagles require a huge territory to forage for prey. They typically forage in open habitats including grasslands, deserts, savannahs, and shrublands. Preferred territory sites include those that have a favorable nest site, a dependable food supply, and broad expanses of open country for foraging. Hilly or mountainous country, deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	Yes	Yes	Moderate potential for occurrence in the BSA. The BSA contains moderate foraging and perching habitat but does not contain adequate roosting and breeding site requirements.
Sensitive Wildlife: These animals have no official status under the ESA and/or the CESA; however they are designated as sensitive or locally important by federal agencies, state agencies, and/or local conservation agencies and organizations.						
Sensitive Invertebrates						
<i>Bombus crotchii</i>	Crotch bumble bee	USFWS candidate,	Inhabits a variety of scrub and open grassland habitats throughout Los Angeles/Southern California region. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> ,	Yes	Yes	Moderate potential for occurrence in the BSA. The BSA contains suitable habitat, and the

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA:		Potential For Occurrence in the BSA
				Located Within Species' Distribution and/or Elevation Range (if known)	Contains Suitable Foraging, Roosting, and/or Breeding Habitats	
		G3G4, S1S2	<i>Eschscholzia</i> , and <i>Eriogonum</i> .			species has been documented in the surrounding area.
<i>Bombus pensylvanicus</i>	American bumble bee	G3G4 S2	Inhabits farmlands, grasslands, and mixed open habitats typically found in the Eastern and Central U.S.	Yes	Yes	Low potential for occurrence in the BSA. The BSA contains adequate habitat, but this species is an uncommon occurrence in the west. A handful of historical and modern occurrences are documented in the area.
<i>Glyptostoma gabrielense</i>	San Gabriel chestnut snail	G2, S3, Local endemic	Located only in the San Gabriel Mountain range and surrounding foothills near the Los Angeles and Pasadena area, this snail requires sufficiently humid microhabitats among plant debris or rock piles to survive. Dry conditions lead to aestivation underground, contributing to a low rate of dispersal.	Yes	Yes	High potential for occurrence in the BSA. The BSA contains suitable habitat and has been documented in the surrounding area, but was not observed during surveys.
Sensitive Fish						
<i>Gila orcuttii</i>	Arroyo chub	SSC, WRCMSHCP: Covered	Arroyo chubs are found in slow-moving or backwater sections of warm to cool (10-24 °C) streams with mud or sand substrates. Depths are typically greater than 40 cm.	Yes	No	No potential for occurrence in the BSA. The BSA does not contain suitable aquatic habitats to support this species.
<i>Rhinichthys osculus</i> ssp. 8	Santa Ana speckled dace	SSC	The Santa Ana speckled dace requires permanent flowing streams with summer water temperatures of 17-20 °C. Typically these streams are maintained by outflows of cool springs. The dace inhabits shallow cobble and gravel riffles. Overhanging riparian plants, mainly alders (<i>Alnus</i> sp.) and sedges, provide cover for fish.	Yes	No	No potential for occurrence in the BSA. The BSA does not contain suitable aquatic habitats to support this species.
Sensitive Amphibians						
<i>Taricha torosa</i>	Coast Range newt (=California newt)	SSC (Monterey County and south)	The Coast Range newt lives in terrestrial habitats (grassland, woodland and forest), but breeds in ponds, reservoirs, and slow-moving streams within coastal drainages. They can migrate over 1 km to breeding areas.	Yes	Yes	Low potential for occurrence in the BSA. The BSA likely does not contain adequate aquatic habitat to support breeding. The species is documented in nearby drainages and canyons.
Sensitive Reptiles						
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan whiptail (=coastal whiptail)	SSC	The coastal western whiptail is found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage such as deserts, chaparral and semiarid. Also found in woodland and riparian areas. The western whiptail probably occurs in oak woodlands because they have been detected in riparian areas. The western whiptail can be found in open, often rocky areas with little vegetation or sunny microhabitats within shrub or grassland associations. The ground may be firm soil, sandy, or rocky.	Yes	Yes	High potential for occurrence in the BSA. The BSA contains suitable habitat and has been documented in the surrounding area, but was not observed during surveys.
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard (=coast horned lizard)	SSC, BLMS	Found in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (e.g., floods, fire, roads, grazed areas, fire breaks). The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	Yes	Yes	Moderate Potential for occurrence in the BSA. The BSA contains suitable habitat but loss of food sources due to the specialized diet hinder potential for occurrence. Nearby sightings and historical records make occurrence possible.
<i>Thamnophis hammondi</i>	Two-striped gartersnake	SSC, BLMS	This snake is highly aquatic and it is rarely found far from water. Though not exclusively aquatic it is associated with permanent or semi-permanent bodies of freshwater and adjacent riparian habitats. It is found in or near permanent or intermittent freshwater, often along streams with rocky beds and bordered by riparian growth and other dense habitats. It can be found at streams, creeks, pools, ponds, lakes, wetlands and vernal pools. It has also been found in oak woodlands, chaparral and coniferous forests on the coastal slopes of mountains and foothills to sea level. Two-striped garter snakes also inhabit large sandy riverbeds, such as the Santa Clara River (Ventura County), if a strip of -riparian vegetation is present along the stream course.	Yes	No	Low potential for occurrence within the BSA. The BSA does not contain sufficient aquatic habitat necessary to support adequate population of prey species. Sightings in nearby locales make occurrence within the BSA unlikely.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA:		Potential For Occurrence in the BSA
				Located Within Species' Distribution and/or Elevation Range (if known)	Contains Suitable Foraging, Roosting, and/or Breeding Habitats	
Sensitive Birds						
<i>Accipiter cooperii</i>	Cooper's hawk	WL Season of Concern: nesting	The Cooper's hawk is a robust, medium sized, agile woodland accipiter. They hunt in broken woodland and habitat edges. They have been found breeding at low densities virtually throughout the state, predominantly in deciduous, conifer, and mixed woodlands typically those with tall trees and with openings or edge habitat nearby. In southern California it generally favors extensive riparian bottomlands and oak woodlands, but is also found in montane forests, and desert oases. Most nests in a California study were in groves of six or more deciduous trees, with two or more trees close enough together that the crowns formed one continuous canopy. The Cooper's hawk seems much more tolerant of human activities near the nest and is seen more often nesting in urban/residential areas. In winter and during migration, they may be observed briefly at any location throughout the state in a wide variety of habitats.	Yes	Yes	Present. This species was observed flying overhead during surveys.
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	WL	Southern California rufous-crowned sparrows are usually found on dry, steep sloping land and hillsides with a moderate density of low, scattered shrubs (50% - 70% shrub cover), usually coastal sage scrub, interspersed with grasses and forbs and occasional rock outcrops for song perches. The herbaceous cover between the shrubs is used for foraging. Areas without this cover will not support these birds. They tend to avoid chaparral or dense unbroken stands of coastal sage scrub. This sparrow often occurs in coastal sage scrub dominated by California sagebrush (<i>Artemisia californica</i>), but also may occur in coastal bluff scrub, low chaparral on serpentine outcrops, open land recovering from a burn, and edges of tall chaparral. Nests are placed in small depressions on the ground usually at base of grass or forb patches, rocks, under a shrub, and very rarely in a shrub.	Yes	Yes	Present. This species was documented within the coastal sage scrub habitat of the southeastern edge of the BSA.
<i>Falco columbarius</i>	Merlin	WL, WRCMSHCP: Covered Season of Concern: nesting	The merlin does not breed in California, but breeds in Alaska and Canada. Merlin's winter in California from September to May and they use a wide variety of habitats from annual grasslands to open ponderosa pine and montane hardwood-conifer habitats, and coastlines, savannahs, woodlands, lakes, and wetlands. Within California, birds are rarely found in heavily wooded areas or over open deserts. Dense tree stands may be used for cover and are frequently close to bodies of water.	Yes	Yes	High potential for occurrence in the BSA. The BSA contains suitable habitat and has been documented in the surrounding area.
Sensitive Mammals						
<i>Antrozous pallidus</i>	Pallid bat	SSC, BLMS	A wide variety of habitats is occupied by pallid bats, including deserts, grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. They are most common in deserts, preferring areas of open, dry habitats, with rocky areas for roosting and water nearby. Night roosts may be in more open sites, such as porches and open buildings. Pallid bats day roosts in deep rock crevices, tree hollows, mines, caves, and a variety of man-made structures.	Yes	No	Low potential to occur in the BSA. The BSA is located within this bat's distribution and contains suitable grassland, shrubland, and woodland habitats; however, they are most common in deserts, preferring areas of open, dry habitats, with rocky areas for roosting and water nearby.
<i>Eumops perotis californicus</i>	Western mastiff bat	SSC, BLMS	Western mastiff bats are found in a variety of habitats, such as semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban, but the species' distribution may be geomorphically determined, occurring primarily where there are significant rock features offering suitable roosting habitat. A cliff dwelling species, where maternity colonies of 30 to several hundred roost generally under exfoliating rock slabs and rock crevices along cliffs. Western mastiff bats can also be found in similar crevices in large boulders and buildings.	Yes	No	Low Potential for occurrence in the BSA The BSA lacks sufficient rocky habitat, additionally this species is considered uncommon for the greater Southern CA region.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA:		Potential For Occurrence in the BSA
				Located Within Species' Distribution and/or Elevation Range (if known)	Contains Suitable Foraging, Roosting, and/or Breeding Habitats	
			When roosting in rock crevices they require a sizable drop from their roost in order to achieve flight. Western mastiff bats prefer deep crevices that are at least 15 or 20 feet above the ground.			
<i>Lasiurus cinereus</i>	Hoary bat	G3G4, S4, IUCN LC	The hoary bat is often found near open grassy areas in coniferous and deciduous forest or near lakes. They prefer open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Habitats suitable for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. During summer, it roosts alone in the shade of foliage, with an open space beneath the roost so that it can drop into flight. Winter roosts include sides of buildings and tree trunks.	Yes	Yes	Moderate potential to occur in the BSA. The BSA falls within wintering range for this species and contains adequate habitat for cover and feeding.
<i>Lasiurus xanthinus</i>	Western yellow bat	SSC	The western yellow bat can be found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. This bat roosts in dead palm tree fronds and other trees. It roosts and feeds in, and near, palm oases and riparian habitats. It forages over water and among trees. It is sometimes found in urban areas. This species occurs year-round in California.	Yes	No	Low potential to occur in the BSA. The BSA lacks suitable habitat in the required density (i.e. palms) to support this species.
<i>Nyctinomops femorosaccus</i>	Pocketed free-tailed bat	SSC	Habitats used include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, chaparral, and palm oasis. They are found in rocky, desert areas with relatively high cliffs, not far from riparian areas. It requires drinking water, and it stays in the vicinity of water that has a large enough surface for it to drink from on the wing. It is a crevice dwelling species, usually associated with high cliffs and rugged rock outcroppings. Colonies can be located in caves, rock crevices in cliff faces or human-made structure. They prefer rock crevices in cliffs as roosting sites.	Yes	No	Low Potential for occurrence in the BSA The BSA lacks sufficient rocky habitat, additionally this species is considered rare for California.
<i>Nyctinomops macrotis</i>	Big free-tailed bat	SSC	The known elevational range is from near sea level to about 8,500 ft. <i>N. macrotis</i> appears to be mainly an inhabitant of rugged, rocky habitats in arid landscapes. It has been found in a variety of plant associations, including desert shrub, woodlands, and evergreen forests.	Yes	No	Low Potential for occurrence in the BSA The BSA lacks sufficient rocky habitat, additionally this species is considered rare for California.
<i>Taxidea taxus</i>	American badger	SSC, G5, S3, IUCN LC	Badgers occur from alpine meadows to elevations as low as Death Valley, which is below sea level. Essentially the badger is an animal of open places. In California, badgers occupy a diversity of habitats. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, openings in desert scrub, and grassy mountain meadows near timberline are preferred. They can also occur in treeless pastures and drained marshes. Badgers are generally associated with dry, open, treeless regions, prairies, parklands, and cold desert areas. They seem to occur primarily in areas of low to moderate slope.	Yes	Yes	Low potential for occurrence in the BSA. The BSA contains suitable habitat and prey species to support the species, however, the solitary nature of individuals and cryptic nature of the species makes sightings a rare occurrence.
Legend and Notes						
Notes Yes = the BSA is located within the wildlife species' known distribution, elevation range, and/or the BSA contains suitable habitats or conditions to support the species. The wildlife species has the potential to occur within the BSA. Further evaluation is needed. No = the BSA is located outside the wildlife species' known distribution, elevation range, and/or the BSA lacks suitable habitats or conditions to support the species. It is highly unlikely for the wildlife species to have a potential to occur within the BSA. No further evaluation is needed. DPS = distinct population segment: A DPS, or a distinct population segment, is a vertebrate population or group of populations that is discrete from other populations of the species and significant in relation to the entire species. The ESA provides for listing species, subspecies, or distinct population segments of vertebrate species. ESU = evolutionarily significant unit: a Pacific salmon population or group of populations that is substantially reproductively isolated from other conspecific populations and that represents an important component of the evolutionary legacy of the species. Federal Endangered Species Act (ESA) Listing Codes: the ESA is administered by the USFWS and NMFS. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments. The official federal listing of Endangered and Threatened animals is published in 50 CFR § 17.11. FE = federally listed as endangered: any species of plant or animal that is in danger of extinction throughout all or a significant portion of their range.						

Legend and Notes

- **FT = federally listed as threatened:** any species of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.
- **FC = federal candidate for listing:** candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them for listing as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by higher priority listing actions to address species in greater need. A proposed regulation has not yet been published in the Federal Register for these species.
- **FPE = federally proposed for listing as endangered:** a candidate species that has been proposed by USFWS or NMFS for listing as endangered and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- **FPT = federally proposed for listing as threatened:** a candidate species that has been proposed by USFWS or NMFS for listing as threatened and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- **FPD = federally proposed for delisting:** a species that has been proposed by USFWS or NMFS for delisting (or down listing from endangered to threatened) and the proposed rule to delist has been published in the Federal Register.

California Endangered Species Act (CESA) Listing Codes: the CESA is administered by CDFW. The official listing of *Animals of California Declared To Be Endangered or Threatened* is contained in the California Code of Regulations, Title 14, § 670.5. Species and subspecies of California native animals are declared to be endangered or threatened as defined by §§ 2062 and 2067 of the Fish and Game Code.

- **SE = state-listed as endangered:** "endangered species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease (Fish and Game Code § 2062).
- **ST = state-listed as threatened:** "threatened species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts (Fish and Game Code § 2067).
- **SCE = state candidate for listing as endangered:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for addition to the list of endangered species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- **SCT = state candidate for listing as threatened:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed by publication in the California Regulatory Notice Register as being under review by CDFW for addition to the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- **SCD = state candidate for delisting:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for removal from either the list of endangered species or the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to remove the species from either list.

California Department of Fish and Wildlife (CDFW) Designations:

For some wildlife species, the CNDDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nesting colonies. For many species of birds, the primary emphasis is on the breeding population in California. For some species which do not breed in California but winter here, emphasis is on wintering range. The SSC designation thus may include a comment regarding the specific protection provided such as nesting or wintering.

- **SSC = species of special concern:** a species of special concern is a species, subspecies, or distinct population of an animal (fish, amphibian, reptile, bird and mammal) native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria: is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role; is listed as federally-, but not state-, threatened or endangered; meets the state definition of threatened or endangered, but has not formally been listed; is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status; has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for state threatened or endangered status.
- **Fully protected:** fully protected animal species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. Lists were created for fish (Fish and Game Code § 5515), amphibians and reptiles (Fish and Game Code § 5050), birds (Fish and Game Code § 3511) and mammals (Fish and Game Code § 4700).
- **WL = watch list:** this list includes birds identified in the *California Bird Species of Special Concern* (Shuford and Gardali, 2008) report and are not on the current CDFW species of special concern list, but were on previous lists and they have not been state-listed under CESA; were previously state or federally listed and now are on neither list; or are on the list of fully protected species.
- **Special Animals List:** the CESA does not allow listing of insects, so despite the insect's precarious status, the insect has no protection under state legislation. CDFW includes this insect on its Special Animals List.
- **California Fish and Game Code §§ 4800 – 4810:** The mountain lion (genus *Puma*) is a specially protected mammal under the laws of California. It is unlawful to take, injure, possess, transport, import, or sell any mountain lion or any part or product thereof, except as specifically provided in California Fish and Game Code §§ 4800 - 4810.
- Protected by § 460 of the California Code of Regulations [CCR], Title 14

Global Ranking

The global rank (G-rank) is a reflection of the overall status of an element throughout its global range.

- GX: Presumed Extinct – Not located despite intensive searches and virtually no likelihood of rediscovery.
- GH: Possibly Extinct – Known from only historical occurrences but still some hope of rediscovery. Examples of evidence include (1) that a species has not been documented in approximately 20-40 years despite some searching and/or some evidence of significant habitat loss or degradation; (2) that a species has been searched for unsuccessfully, but not thoroughly enough to presume that it is extinct throughout its range.
- G1: Critically Imperiled – At very high risk of extinction due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
- G2: Imperiled – At high risk of extinction due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
- G3: Vulnerable – At moderate risk of extinction due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
- G4: Apparently Secure – At fairly low risk of extinction due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
- G5: Secure – At very low risk of extinction due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
- GNR: Unranked – Global rank not yet assessed.

State Ranking:

The state rank (S-rank) is assigned in much the same way as the global rank, but state ranks refer to the imperilment status only within California's state boundaries.

Legend and Notes

- SX: Presumed Extirpated – Species is believed to be extirpated from the state Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered
- SH: Possibly Extirpated – Known from only historical records but still some hope of rediscovery. There is evidence that the species may no longer be present in the state, but not enough to state this with certainty. Examples of such evidence include (1) that a species has not been documented in approximately 20-40 years despite some searching and/or some evidence of significant habitat loss or degradation; (2) that a species has been searched for unsuccessfully, but not thoroughly enough to presume that it is no longer present in the jurisdiction.
- S1: Critically Imperiled – At very high risk of extirpation in the state due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.
- S2: Imperiled – At high risk of extirpation in the state due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
- S3: Vulnerable – At moderate risk of extirpation in the state due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
- S4: Apparently Secure – At a fairly low risk of extirpation in the state due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of recent declines, threats, or other factors.
- S5: Secure – At very low or no risk of extirpation in the state due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
- SNR: Unranked – State rank not yet assessed.

United States Fish and Wildlife Service (USFWS) Designations:

- **FSC = federal species of concern:** federal species of concern is an informal term. It is not defined in the ESA. The term commonly refers to species that are declining or appear to be in need of conservation.
- **BCC = bird of conservation concern:** a bird of conservation concern is listed in the USFWS' 2008 *Birds of Conservation Concern* report. The report identifies species, subspecies, and populations of all migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that, without additional conservation actions, are likely to become candidates for listing under the ESA. While all of the bird species included in the report is priorities for conservation action, the list makes no finding with regard to whether they warrant consideration for ESA listing.

4.3. BIOLOGICAL RECONNAISSANCE SURVEY

4.3.1. Vegetation

4.3.1.1. Vegetation Communities Descriptions

Determining vegetation communities is critical for understanding the natural processes of the area and informs potentials for wildlife and plant species to occur. Due to the inaccessible nature of large parts of the project site, the Holland vegetation classification was used (1986). This classification relies on more qualitative or descriptive analysis compared to the online Manual of California Vegetation which relies on quantitative measurements (i.e. vegetation transects) (CNPS 2025a). Five (5) plant communities were determined within the site. Descriptions of each community found within are discussed below. A single stand of oaks were also recorded due to its proximity to proposed work and is also described below. A map that illustrates all onsite plant communities is included in **Exhibit VI, Vegetation Communities**.

California Walnut Woodland

This area is dominated by California walnut (*Juglans californica* var. *californica*) with coast live oak (*Quercus agrifolia*) sparsely distributed throughout the canopy. Common shrub layer species include poison oak (*Toxicodendron diversilobum*), blue elderberry (*Sambucus mexicana*), toyon (*Heteromeles arbutifolia*), and laurel sumac (*Malosma laurina*). Non-native grasses are common in the herbaceous layer, often forming the understory's primary vegetation. True walnut woodland only occurred in one area along the northern slope.

Coastal Sage – Chaparral Scrub

Today these areas are comprised of a modified and intergraded habitat comprised of native and non-native plant species. Common coastal sage scrub (CSS) species like California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), California buckwheat (*Eriogonum fasciculatum*), monkeyflower (*Diplacus* spp.), *Encelia* spp., and chaparral yucca (*Hesperoyucca whipplei*) are all present. These species intergrade with random patches of Southern Mixed Chaparral species and non-native species like mustard (*Brassica* spp.), crimson fountaingrass (*Pennisetum setaceum*), and bromes (*Bromus* spp.) to form this amalgamation.

Mesic North Slope Chaparral

This chaparral community has a mixed composition without a single dominant species; it is typically found on northern slopes where the area receives less sun exposure and contains more moisture. This community was found along northern slopes of the project site with one small patch on the southern slope that had a northern facing aspect. Species associated with this community are typically evergreen, sclerophyllous shrubs and almost approach woodlands. These include Ceanothus spp., Mountain mahogany (*Cerocarpus* spp.), toyon, chaparral pea (*Pickeringia montana*), coast live oak (*Quercus agrifolia*), California scrub oak (*Quercus berberidifolia*), poison oak (*Toxicodendron diversilobum*), hollyleaf cherry (*Prunus ilicifolia*), gooseberry, elderberry, and California bay (*Umbellularia californica*). This is a common community of north facing slopes across southern California.

Mixed Woodland

This area contains aspects of both California Walnut Woodland and Coast Live Oak Woodland with no clear delineation between the two. California Walnut Woodland has a known distribution within the southern side of the San Gabriel Mountains and often intergrades with Coast Live Oak Woodland,

particularly in canyons and mesic areas. In the BSA we found these in the canyons and adjoining slopes found throughout the southern slope of the ridge.

California Walnut Woodland has a more open tree canopy when compared to Coast Live Oak Woodland due to walnut being a deciduous species, allowing for a more diverse understory to develop. Shrub species such as horehound (*Marrubium vulgare*), blue elderberry (*Sambucus mexicana*), and sugarbush (*Rhus ovata*) can be found here. Southern California black walnut (*Juglans californica*), for which this community is named, generally achieves co-dominant status with other trees, most frequently with coast live oak (*Quercus agrifolia*), but can include white alder (*Alnus rhombifolia*), California ash (*Fraxinus dipetala*), and a variety of willows (*Salix* spp.). This community often intergrades with coast live oak woodlands as well as scrub-shrub communities like coastal sage scrub and chaparral. Coast Live Oak Woodland, as its name implies, is largely dominated by coast live oak with varying degrees of openness (canopy cover) depending on site conditions. Common shrub species such as blue elderberry, toyon, gooseberries (*Ribes* spp.), and laurel sumac (*Malosma laurina*) are found interspersed in these woodlands with a degree of composition varying depending on surrounding habitats, openness of canopy, slope, and moisture. Both communities often have a grassy, usually non-native, understory comprising the herbaceous layer. Overlap of associated species has led to unclear delineations between these communities. As a result, we will be referring to this area as a “mixed woodland”, containing strong characteristics of both communities.

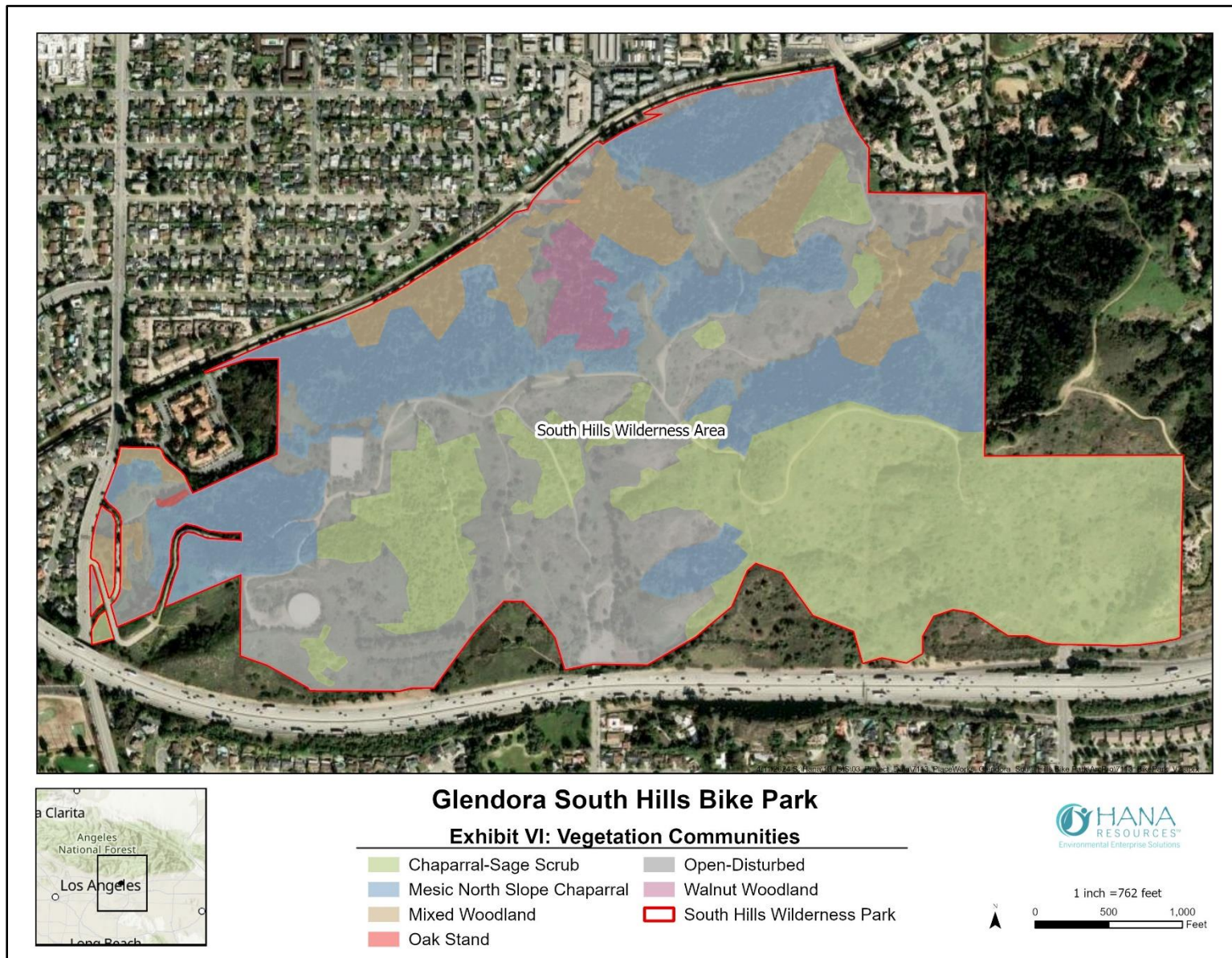
Open - Disturbed

Disturbed/Developed areas are those with a high percentage of non-native vegetation with a low to zero percentage of native vegetation or those areas devoid of vegetation (i.e. dirt or paved roads). These areas generally fell along trails on the northern slope at higher elevation where non-native grasses and herbs dominate the area.

Oak Stand

This area is designated as a stand of large coast live oaks that is distinct from the adjacent mesic north slope chaparral. While not a vegetation community, this stand is noted due to its occurrence within the building footprint of the proposed bike park and downhill trails.

Exhibit VI. Vegetation Communities



4.3.1.2. Sensitive Natural Communities

Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable. These communities may or may not contain special-status plants or their habitat. The literature review resulted in a list of six (6) vegetation communities that have been known to occur within the five-mile area, which is presented in **Table 4, Sensitive Vegetation Communities**. One (1) community type, California Walnut Woodland, was located onsite.

4.3.2. Plant Species

4.3.2.1. General

Plant species observed or detected during the site survey were characteristic of the existing site conditions. A full list of the plant species detected within the Survey Area is included in **Appendix C, Plant & Wildlife Species Observed/Detected Onsite**.

4.3.2.2. Special-Status Species

Of the twenty-nine (29) special-status plant species found from the literature review, one (1) special-status species was present within the BSA. Southern California black walnut (*Juglans californica*) was primarily encountered in the riparian corridors as well as along the Walnut Trail going across the northern portion of the BSA.

Two (2) of the twenty-nine (29) special-status species have a high potential for occurrence within the BSA. San Gabriel oak (*Quercus durata* var. *gabrielensis*) occurs in dense thickets along chaparral slopes and is endemic to the transverse ranges of Southern California. Engelmann oak (*Quercus engelmannii*) inhabits oak woodlands, foothills, and southern mixed chaparral. While observations for Engelmann oak are limited for the immediate area, there is a significant potential for recruitment or occurrence amongst the oak woodlands. While not detected on site during surveys, both species have been well-documented and observed within the foothill communities of the San Gabriel Mountains (Tidal Influence 2019; Cooper 2021).

Four (4) of the twenty-nine (29) special-status species from the literature review have a moderate potential to occur.

Although mesa horkelia (*Horkelia cuneata* var. *puberula*) would have adequate habitat to grow in the BSA, low potential for recruitment exists based on near-by observations. Plummer's mariposa lily (*Calochortus plummerae*) has nearby sightings and prefers to grow on dry, rocky slopes within openings in chaparral, coastal scrub, and foothill grasslands. Fragrant pitcher sage (*Lepechinia fragrans*) also has adequate habitat within the BSA with occurrences documented in the surrounding foothills. Ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*) grows on openings in montane and coniferous canopies as well as chaparral habitat, with sightings of this plant occurring in the nearby area.

Fourteen (14) of the special-status species had a low potential for occurrence within the BSA.

Braunton's milk-vetch (*Astragalus brauntonii*), which while occurs in sage-scrub and chaparral plant communities like that of the BSA, is a plant that is extant to a limited number of known areas within the

Los Angeles Basin, making recruitment unlikely. Overall recruitment for instance is limited by its distribution in the area, despite there being suitable habitat available in the BSA in the form of openings along its coastal scrub and chaparral slope habitat. The BSA falls within a small window of elevation range for the Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) but contains the habitat for which this species is associated making potential low due to elevation range. Many-stemmed dudleya (*Dudleya multicaulis*), as well as intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) have extant ranges that place the BSA at its outer known edges. Although the BSA contains suitable habitat for this plant, the lack of recent documented occurrences of many-stemmed dudleya and intermediate mariposa lily in the immediate area suggests a low potential for occurrence. While the San Gabriel mountain dudleya (*Dudleya densiflora*) and San Gabriel River dudleya (*Dudleya cymosa* ssp. *crebrifolia*) habitat of steep cliff faces within chaparral is present in small amounts within the BSA. For San Gabriel bedstraw (*Galium grande*), the BSA currently lies well below the extant elevation ranges for these plants. White rabbit-tobacco (*Pseudognaphalium leucocephalum*), chaparral ragwort (*Senecio aphanactis*), and club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*) all lack recent and/or historical occurrences, suggesting a limited potential for present occurrence or recruitment. Sonoran maiden fern (*Pelazoneuron puberulum* var. *sonorense*) and western spleenwort (*Asplenium vespertinum*) additionally can grow in the BSA among select areas within the BSA consisting of the moist, riparian washes. Despite lacking recent local occurrences, prior documented occurrences place these species nearby with a considerable probability of rediscovery. Although thread-leaved brodiaea (*Brodiaea filifolia*) has documented sightings within the local area, these sightings were limited to areas with specific soil composition requirements that the BSA lacks. Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*) has suitable habitat amongst the dry soil slopes of the chaparral and sage scrub within the BSA, however individual sightings of this plant in the area are limited.

4.3.3. Wildlife

4.3.3.1. General

Wildlife species observed or detected during the site survey were characteristic of the existing site conditions. A full list of the wildlife species detected within the Survey Area is included in **Appendix C, Plant & Wildlife Species Observed/Detected Onsite**.

Birds

Thirty-seven (37) species were observed/detected in the BSA during the field surveys.

- Allen's hummingbird (*Selasphorus sasin*)
- American robin (*Turdus migratorius*)
- Anna's hummingbird (*Calypte anna*)
- Bewick's wren (*Thryomanes bewickii*)
- black phoebe (*Sayornis nigricans*)
- brown-headed cowbird (*Molothrus ater*)
- bushtit (*Psaltiriparus minimus*)
- California gnatcatcher (*Polioptila californica*)
- California quail (*Callipepla californica*)
- California scrub-jay (*Aphelocoma californica*)
- California thrasher (*Toxostoma redivivum*)
- California towhee (*Melospiza crissalis*)
- Cassin's kingbird (*Tyrannus vociferans*)
- common raven (*Corvus corax*)
- common yellowthroat (*Geothlypis trichas*)
- Cooper's hawk (*Accipiter cooperii*)
- hermit thrush (*Catharus guttatus*)
- horned lark (*Eremophila alpestris*)
- house finch (*Haemorhous mexicanus*)
- killdeer (*Charadrius vociferus*)
- lesser goldfinch (*Spinus psaltria*)
- mourning dove (*Zenaidura macroura*)
- northern flicker (*Colaptes auratus*)
- northern mockingbird (*Mimus polyglottos*)
- Nuttall's woodpecker (*Dryobates nuttallii*)
- oak titmouse (*Baeolophus inornatus*)
- red-winged blackbird (*Agelaius phoeniceus*)
- ruby-crowned kinglet (*Corthylio calendula*)
- rufous-crowned sparrow (*Aimophila ruficeps*)
- song sparrow (*Melospiza melodia*)
- spotted towhee (*Pipilo maculatus*)
- Townsend's warbler (*Setophaga townsendi*)
- western bluebird (*Sialia mexicana*)
- white-crowned sparrow (*Zonotrichia leucophrys*)
- white-throated sparrow (*Zonotrichia albicollis*)
- wrenit (*Chamaea fasciata*)
- yellow-rumped warbler (*Setophaga coronata*)

Reptiles

One (1) common reptile species, the Western fence lizard (*Sceloporus occidentalis*), was observed/detected during the field survey.

Mammals

Through field surveys, five (5) mammal species were observed to occur within the BSA. Bobcat (*Lynx rufus*) and coyote (*Canis latrans*) were determined to occur within the BSA through presence of tracks and scat found during surveys. Within the wildland-urban interface, desert cottontail (*Sylvilagus audubonii*) and mule deer (*Odocoileus hemionus*) were detected visually and through presence of scat with California ground squirrel (*Otospermophilus beecheyi*) detected visually and aurally.

4.3.3.2. Sensitive Wildlife Species

Of the three (3) special-status wildlife species present in the BSA; one (1) is a listed bird species (coastal California gnatcatcher); and two are sensitive bird species (Cooper's hawk and Southern California rufous-crowned sparrow).

Three (3) sensitive species were considered to have high potential for occurrence in the BSA; this includes the merlin, San Diegan Whiptail, and the San Gabriel chestnut snail. Five (5) sensitive species were considered to have moderate potential; this includes two Listed bird species, the bald eagle and the golden eagle; the crotch bumble bee; the Blainville's horned lizard; and the hoary bat.

All species are described and have regulatory listings as follows:

Cooper's Hawk (*Accipiter cooperii*)

Cooper's hawks are on the California Department of Fish and Wildlife's Watch list, with nesting season identified as their primary season of concern. Cooper's hawks are medium-sized hawks with long banded tails and broad, rounded wings. The adults have a grayish-blue back with a white underside, horizontally streaked with rufous bars. The outer tail feathers are shorter than the rest of the tail feathers, giving the tail a rounded appearance. This species occupies wooded habitats as well as suburban areas and feeds on mammals and smaller birds. Cooper's hawks breed from southern Canada to the southern part of the United States. Cooper's hawks build a stick nest about 25 to 50 feet high in trees where they lay two to five eggs. They are known to return to the same area to nest year after year.

Southern California Rufous-crowned sparrow (*Aimophila ruficeps canescens*)

The rufous-crowned sparrow is a watch-list species by the California Department of Fish and Wildlife. These sparrows are grayish-brown color noted for their rufous crown with a rufous stripe behind the eye. They have a thin white eye-ring and white "mustache" seen bordered by black. Formerly considered a California Species of Special Concern, this is a common species and is a habitat specialist in variety of scrub habitats throughout coastal and southwestern California. They are a non-migratory species and are found year-round in these habitats. Generally, a ground-dwelling species, where they are often seen hopping around while they forage. Diet generally consists of insects in the spring and summer and vegetative material and seeds in winter. Breeding seasons occur from March through August, and they are generally monogamous during breeding season. They build nests on or near the ground near rocks, leaves, or near the base of shrubs and grasses. The nest is generally 4 inches wide by 2.5 inches tall. Clutch size ranges from 2-5 eggs and fledge within 2-3 weeks but are dependent on parental care for some time after fledging.

As a habitat specialist, the primary threat to rufous-crowned sparrows is habitat loss and degradation through human expansion and activity. Additionally, fire suppression and non-native vegetation spread further degrade habitats as they become too dense to be useable.

Coastal California Gnatcatcher (*Polioptila californica californica*)

The coastal California Gnatcatcher (CAGN) is a subspecies of the California gnatcatcher and is a federally listed threatened species and a California Species of Special Concern. CAGNs are small, non-migratory songbirds with blue-grey plumage on its upperparts and greyish-white underparts. They have a white eye ring and a black tail with white outer tail feathers. Males have a black cap in summer that is lost during the winter. CAGN occur along the coast of southern California, from Ventura and San Bernardino Counties, south to northern Baja California, Mexico (Mock 2004). Breeding season starts in late-February and extends through July, with peak nest building from mid-March through mid-May. Both sexes are involved in all aspects of the nesting cycle. Nests are open-cup, often built in California sagebrush plants about three feet above the ground over a four to ten day period. The average clutch size is four eggs and incubation averages 14 days. Their diet consists of insects and spiders. Nestlings fledge after approximately 16 days after hatching. Juveniles remain closely associated with their parents for several

months after leaving the nest (USFWS 2010). This species is found in and around shrub and sub-shrub vegetation communities that are often drought deciduous including coastal scrub, coastal sage scrub and coastal succulent scrub communities. This species may occur in other nearby plant communities but is tied to coastal scrub for reproduction (USFWS 2010).

The current threats to CAGN include urbanization, which alters and/or eliminates coastal scrub habitat; and increased human activity, which has increased the number of wildland fires in the habitat. Frequent fires facilitate the growth of invasive plant species, which outcompete the native vegetation critical to CAGN diet. Nest parasitism by brown-headed cowbirds may also play a part in decreasing CAGN populations in some areas and parasitism often causes nest abandonment (USFWS 2010).

Merlin (*Falco columbaris*)

Merlin's are on the California Department of Fish and Wildlife's Watch list, with winter identified as their primary season of concern. This species is a small, short-tailed falcon with pointed wings, showing brown plumage in females and blue-gray plumage in males. Merlins have long square-tipped tails, small black beaks with a yellow base, and yellow legs. Their dark tails are crossed with narrow white bands. Unlike many other falcons, they lack the typical "mustache" facial markings seen in other species. This species is found in open woodlands, foothills, marshes, and open areas where it preys on small birds (such as horned larks and sparrows), insects, and bats. Perches while searching for prey, which it then hunts and captures mid-air. Breeding occurs in semi-open terrain in the northern and western regions of North America, with typically monogamous pairs often nesting in the same area as previous seasons. Nests anywhere from 10-60' above ground in previously used nests of hawks or corvids.

San Gabriel Chestnut Snail (*Glyptostoma gabrielse*)

The San Gabriel chestnut snail is dark chestnut brown in color and the shell is "highly polished" with a "brilliant" gloss (Pilsbry 1939). It grows to be 14 mm in height and 30 mm in diameter (Nekola 2014). This species is endemic to the San Gabriel Mountain range and surrounding foothills. Dry conditions lead to aestivation underground, contributing to a low rate of dispersal.

San Diegan Whiptail (*Aspidoscelis tigris stejnegeri*)

The San Diegan whiptail, or coastal whiptail, is a Species of Special Concern that can be found in California from Ventura County south to San Diego County. This species of slim-bodied lizards has long tails, pointed snout and a distinct, hesitant gait. This species has light brown stripes, a pale throat with black spots. Juveniles have blue tails. Coastal whiptails occur in coastal sage scrub, chaparral, riparian, woodland and rocky habitats. They prefer sandy or gravelly substrate in brushy habitat associated with washes in large blocks of contiguous habitat (Thomson et al. 2016). Coastal whiptails are diurnal, generalist predators that feed on insects, spiders, scorpions, and other small arthropods. They are active from mid-March to early October, with juveniles remaining active until November (Thomson et al. 2016). Reproduction begins in May, with eggs hatching from July to August.

The primary threat to coastal whiptail populations is habitat loss and fragmentation due to development. The increasing frequency and intensity of wildfires in California contributes to habitat loss as well, as fires convert preferred habitat into non-native grasslands.

Golden Eagle (*Aquila chrysaetos*)

The golden eagle is a fully protected species in the state of California. It is one of the largest raptors in North America and identified by its dark brown coloration, white patches at the base of the primary

feathers and base of tail, and signature “golden” nape. The golden eagle occupies a wide variety of open habitats across the Northern Hemisphere, in California this includes canyons, cliffs/bluffs, grasslands, chaparral, shrub, open forest, and disturbed areas. Their diet primarily consists of small to medium sized mammals such as rabbits, squirrels, prairie dogs, and marmots but are opportunistic and eat carrion, fish, and steal food from other wildlife. In California they are year-round residents across most of the state and breed from January through August. A life-long monogamous species, nests are built on high points such as cliffs, trees, and human-made structures. Clutch size is between one to three eggs, incubation occurs on average for 43 days, and young fledge in 9-10 weeks.

Threats to golden eagles include loss of habitat for nesting and for prey species as well as collisions with vehicles, wind turbines, and other tall structures. Further threats include fire suppression due to vegetation growth closing up open habitats and contaminants such as heavy metals, persistent organic chemicals, and pesticides.

Bald Eagle (*Haliaeetus leucocephalus*)

Bald eagles are the national emblem of the United States are a California Department of Fish and Wildlife’s fully protected bird and state listed as an endangered species. The bald eagle is a large predatory raptor easily recognizable as adults for their dark brown body, white head and tail feathers, and their yellow beak and talons.

The bald eagle range covers most of North America and breeds along the East and West Coasts, Alaska, Rocky Mountains, and mountainous locales across the country. In California, they can be found year-round in northern counties but are winter migrants in most of the state. Breeding pairs are generally monogamous with some returning to the same nest year after year. Nests can reach a six-foot diameter and be six feet high, weighing over a ton. Clutch size is usually two to three eggs and are incubated over the course of 35 days. After fledging in 12-weeks, individuals spend the first four years of their lives roaming, at times covering hundreds of miles in a day. The diet of the bald eagle mainly consists of fish, however they are opportunistic predators who will feed on small birds, rodents, and carrion. They have been regularly documented exhibiting kleptoparasitism, or stealing food from other wildlife, particularly fish from species like the osprey (*Pandion haliaetus*). Bald eagles often are found by and regularly nest close to large bodies of water such as rivers, lakes, reservoirs, and coastal wetlands.

Historic threats include the use of the pesticide DDT in the mid-20th century which caused widespread nesting failures and a resulting decrease in population size, a nationwide ban took effect in 1972 enabling bald eagle numbers to increase. Modern threats include habitat loss, timber harvest, human disturbances, and contaminants such as heavy metals, persistent organic chemicals, and pesticides.

Crotch Bumble Bee (*Bombus crotchii*)

Crotch bumble bee is a candidate for state listing as an endangered species in California. This bee can be found in open grassland and scrub habitats from coastal California to the Sierras. Crotch bumble bees can be identified by their short cheeks with a rounded angle on their mid legs (Koch et al. 2012). They have yellow on the top of their heads and yellow on the front part of their thorax, usually with black between and below the wings. The first tergal segment is black and the second is yellow. The 4th and 5th are entirely red or black (Hatfield et al. 2018). Bumble bees are social and live in colonies composed of a queen, workers, males and new queens. Nests are often located underground in abandoned rodent nests or above ground in grass, tree cavities or abandoned bird nests. Its food plants include milkweeds (*Asclepias*), lupines (*Lupinus*), phacelias (*Phacelia*), and sages (*Salvia*) (Hatfield et al. 2018).

Blainville's Horned Lizard (*Phrynosoma blainvillii*)

Blainville's horned lizard, or coast horned lizard, is a Species of Special Concern and is an oval, flat-bodied horned lizard. It has a row of large horns on its head, with the two middle horns longer and separated at their base, horns scales on each side of the body and large scales on the throat. They are tan, yellowish brown in color with large dark spots. This species can be found in a variety of habitats including alluvial scrub, annual grassland, chaparral, oak woodland, riparian woodland, coniferous forest and saltbush scrub. They require loose, fine soils for burrowing and a mix of open areas and shrubs for thermoregulation and refuge (Thomson et al. 2016).

Blainville's horned lizard is active from February to November, with peak activity between April and July. Reproduction occurs from March to June, with females typically laying eggs in May. Clutch sizes are about 11 to 12 eggs and they typically have only one clutch per season. Their diet consists mainly of ants, but they also eat beetles and other insects (Thomson et al. 2016).

Invasive species, urbanization, agriculture, off-roading, and flood control structures are some of the major threats to horned lizard populations. Introduced non-native Argentine ants displace native ant prey and human activities and development alter suitable habitat for this species (Thomson et al. 2016).

Hoary Bat (*Lasiurus cinereus*)

The hoary bat is the most widespread North American bat and can be found across California but has a patchy distribution in the southeastern deserts of California. This common, solitary species winters along the coast and in southern California, breeding inland and north of the winter range. During migration, it may be found at locations far from the normal range, such as the Channel Islands (Brown 1980) and the Farallon Islands (Tenaza 1966). Habitats suitable for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. Hoary bats have been recorded from sea level to 4125 m (13,200 ft). There is evidence that sexes are separate during the warm months, females being more abundant in the northeastern U.S., males in the west. Both sexes occur on the winter range. During migration in southern California, males are found in foothills, deserts and mountains; females in lowlands and coastal valleys (Vaughan and Krutzsch 1954).

SECTION 5. CONCLUSIONS AND RECOMMENDATIONS

5.1. SENSITIVE SPECIES CONCLUSIONS

5.1.1. Sensitive Vegetation Communities

One (1) of the six (6) sensitive vegetation communities identified in the literature review, walnut woodland, was present within the BSA. Of the remaining communities, one (1) had high potential (South Coast Live Oak Riparian Forest), and the remaining four (4) had low potential.

Walnut woodland was present in low quantity and quality in the BSA, largely occurring as small patches within or adjacent to coast live oak woodlands. It should be noted that while this community was rare, Southern California black walnut was a fairly common species throughout the site.

5.1.2. Sensitive Plants

One (1) of the twenty-nine sensitive plant species identified in the literature review was present within the BSA, the Southern California black walnut. Of the remaining species, twenty-two (22) have suitable habitat present on site. Focused surveys are required for any federal and/or state listed endangered species with potential to occur on site when the species is in bloom to ensure it is both evident and identifiable during the survey. Due to the BSA's location amongst urban development, lack of suitable habitat for protected species, and limitation of species occurrences in the area, no focused surveys are required.

5.1.3. Sensitive Wildlife

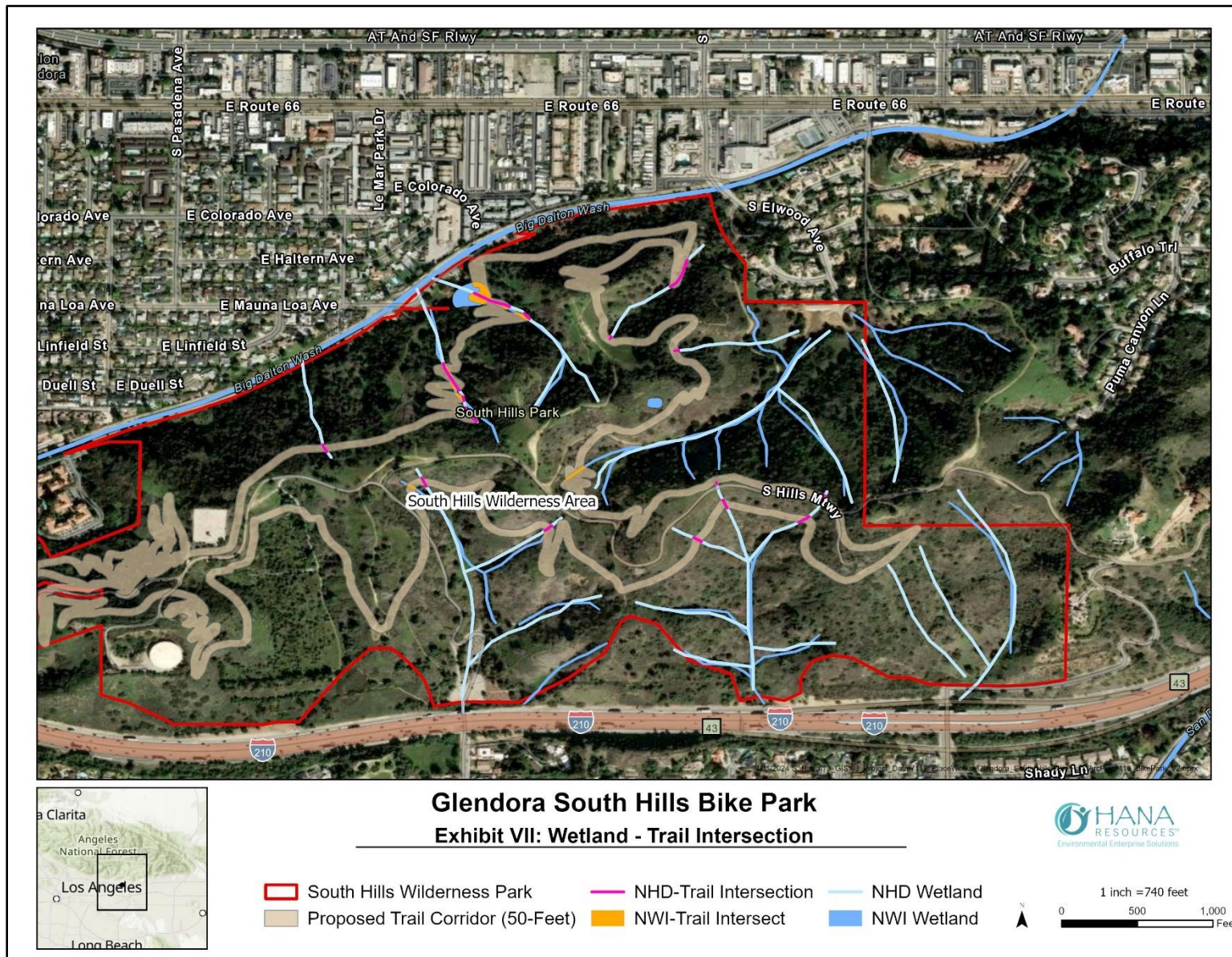
Of the twenty-seven (27) sensitive wildlife species identified in the literature review, three (3) sensitive wildlife species were present, three (3) species have a high potential to occur, five (5) have a moderate potential to occur, and sixteen (16) have low-no potential to occur in the Survey Area. Of the three (3) species present, all were avian species.

5.2. RECOMMENDATIONS

5.2.1. Wetlands

The proposed 5-mile trail that will span the entire South Hills Wilderness Area has seventeen (17) instances of intersection with NWI and NHD wetlands (**Exhibit VII, Wetland-Trail Intersection**). These intersections occur primarily in the northeastern portion of the wilderness area within mesic north slope chaparral, mixed woodland, and open-disturbed habitat. However, the preliminary jurisdictional delineation conducted by HANA found no evidence to suggest presence of jurisdictional wetland features were present on site (HANA 2025).

Exhibit VII. Wetland-Trail Intersection



While trail creation will follow U.S. Forest Service's Trail Design Parameters for Trail Class 3 that minimizes disturbance and impact to the landscape, conservation measures are recommended for implementation throughout project design, construction, and post-construction maintenance (USDA 2016).

Where feasible, aquatic features, including potential ephemeral drainages and wetland polygons identified during the delineation survey, should be avoided or minimally disturbed through careful trail alignment and siting of infrastructure. During construction, trail crossings should utilize low-impact design methods through trail alignment along the narrowest portion of the streambed and use of elevated stream crossings (i.e. small-span bridge, elevated puncheon) to avoid in-channel grading. If elevated stream crossings cannot be implemented, maintain the natural grade and slope of the streambed during construction to avoid alteration of hydrology. Use of native cobble or armored rock can be used for bank stabilization and to prevent channel incision. Construction activities within or adjacent to potential aquatic resources should be scheduled during the dry season (typically May through October) to reduce the risk of hydrologic disruption and erosion.

Erosion control measures and stormwater best management practices should be incorporated into construction plans, particularly along slopes that drain toward mapped aquatic features. These may include straw wattles, silt fencing, or stabilized construction entrances to prevent sediment transport. Disturbed soils should be stabilized as soon as practicable following construction through native seed mixes, erosion control blankets, or equivalent methods as approved by agencies. To ensure compliance, a qualified biologist shall conduct monitoring at least once per week during active construction within or adjacent to aquatic features, and within 24 hours following any rainfall event. Monitoring shall include inspection of all erosion and sediment control measures, photo documentation of work areas, and verification of adherence to avoidance and minimization measures. A weekly monitoring report summarizing site conditions, compliance status, and any corrective actions taken shall be submitted to the lead agency and maintained in the project file. The qualified biologist shall have the authority to halt work if non-compliance is observed until corrective measures are implemented.

5.2.2. Plants and Vegetation

While protected species were not detected during surveys and focused surveys not required, the BSA supports individuals and native stands of Southern California black walnut, a CRPR 4.2 species considered of limited distribution and moderate threat. While not legally protected under federal or state endangered species acts, this species warrants conservation consideration under CEQA.

To the extent feasible, walnut trees should be avoided through micro-siting of trails and infrastructure, with a minimum 10-foot buffer maintained from the dripline of each tree to prevent root zone disturbance. If removal of any walnut trees is determined to be unavoidable, impacts should be documented and mitigated through on-site replacement or habitat enhancement at a minimum 2:1 ratio, in coordination with the lead agency and consulting biologist. Success can be measured as healthy growth of replacement trees or through accomplishing 80% native vegetation cover and less than 5% invasive species cover for habitat enhancement over 2-3 years.

Similarly, areas of coastal sage scrub, a sensitive natural community identified by the CDFW, should be protected to the greatest extent possible. If avoidance is not feasible, temporary fencing or staking should be installed around CSS patches during construction, and post-construction restoration of temporarily disturbed areas should include native container plants or seed mixes representative of the local CSS assemblage. Long-term site management should include invasive species control to prevent edge

degradation, habitat fragmentation, and promote ecological integrity. Invasive species removal should occur prior to construction activities and post-construction during trail maintenance to prevent further spread of non-native species. A typical success criteria of 80% native vegetation cover and less than 5% invasive species cover over 2-3 years can be implemented to run concurrent with other post-construction monitoring.

5.2.3. Wildlife

To comply with the MTBA and CEQA, measures should also be implemented to protect nesting birds that may utilize CSS or other native vegetation. Vegetation clearing, or ground disturbing activities should be conducted during the non-breeding season (September 1 to February 14) in order to limit impacts to nesting birds. If vegetation clearing or ground disturbing activities need to take place during breeding season (February 15 through August 31), in order to remain in compliance with the Migratory Bird Treaty Act, a pre-construction nesting bird survey(s) will be required. The last survey day should be conducted no more than three days prior to the start of work. Additionally, if the proposed trail's construction is unavoidable during this window, a qualified biologist should be present for trail construction activities. If active nests are found, an appropriate no-disturbance buffer should be established until the young have fledged, as determined by the biologist.

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APPENDIX A
SITE PHOTOGRAPHS



Photo 1: View of the site from the southwest corner, showing mixed woodland.



Photo 2: Open/disturbed area from ridgeline looking toward east section of parcel.



Photo 3: Site overview, from ridgeline looking at northeast corner of parcel.



Photo 4: Downhill drainage movement through section of Bonnie Cove West Trail.



Photo 5: Water runoff outlet on Bonnie Cove West Trail, facing west.



Photo 6: Culvert outlet on Bonnie Cove West Trail, facing east.



Photo 7: South Hills Bike Park project site, facing west.



Photo 8: South Hills Bike Park project site, facing northwest.



Photo 9: Bobcat (*Lynx rufus*) tracks, Bonnie Cove West Trail.



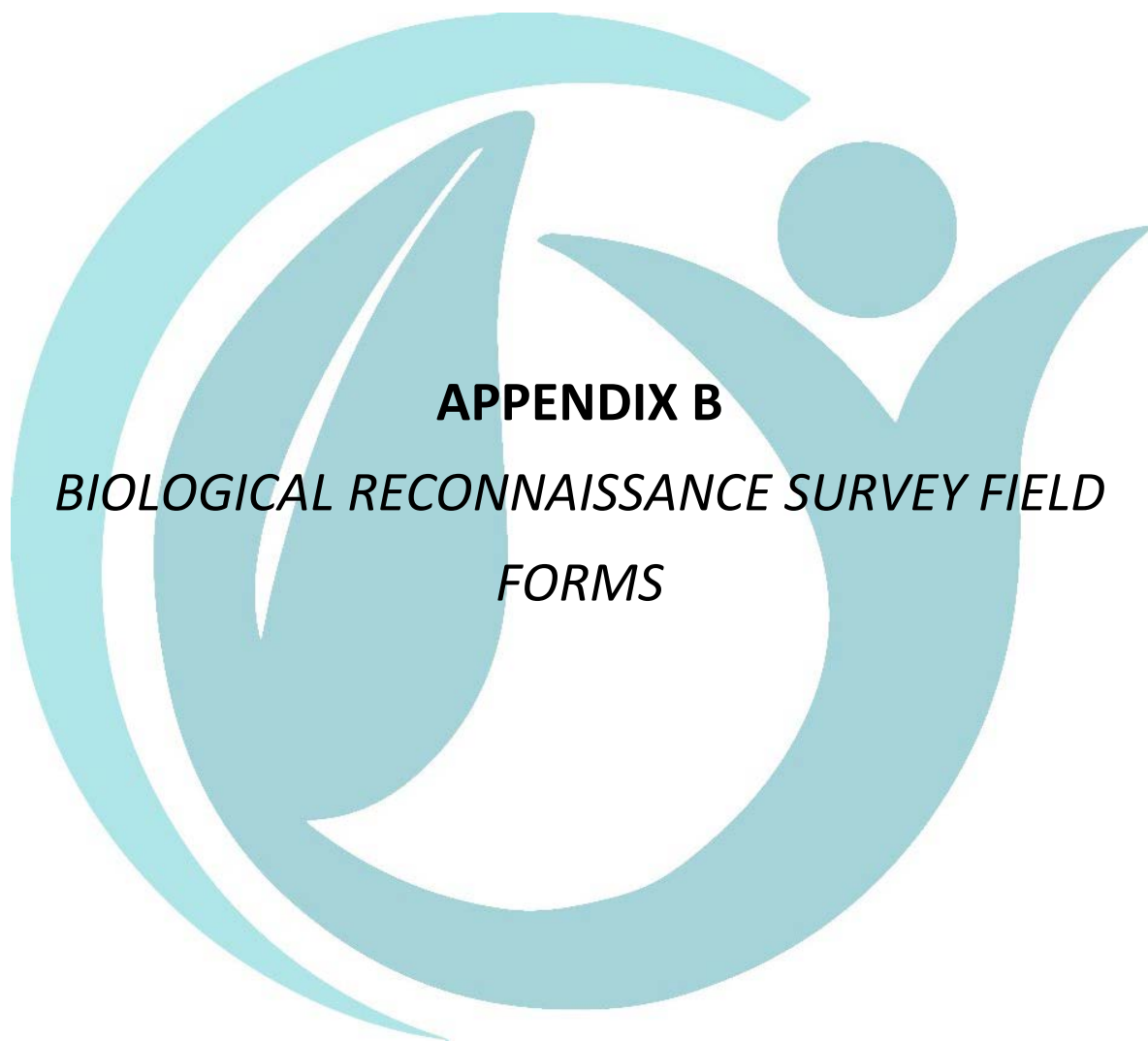
Photo 10: View from South Hills Bike Park project site, facing northeast.



Photo 11: Open/disturbed area on northwest slope, facing north.



Photo 12: Open/disturbed area on northwest slope facing west.





Biological Reconnaissance Survey Field Form

PLANT SPECIES OBSERVATIONS

PLANT SPECIES PRESENT	
Specify plant layer as herb (h), shrub (s), or tree (t)	
Species	Layer
turkey mull	
* Baja Fairy duster	
gumplant sp.	
black sage	
lemonade berry	
black oak	
* ~~pot~~	
* Goldenrod sp.	
white sage	
* bladderpod	
laurel sumac	
* Peru Pepper	
C. live oak	
horehound	
Amer Agave	
* Rhamnus (ret berry)	
* gum	
* Pinus	
black walnut	
Oleander	
CA Buckthorn	
Malt star thistle	
CA sagebrush	
* Hartweg's milkweed	
common sunflower	
smooth beggarticks	
poison oak	
cucurbita	
Tree Tobacco	
Arundo	
Toyon	

PLANT SPECIES PRESENT	
Specify plant layer as herb (h), shrub (s), or tree (t)	
Species	Layer
Scrub oak	
* wild rye	
caterpillar phac	
CA buckwheat	
* bromus	
rabbit tobacco	
shotpot mustard	
castor bean	
Jimson/nightshade	
Opuntia	
lime Tree	
blue gum	
* Jacaranda sp.	
mulefat	
* Rumex sp.	
Tamarisk	
scarlet pimpernel	
spiny red berry	
Dotter sp.	
* leafless cassia	
CA Fuchsia	
Sand Aster	
Fennel	
* Duranta?	
blue elder	

Biologist Signature: 

Date: 10/29/24

* - specimen/photo taken for ID



WILDLIFE SPECIES OBSERVATIONS

[illegible]

Date:

10/29/24



Biological Reconnaissance Survey Field Form

Date: 10/30/24 Project Name: _____

Job #: 7113 Client: Placeworks

Surveyor(s): AW + AI

LOCATION DESCRIPTION

Site Address: _____ City, State: Glendora, CA

Habitat Types Present: _____

Current Land Uses: Wilderness Park

Start (time) 715

Temp (°F) 46

Cloud Cover (%) 30

Precipitation N

Wind (mph) 4

End (time) 1230

Temp (°F) 68

Cloud Cover (%) 30

Precipitation X

Wind (mph) 2

NOTES: (Nest locations and species behavioral notes, disturbances, habitat conditions, etc.)

bobcat → bobcat rd. = fork in road by spur

npnan → bt East view north fork trail + Arista Canyon trail

cactus only in southern slope bt Bonnie + backbone + boundary

⊗ take oak pics

[illegible][illegible]

A

(10 | 30 | 24)

Biological Reconnaissance Survey Field Form

Date: 10/31/24 Project Name: _____

Job #: 7113 Client: Place Works

Surveyor(s): AW+AI

Habitat Types Present: _____

Current Land Uses: Wilderness park

Start (time) 730

Temp (°F) 46

Cloud Cover (%) 20

Precipitation ~~8~~

Wind (mph) 4

End (time) 1200

Temp (°F) 72

Cloud Cover (%) 40

Precipitation ~~0~~

Wind (mph) 5

WILDLIFE SPECIES OBSERVATIONS

Biologist Signature:

Date: 10/31/24

APPENDIX C
PLANT & WILDLIFE SPECIES OBSERVED/DETECTED
ONSITE

Plants		
Scientific Name	Common Name	Special Status
EUDICOTS		
Anacardiaceae - Sumac or Cashew family		
<i>Malosma laurina</i>	Laurel sumac	
<i>Rhus integrifolia</i>	Lemonade-berry	
* <i>Schinus molle</i>	Peruvian pepper tree	
<i>Toxicodendron diversilobum</i>	Pacific poison oak	
Apocynaceae - Dogbane Family		
<i>Nerium oleander</i>	Oleander	
Asteraceae - Sunflower Family		
* <i>Centaurea melitensis</i>	Maltese star-thistle	
<i>Achillea filipendulina</i>	Fernleaf yarrow	
<i>Bidens laevis</i>	Smooth beggarticks	
<i>Artemisia californica</i>	California sagebrush	
<i>Baccharis salicifolia</i>	Mulefat	
<i>Baccharis pilularis</i>	Coyote brush	
<i>Grindelia squarrosa</i>	Curlycup gumweed	
<i>Helianthus annuus</i>	Common sunflower	
<i>Malacothrix saxatilis</i>	Cliff aster	
<i>Pseudognaphalium biolettii</i>	Two-color rabbit tobacco	
<i>Solidago</i> sp.	Goldenrod	
Boraginaceae - Borage Family		
<i>Phacelia cicutaria</i>	Caterpillar scorpionweed	
Brassicaceae - Mustard Family		
* <i>Hirschfeldia incana</i>	Shortpod mustard	
Cactaceae - Cactus Family		
<i>Opuntia littoralis</i>	California prickly pear cactus	
<i>Cylindropuntia</i> sp.	Cholla	
Cleomaceae – Spiderflower Family		
<i>Cleomella arborea</i>	Bladderpod	
Crassulaceae - Stonecrop Family		
* <i>Crassula ovata</i>	Jade plant	
Euphorbiaceae - Spurge Family		
<i>Croton setigerus</i>	Turkey mullein	
* <i>acacia</i> * <i>Ricinus communis</i>	Castor bean	
Fabaceae - Legume Family		
<i>Calliandra californica</i>	Baja fairy duster	
<i>Acmispon glaber</i>	Deerweed	
Fagaceae - Oak Family		
<i>Quercus berberidifolia</i>	California scrub oak	
<i>Quercus agrifolia</i>	Coast live oak	
<i>Quercus velutina</i>	Black oak	
Juglandaceae - Walnut Family		
<i>Juglans californica</i>	Southern California black walnut	S4.2
Lamiaceae - Mint Family		
* <i>Marrubium vulgare</i>	Common horehound	
<i>Salvia apiana</i>	White sage	
<i>Salvia greggii</i>	Autumn sage	

Plants		
Scientific Name	Common Name	Special Status
<i>Salvia mellifera</i>	Black sage	
<i>Trichostema lanceolatum</i>	Vinegar weed	
Myrtaceae – Myrtle Family		
<i>*Eucalyptus globulus</i>	Tasmanian blue gum	
Onagraceae - Evening-primrose Family		
<i>Epilobium canum</i>	California fuchsia	
Oxalidaceae - Oxalis Family		
<i>*Oxalis pes-caprae</i>	Bermuda buttercup	
Platanaceae - Sycamore Family		
<i>Platanus racemosa</i>	California sycamore	
Plumbaginaceae – Leadwort Family		
<i>Limonium sp.</i>		
Polygonaceae - Buckwheat Family		
<i>Rumex crispus</i>	Curly dock	
<i>Eriogonum fasciculatum</i>	California buckwheat	
Rhamnaceae - Buckthorn Family		
<i>Frangula californica</i>	California buckthorn	
<i>Rhamnus crocea</i>	Spiny redberry	
<i>Rhamnus ilicifolia</i>	Hollyleaf redberry	
Primulaceae – Primrose Family		
<i>*Anagallis arvensis</i>	Scarlet pimpernel	
Rosaceae - Rose Family		
<i>Cercocarpus betuloides</i>	Birchleaf mountain-mahogany	
<i>Heteromeles arbutifolia</i>	Toyon	
<i>Prunus ilicifolia</i>	Hollyleaf cherry	
Sapindaceae - Soapberry Family		
<i>Aesculus californica</i>	California buckeye	
Solanaceae - Nighthshade Family		
<i>Solanum douglasii</i>	Greenspot nightshade	
<i>Datura stramonium</i>	Jimsonweed	
<i>*Nicotiana glauca</i>	Tree tobacco	
Tamaricaceae - Tamarisk Family		
<i>*Tamarix ramosissima</i>	Saltcedar	
Viburnaceae - Muskroot Family		
<i>Sambucus canadensis</i>	Common elderberry	
MONOCOTS		
Poaceae - Grass Family		
<i>*Arundo donax</i>	Arundo	
<i>*Bromus rubens</i>	Red brome	
<i>*Elymus spp.</i>	Wild rye	
Arecaceae - Palm Family		
<i>*Washingtonia robusta</i>	Mexican fan palm	
POLYPODIOPSIDA - Ferns		
Dryopteridaceae – Wood Fern Family		
<i>Dropteris sp.</i>		

Plants		
Scientific Name	Common Name	Special Status
Pteridaceae - Brake Family		
<i>Pentagramma triangularis</i>	Goldback fern	<i>Pentagramma triangularis</i>
Legend		
*= Non-native/ invasive species	CRPR – California Rare Plant Rank	
	1A. Presumed extinct in California	
<i>Special Status:</i>	1B. Rare or Endangered in California and elsewhere	
Federal:	2. Rare or Endangered in California, more common elsewhere	
FE = Endangered	3. Plants for which we need more information - Review list	
FT = Threatened	4. Plants of limited distribution - Watch list	
State:	Threat Ranks	
SE = Endangered	.1 - Seriously endangered in California	
ST =Threatened	.2 - Fairly endangered in California	

WILDLIFE		
Common Name	Scientific Name	Special Status
Birds		
Allen's hummingbird	<i>Selasphorus sasin</i>	
American Robin	<i>Turdus migratorius</i>	
Anna's Hummingbird	<i>Calypte anna</i>	
Bewick's Wren	<i>Thryomanes bewickii</i>	
Black Phoebe	<i>Sayornis nigricans</i>	
Brown-Headed Cowbird	<i>Molothrus ater</i>	
Bushtit	<i>Psaltiriparus minimus</i>	
California Gnatcatcher	<i>Polioptila californica</i>	
California Quail	<i>Callipepla californica</i>	
California Scrub-Jay	<i>Aphelocoma californica</i>	
California Thrasher	<i>Toxostoma redivivum</i>	
California Towhee	<i>Melospiza crissalis</i>	
Cassin's Kingbird	<i>Tyrannus vociferans</i>	
Common Raven	<i>Corvus corax</i>	
Common Yellowthroat	<i>Geothlypis trichas</i>	
Cooper's Hawk	<i>Accipiter cooperii</i>	WL
Hermit Thrush	<i>Catharus guttatus</i>	
Horned Lark	<i>Eremophila alpestris</i>	
House Finch	<i>Haemorhous mexicanus</i>	
Killdeer	<i>Charadrius vociferus</i>	
Lesser Goldfinch	<i>Spinus psaltria</i>	
Mourning Dove	<i>Zenaida macroura</i>	
Northern Flicker	<i>Colaptes auratus</i>	
Northern Mockingbird	<i>Mimus polyglottos</i>	
Nuttall's Woodpecker	<i>Dryobates nuttallii</i>	
Oak Titmouse	<i>Baeolophus inornatus</i>	
Red-Winged Blackbird	<i>Agelaius phoeniceus</i>	
Ruby-Crowned Kinglet	<i>Corthylio calendula</i>	
Rufous-Crowned Sparrow	<i>Aimophila ruficeps</i>	

WILDLIFE		
Common Name	Scientific Name	Special Status
Song Sparrow	<i>Melospiza melodia</i>	
Spotted Towhee	<i>Pipilo maculatus</i>	
Townsend's Warbler	<i>Setophaga townsendi</i>	
Western Bluebird	<i>Sialia mexicana</i>	
White-Crowned Sparrow	<i>Zonotrichia leucophrys</i>	
White-Throated Sparrow	<i>Zonotrichia albicollis</i>	
Wrentit	<i>Chamaea fasciata</i>	
Yellow-Rumped Warbler	<i>Setophaga coronata</i>	
Mammals		
Coyote	<i>Canis latrans</i>	
Mule deer	<i>Odocoileus hemionus</i>	
Bobcat (tracks)	<i>Lynx rufus</i>	
Desert cottontail	<i>Sylvilagus audubonii</i>	
California ground squirrel	<i>Otospermophilus beecheyi</i>	
Reptiles		
Western fence lizard	<i>Sceloporus occidentalis</i>	
SE = Endangered		
ST =Threatened		
CSC = California Species of Special Concern		
CFP = California Fully Protected Species		



APPENDIX D
*USDA NATURAL RESOURCES CONSERVATION
SERVICE WEB SOIL SURVEY*



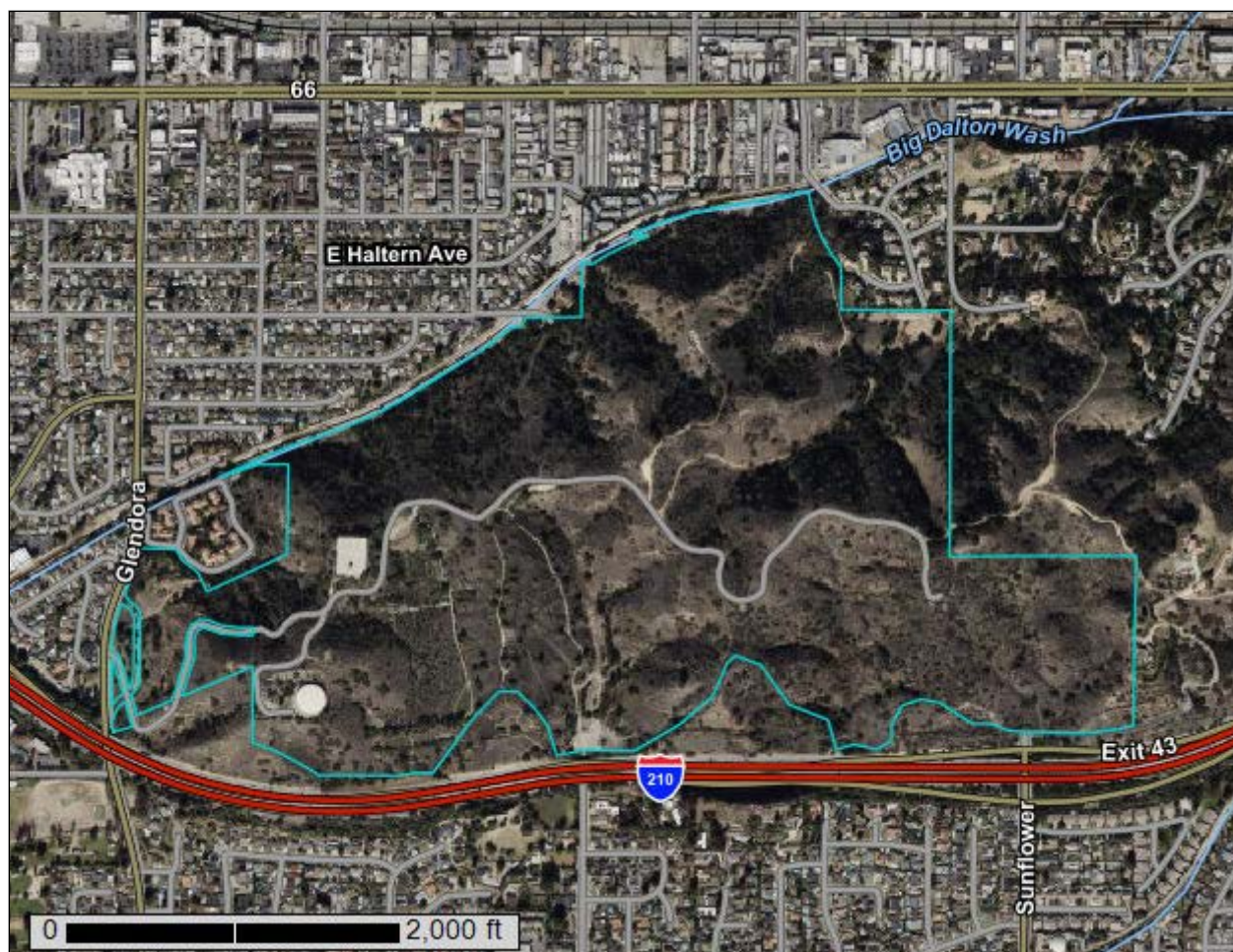
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Los Angeles County, California, Southeastern Part



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

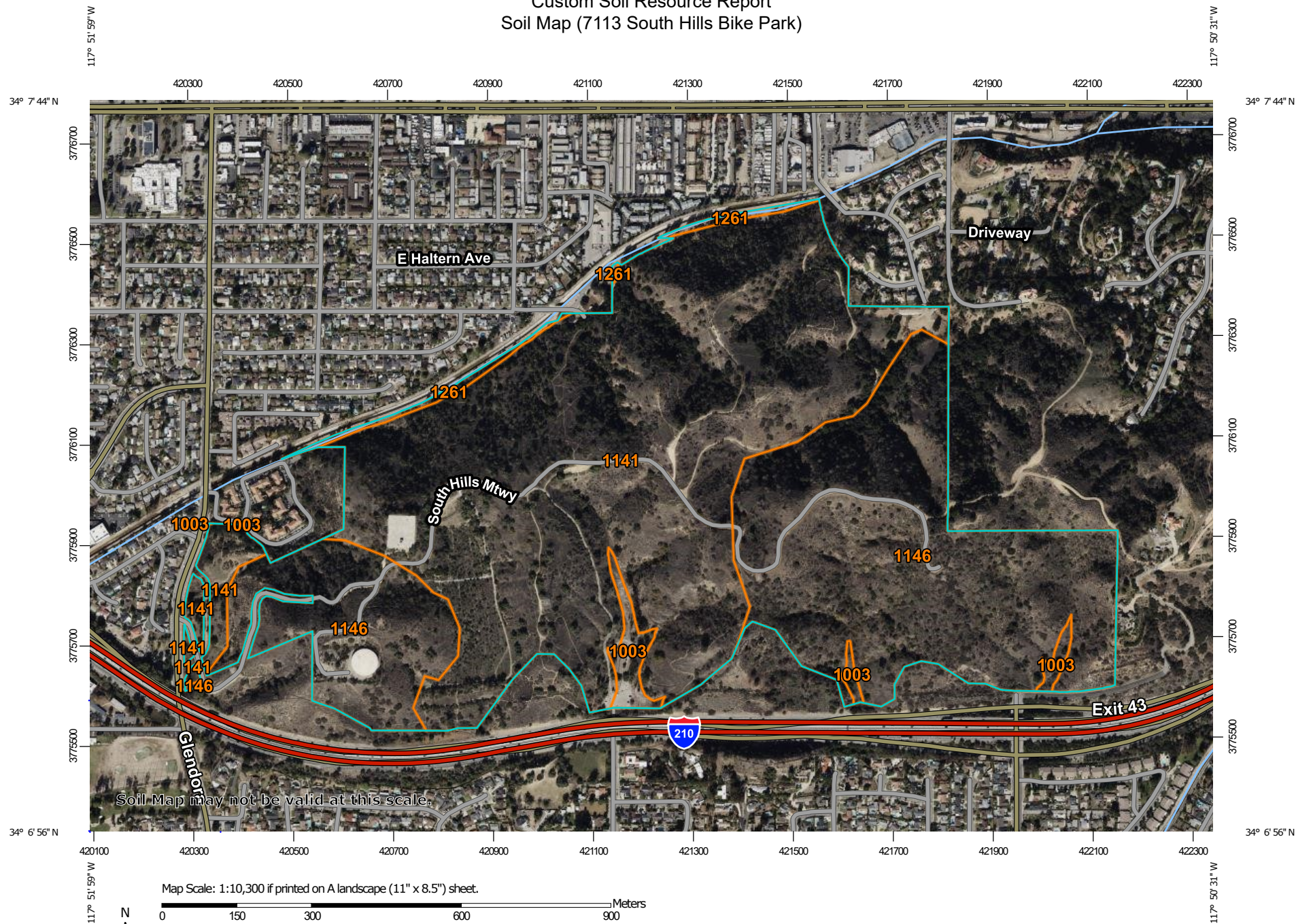
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map (7113 South Hills Bike Park)



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Los Angeles County, California, Southeastern Part
Survey Area Data: Version 11, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 20, 2022—Nov 25, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (7113 South Hills Bike Park)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1003	Urban land-Palmview-Tujunga, gravelly complex, 2 to 9 percent slopes	4.7	1.7%
1141	Zaca-Apollo, warm complex, 20 to 55 percent slopes	161.5	58.5%
1146	Lithic Haploxerolls-Lithic Argixerolls complex, 20 to 55 percent slopes	107.5	38.9%
1261	Urban land, frequently flooded, 0 to 5 percent slopes	2.4	0.9%
Totals for Area of Interest		276.0	100.0%

Map Unit Descriptions (7113 South Hills Bike Park)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not

mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Los Angeles County, California, Southeastern Part

1003—Urban land-Palmview-Tujunga, gravelly complex, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2qds7

Elevation: 200 to 2,240 feet

Mean annual precipitation: 17 to 27 inches

Mean annual air temperature: 63 to 66 degrees F

Frost-free period: 350 to 365 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 45 percent

Tujunga, gravelly, and similar soils: 20 percent

Palmview and similar soils: 20 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Alluvial fans

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: 0 inches to manufactured layer

Runoff class: Very high

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Ecological site: R019XG911CA - Loamy Fan

Hydric soil rating: No

Description of Palmview

Setting

Landform: Alluvial fans

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Discontinuous human-transported material over alluvium derived from granite

Typical profile

^A1 - 0 to 4 inches: sandy loam

^A2 - 4 to 14 inches: sandy loam

2C1 - 14 to 28 inches: sandy loam

2C2 - 28 to 79 inches: sandy loam

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

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Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R019XG911CA - Loamy Fan
Hydric soil rating: No

Description of Tujunga, Gravelly

Setting

Landform: Alluvial fans
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Discontinuous human-transported material over alluvium derived from granite

Typical profile

^Au - 0 to 6 inches: loamy sand
^A - 6 to 9 inches: gravelly loamy sand
2C1 - 9 to 30 inches: gravelly sand
2C2 - 30 to 79 inches: gravelly sand

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: R019XG912CA - Sandy Fan
Hydric soil rating: No

Minor Components

Soboba

Percent of map unit: 10 percent
Landform: Alluvial fans

Custom Soil Resource Report

Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Tujunga

Percent of map unit: 5 percent
Landform: Alluvial fans
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

1141—Zaca-Apollo, warm complex, 20 to 55 percent slopes

Map Unit Setting

National map unit symbol: 2pt45
Elevation: 220 to 1,630 feet
Mean annual precipitation: 14 to 21 inches
Mean annual air temperature: 64 to 66 degrees F
Frost-free period: 355 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Zaca and similar soils: 50 percent
Apollo, warm, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Zaca

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Colluvium and/or residuum weathered from sandstone and siltstone

Typical profile

A - 0 to 8 inches: clay
Bkss1 - 8 to 21 inches: clay
Bkss2 - 21 to 37 inches: clay
Bk - 37 to 53 inches: clay
Cr - 53 to 63 inches: bedrock

Properties and qualities

Slope: 20 to 55 percent
Depth to restrictive feature: 37 to 69 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: F019XG913CA - Loamy Hills <30"ppt
Hydric soil rating: No

Description of Apollo, Warm

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Colluvium and/or residuum weathered from sandstone and siltstone

Typical profile

A - 0 to 4 inches: clay loam
Btk1 - 4 to 11 inches: clay loam
Btk2 - 11 to 26 inches: clay loam
Bk - 26 to 45 inches: clay loam
Cr - 45 to 55 inches: bedrock

Properties and qualities

Slope: 20 to 55 percent
Depth to restrictive feature: 31 to 55 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e

Custom Soil Resource Report

Hydrologic Soil Group: C

Ecological site: F019XG913CA - Loamy Hills <30"ppt

Hydric soil rating: No

Minor Components

Boades

Percent of map unit: 8 percent

Landform: Hillslopes

Landform position (two-dimensional): Shoulder, backslope, summit

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Balcom

Percent of map unit: 7 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

1146—Lithic Haploxerolls-Lithic Argixerolls complex, 20 to 55 percent slopes

Map Unit Setting

National map unit symbol: 2pt4b

Elevation: 720 to 2,380 feet

Mean annual precipitation: 17 to 25 inches

Mean annual air temperature: 62 to 65 degrees F

Frost-free period: 345 to 365 days

Farmland classification: Not prime farmland

Map Unit Composition

Lithic haploxerolls and similar soils: 50 percent

Lithic argixerolls and similar soils: 35 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lithic Haploxerolls

Setting

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Custom Soil Resource Report

Parent material: Residuum weathered from volcanic rock

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material

A - 1 to 10 inches: loam

R - 10 to 20 inches: bedrock

Properties and qualities

Slope: 20 to 55 percent

Depth to restrictive feature: 8 to 20 inches to lithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)

Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: F019XG913CA - Loamy Hills <30"ppt

Hydric soil rating: No

Description of Lithic Argixerolls

Setting

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from volcanic rock

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material

A - 2 to 7 inches: sandy loam

Bt1 - 7 to 12 inches: sandy loam

Bt2 - 12 to 18 inches: sandy loam

R - 18 to 28 inches: bedrock

Properties and qualities

Slope: 20 to 55 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D

Ecological site: F019XG913CA - Loamy Hills <30"ppt

Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 10 percent

Landform: Hillslopes

Landform position (three-dimensional): Side slope

Hydric soil rating: No

Zaca

Percent of map unit: 5 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

1261—Urban land, frequently flooded, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2myv7

Elevation: 0 to 1,190 feet

Mean annual precipitation: 12 to 24 inches

Mean annual air temperature: 63 to 66 degrees F

Frost-free period: 320 to 365 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land, frequently flooded: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land, Frequently Flooded

Setting

Landform: Channels

Properties and qualities

Slope: 0 to 5 percent

Depth to restrictive feature: 0 inches to manufactured layer

Runoff class: Very high

Frequency of flooding: Frequent

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Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: B

Hydric soil rating: No

Minor Components

Water

Percent of map unit: 5 percent

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