Appendix C
Biota Report

Biota Report

Trails at Lyons Canyon

DECEMBER 2024

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Acronyms and Abbreviations

Acronym	Definition
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
Esri	Environmental Systems Research Institute
FESA	Federal Endangered Species Act
GIS	geographic information system
HCP	habitat conservation plan
IPaC	Information for Planning and Conservation System
ISA	International Society of Arboriculture
NCCP	natural community conservation plan
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
OHWM	ordinary high-water mark
SC	State Candidate (for CESA listing)
SSC	California Species of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1 Introduction

This report presents the findings of a biological resources assessment conducted for the proposed Trail at Lyons Canyon Project (Project). The purpose of this assessment was to evaluate the existing biological conditions and potential impacts to sensitive biological resources associated with the proposed Project. This report provides an analysis of the Project's impacts on the County of Los Angeles' (County) Significant Ecological Area (SEA) Resources as identified within the Los Angeles County SEA Ordinance Implementation Guide (Implementation Guide; Los Angeles County Planning [County Planning] 2020). This report is also prepared at a level of detail sufficient to address California Environmental Quality Act (CEQA) requirements, specifically the biological thresholds of significance included in Appendix G, as well as identifying the potential need for permits for sensitive resources protected under federal and state regulations.

1.1 Project Location

The Project site totals 233.49 gross acres and 227.34 net acres. The Project is located near the City of Santa Clarita, within unincorporated Los Angeles County, California (Figure 1, Project Location) and is located within Sections 4 and 9 of Township 3 North, Range 16 West, of the U.S. Geological Survey (USGS) Oat Mountain, California 7.5" topographic quadrangle (quad) map. The Project site consists of assessor parcel numbers (APNs) 2826-041-039, 2826-023-014, 2826-022-026, 2826-022-027 and 2826-022-035.

Stevenson Ranch, a master-planned community in the unincorporated County, is located north of the Project site, and the City of Santa Clarita is located just east of the Project site. The Santa Susana Mountains are located west of the site, with Ventura County located farther west of the Santa Susana Mountains. South of the Project site is unincorporated County land and City of Santa Clarita land (specifically, Rivendale Park and Open Space). Locally, the Project site is south of Sagecrest Circle, adjacent to The Old Road on its eastern side, and north of Calgrove Boulevard near Ed Davis Park in Towsley Canyon. The Project site is bordered by open space on its western, southern, and southeastern boundaries. Regional access to the Project site is provided by the northbound/southbound Interstate-5 (I-5) Freeway to the east, with freeway access ramps via Lyons Avenue or Calgrove Boulevard, each located approximately 1.0 mile from the Project site. Direct access to the Project site is currently provided by The Old Road on the east.

1.2 Project Description

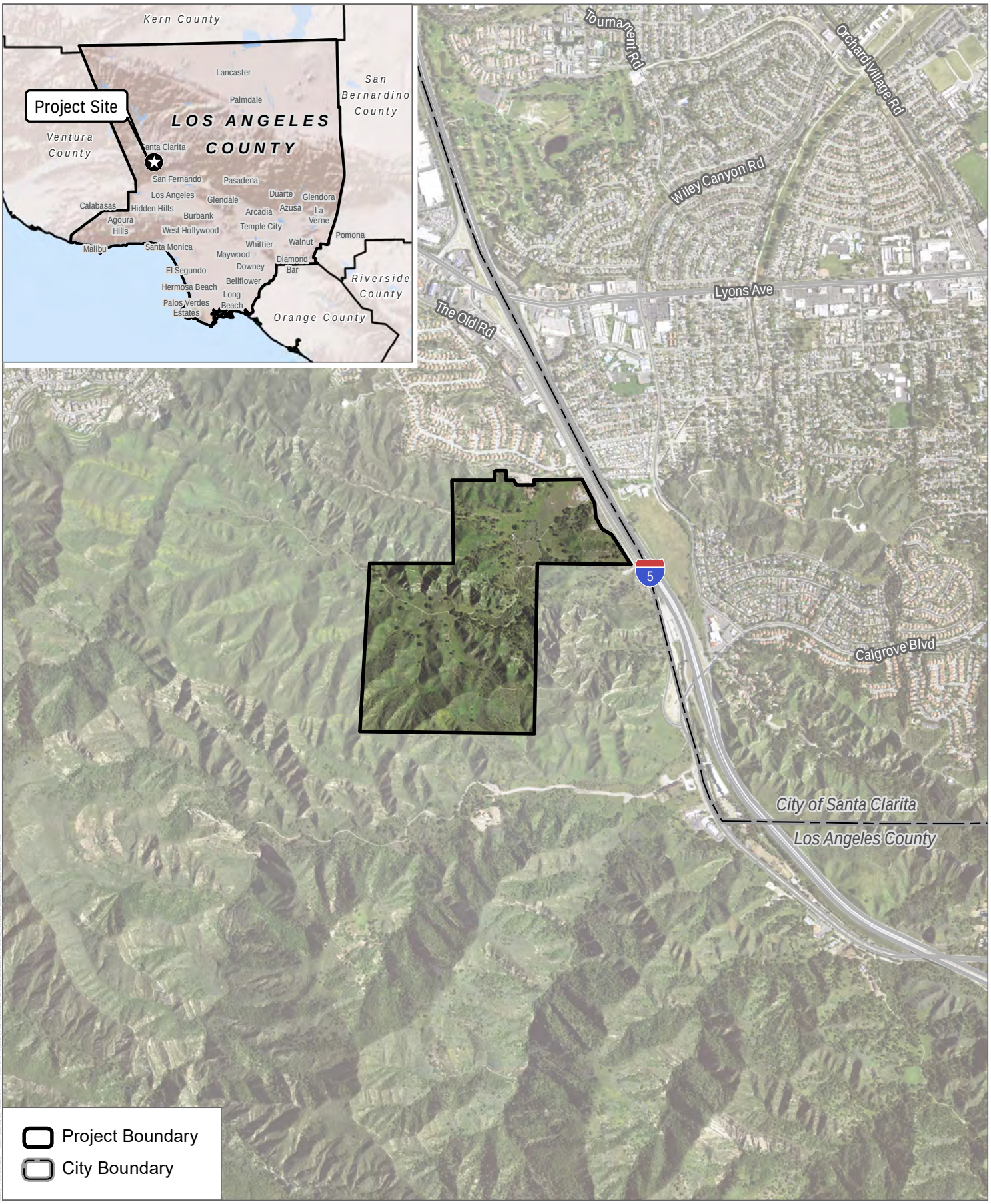
1.2.1 On-Site Project Components

NUWI Lyons Canyon LLC (the Project Applicant) is proposing a subdivision for the development of 510 dwelling units with a mix of attached and detached dwelling units and affordable senior housing, a recreational center, fuel modification zones (on-site), brush thinning (off-site), and natural and improved open space within a 233.49-gross-acre (227.34-net-acre) Project site (Figure 2, Conceptual Site Plan). Project infrastructure would include internal roadways, trails and a new trailhead, a new water tank, and debris and desilting basins. The total Project Development Footprint, which includes the Project's grading limits and a surrounding construction buffer, is 72.55 acres. The Project includes 6.73 acres of on-site fuel modification and 3.90 acres of on-site drainage inundation areas for debris basins (debris extents). The total on-site Project impact area, which includes the Project Development Footprint, fuel modification zones, and debris extents, would be 83.17 acres.

Additionally, the Project, as required by Section 22.102.090 (SEA Development Standards) of the County Code proposes to dedicate approximately 144.43 acres (approximately 62% of the Project site) of natural open space to the public at the Project site; this area is defined as the "Conservation Area" in this document and would be preserved and maintained in perpetuity through a conservation easement as implemented through mitigation measure (MM)-BIO-1.[1] In totality, the on-site Project impact area (83.17 acres), 5.89 acres of unimpacted and unpreserved open space, and Conservation Area (144.43 acres) total to approximately 233.49 gross acres of the Project site.

The Project would include features to create a more naturalized transition between the development on the Project site and the off-site Rivendale Park and Open Space to the south. The southern on-site "B Street" that runs adjacent to the northern boundary of Rivendale Park and Open Space would have a mix of small and medium ornamental street trees spaced 25-feet on center. In addition to the trees, the south side of the on-site "B Street" right-of-way would include either a retaining wall or a six-foot tall treated chain-link fencing and associated screening shrubs (e.g. laurel sumac, sweet bay, Indian laurel, coffeeberry) to further buffer the Project site from the off-site open space areas. The shrub screening in the street right-of-way would be followed by varying distances of slope plantings, native habitat plantings, and bioretention rim planting that would continue to the southern edge of the Project site. The intent of these structural and vegetative features is to add a physical barrier that would discourage terrestrial wildlife movement into the developed portion of the Project site and to create a visibility barrier between the properties, while also providing additional screening for Project-related street, vehicle lighting, and vehicle noise.

[1] It should be noted that according to the Vesting Tentative Tract Map prepared for the Project, Lots 24 through 27 are labeled as "natural open space", for a total of 152.84 acres. However, as discussed later in this report, this acreage differs from the "Conservation Area", which would include 144.43 acres and includes all acreage on-site that would not be disturbed (i.e., would not include graded areas, fuel modification zones, debris basins, etc.) within the Project site.



SOURCE: NAIP 2020, Open Streets Map 2019

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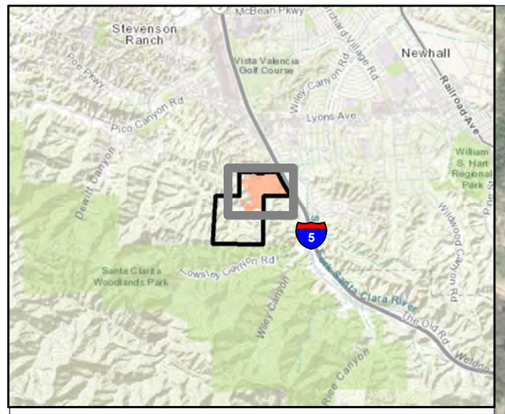
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FIGURE 1

Project Location

Trails at Lyons Canyon Project

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- Project Boundary
- Lot Line
- Structure
- Water Tank Access Retaining Wall
- 6-Ft High Fire Wall
- Enhanced Ignition Resistant Construction

Fuel Modification Zone

- FMZ Equivalent
- Zone A - Setback Zone
- Zone B - Irrigated Zone
- Zone C - Native Brush Thinning Zone
- Fire Access Roadway Zone
- Water Quality Basin (Annual Maintenance Required)
- Drainage Channel (Annual Maintenance Required)
- Offsite FMZ

Land Use

- Debris Extent
- Driveway/Roadway Access
- Fire Lane Access
- Graded Area
- Manufactured Slope
- Park
- Trail/Access Road

SOURCE: AERIAL-BING MAPPING SERVICE; DEVELOPMENT-ALLIANCE ENGINEERING 2023

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0 150 300 Feet

FIGURE 2

Conceptual Site Plan

Trails at Lyons Canyon Project

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1.2.2 Off-Site Project Components

The Project includes 6.17 acres of off-site areas, including the Project Development Footprint, brush thinning zones, and debris extents. These are detailed further below.

APN 2826-022-901 at The Old Road

As shown on Figure 2, the Project boundary is not located directly adjacent to The Old Road, but rather it is offset from the road by varying distances. Property included within APN 2826-022-901 would contribute to the development of Lots 7 and 8, thereby allowing the Project to develop the required manufactured slopes, retaining wall, stormwater infrastructure (V-ditches along slopes), roadway ingress/egress and curb/gutter where the private access road meets The Old Road, and roadway ingress/egress for the gated private access road. The off-site Project Development Footprint along The Old Road would occur on 2.49 acres.

The Old Road

The Old Road would be improved as required by the conditions of approval imposed by Los Angeles County Public Works (Public Works). The existing portion of The Old Road aligned next to the Project's northeastern boundary within APN 2826-022-901 is approximately 21 feet wide, with a curb and gutter on the east side of the road and an asphalt edge on the western side of the road. Off-site improvements of the Project would include widening The Old Road by 47 feet (including 45 feet of asphalt and 2 feet of concrete curb and gutter) within APN 2826-022-901 to create a total 68-foot-wide curb to curb road within an 80-foot right of way. A new 8-foot-wide concrete sidewalk would be installed along the western frontage of the Project site and an approximately 4-foot-tall retaining wall would be constructed adjacent to the sidewalk.

Water Infrastructure

In coordination with the Santa Clarita Valley Water Agency, the Project will require various off-site water infrastructure improvements to service the Project site. Required improvements include the following:

- New Zone Valve between Newhall and Valencia in The Old Road
- 2,950 feet of 18-inch main in The Old Road
- 4,000 feet of 12-inch main in The Old Road
- Pump Station 4 Upgrades (within footprint of Pump Station 4):
  - 1,975 gallons per minute (gpm) firm capacity (820 gpm increase)
  - Upsize/replace 50 feet of on-site 6-inch pump station pipelines to 8-inch
  - Upsize/replace 190 feet of on-site 8-inch pump station pipelines to 10-inch
- Pump Station 5 Upgrades:
  - 1,225 gpm firm capacity (366 gpm increase)

At Pump Station 4, the Project would include a connection to Peachland Avenue from Pump Station 4. This would include an approximately 40-foot-long pipeline connection from the point of connection to the pump station. Through implementation of the Project, a water line would run directly from Pump Station 4 into the existing water main within Peachland Avenue. This would require trenching within Peachland Avenue.

Sewer Infrastructure

The existing downstream sewer system consists of approximately 11,500 linear feet of gravity sewer pipe ranging in size from 8 inches to 18 inches before connecting to the 24-inch SCVSD Trunk Sewer. The Project would upsize an 8-inch pipeline to 10-inches and construct three manholes within The Old Road, near the northeastern boundary of the Project site. It is anticipated that the Project would generate a total flow rate of 0.525 cubic feet per second entering existing 8-inch sewer lines from one of the proposed manholes. The sewage would flow through 10 to 18-inch lines before terminating at the existing 24-inch SCVSD Trunk Sewer (diversion structure).

Fuel Modification

As detailed below, Project development would require the fuel modification on-site. Additionally, due to the requirements of fuel modification zone distances for the proposed development, the Project would require off-site fuel modification (brush thinning) across 3.17 acres. The extent of off-site brush thinning requirements is depicted on Figure 2.

Debris Basins

The Project would result in 0.51-acre of off-site debris extents. The drainage inundation areas for the debris basins do not involve earthwork or grading activities.

1.2.3 Fuel Modification

The Project site is located within Fire Zone 4, which is within a Very High Fire Hazard Severity Zone (VHFHSZ) that falls within the State Responsibility Area (SRA). Thus, a fuel modification plan for the Project Footprint would be designed in compliance with the Los Angeles County Fire Department's Fuel Modification Guidelines and best practices. The fuel modification plan would categorize the Project site into fuel modification zones for planting, which would include the Ember Resistant Zone, Zone A, Setback Zone; Zone B, Irrigated Zone; Zone C, Native Brush Thinning Zone; and a fire access road zone. The Ember Resistant Zone extends 5 feet from any combustible structure and prohibits combustible material in that distance. Zone A extends 20 feet beyond the edge of any combustible structure, accessory structure, appendage, or projection and would primarily consist of green lawns, ground cover, and adequately spaced shrubs. Plants within Zone A would be highly fire-resistant. Zone B, Irrigated Zone, would extend from the outermost edge of Zone A to 100 feet from proposed structures. Landscaping within Zone B would consist of primarily green lawns, ground cover, shrubs, and trees. Zone C, Native Brush Thinning Zone, would extend from the outermost edge of Zone B, up to 200 feet from structures or the Project site boundary. Plants in Zone C would likely consist of existing native vegetation and adequately spaced ornamental shrubs and trees. Existing native vegetation would be modified by thinning and removing portions of the vegetation if the species constitute a fire risk. The limits of the fuel modification and off-site brush thinning are shown in Figure 2.

1.3 Environmental Setting

1.3.1 On-Site Conditions

The Project site is currently undeveloped hillsides with no habitable structures or paved roads on-site. The topography of the Project site is characterized by hillside and valley terrain with moderate to steep variations with a significant ridgeline designated in the southern portion of the Project site. Elevations in the Project site range from

approximately 1,654 feet above mean sea level (msl) at the southwest corner to approximately 1,300 feet above msl at the northeast corner. Lyons Canyon is in the central portion of the Project site. An unpaved dirt and gravel pathway known as "Lyons Ranch" traverses the Project site from the northeastern end, traveling south and eventually west, and continuing off-site. Lyons Ranch is currently used as an emergency access road and non-dedicated trail. Non-dedicated and informal hiking trails are located throughout the Project site's hillsides, generally meandering between Lyons Ranch and Towsley Canyon Road, located off-site and south of the Project site. A part of Taylor Trail transects the southeastern portion of the Project site.

1.3.2 Regional Conditions

The Project site is in the eastern Ventura Basin within the Transverse Ranges (i.e., an east-west trending series of steep mountain ranges and valleys) along the northerly flank of the Santa Susana Mountains, as shown in Figure 3, Regional Conditions. The east-west structure of the Transverse Ranges contrasts with the normal northwest trend of much of the rest of coastal California. The Ventura Basin consists of a narrow, elongate, and east-west trending sedimentary trough extending from the Santa Barbara Channel on the west to the San Gabriel fault on the east. The flanks of the Ventura Basin are broken by a series of large reverse/thrust faults including the Santa Susana and Oak Ridge faults on the southern flank, and the Red Mountain and San Cayetano faults on the northern flank. The San Gabriel Fault, the dominant geologic feature in the Santa Clarita Valley, forms the eastern Ventura Basin boundary, and separates the Ventura Basin from the structurally similar Soledad Basin (RTF&A 2023). No active or potentially active faults are known to exist within the Project site or surrounding area, and the nearest Alquist Priolo Earthquake Fault Zone is located approximately 1.5 miles northwest of the site and was established for surface features identified following the 1994 Northridge earthquake (RTF&A 2023).

The Project site occurs entirely within the Santa Susana Mountains and Simi Hills SEA. Although the Project site is located at the interface of undeveloped lands and existing development, it represents the northeastern extent of a County of Los Angeles designated wildlife corridor that provides for wildlife movement from lands associated with the Santa Susana Mountains and Simi Hills SEA to undeveloped lands associated with the San Gabriel Mountains further east, with a substantial east-west movement route in Towsley Canyon located south of the Project site. The shrubland, grassland, and woodland habitats within the Project site are contiguous with large tracts of similar habitat communities that are on adjacent lands that are both privately held undeveloped land and designated open space associated with Santa Clarita Woodlands Park, Rivendale Ranch Open Space, and Pico Canyon Park. Except for developed areas to the immediate north and east of the Project site, adjacent undeveloped lands contain contiguous chaparral, coastal sage scrub, and woodlands.

The Project site is in the Upper Santa Clara River East Subbasin hydraulic area (Regional Water Quality Control Board [RWQCB] 2012). The Santa Clara River Valley East Subbasin is bordered on the north by the Piru Mountains, on the west by impervious rocks of the Modelo and Saugus Formations and a constriction in the alluvium, on the south by the Santa Susana Mountains, and on the south and east by the San Gabriel Mountains. Surface water is drained by the Santa Clara River, Bouquet Creek, and Castaic Creek (Stantec 2023). Lyons Canyon, located in the central portion of the Project site, drains eastward into the South Fork of the Santa Clara River, which leads to the Santa Clara River approximately 3.75 miles northeast of the Project site.

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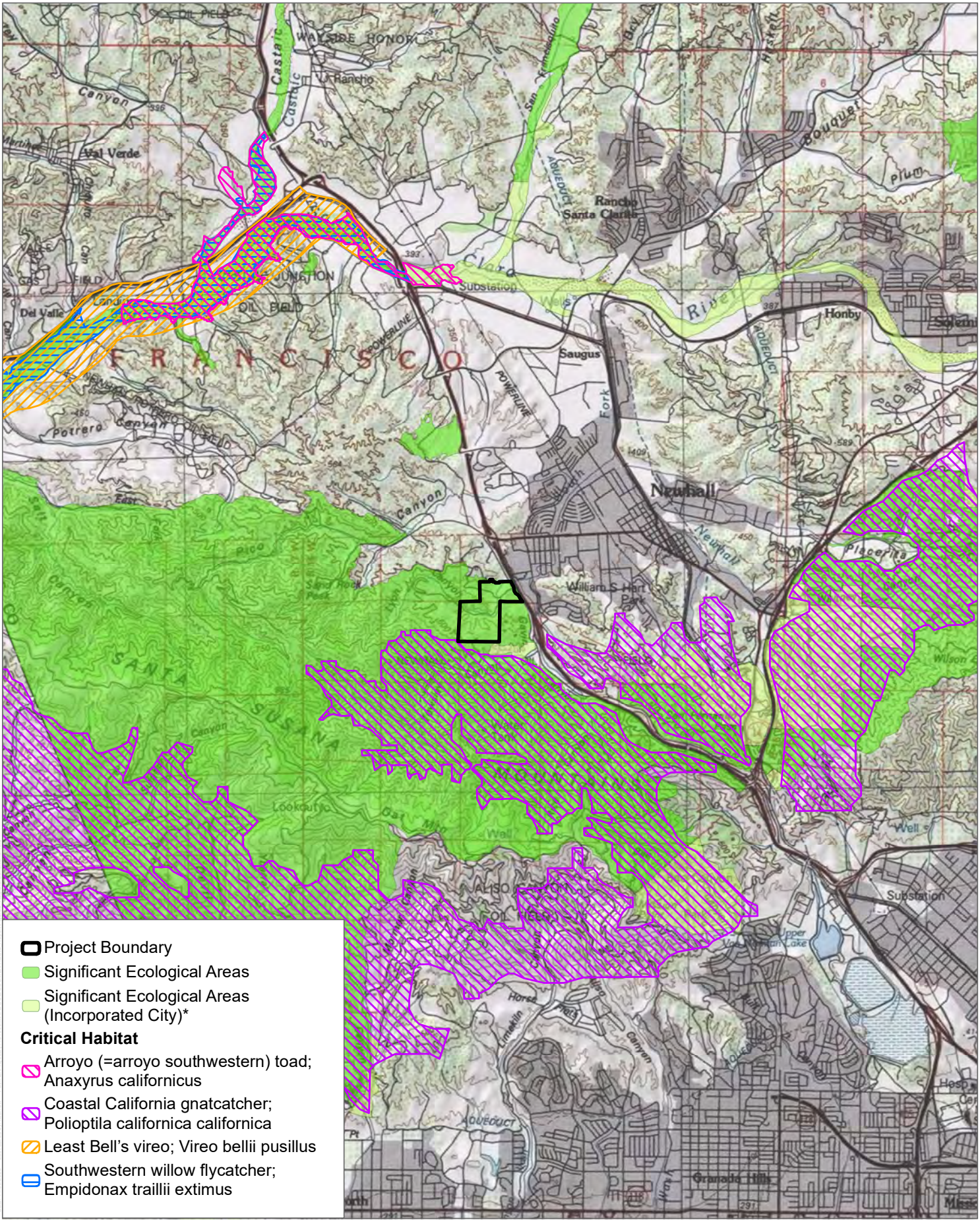


FIGURE 3

Regional Conditions

Trails at Lyons Canyon Project

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2 Regulatory Context

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and wildlife species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. FESA is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and to provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to take any listed species; "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of Incidental Take Permits for listed species under Section 7, which is generally available for Projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans (HCP) on private property without any other federal agency involvement. Upon development of a HCP, USFWS can issue Incidental Take Permits for listed species.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA; 16 USC 703 et seq.), as amended, prohibits the intentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so. In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA's "take" prohibition to apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs. Unintentional or accidental take is not prohibited. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

2.1.3 Clean Water Act

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires a project operator for a federal license or permit that allows activities resulting in a discharge to waters of the United States (waters of the U.S.) to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The Regional Water Quality Control Boards (RWQCBs) administer the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by U.S. Army Corps of Engineers (USACE) that regulates the

discharge of dredged or fill material into waters of the United States, including wetlands. USACE implementing regulations are found at 33 Code of Federal Regulations (CFR) 320 and 330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

2.1.4 Wetlands and Other Waters of the United States

Aquatic resources, including riparian areas, wetlands, and certain aquatic vegetation communities, are considered sensitive biological resources and can fall under the jurisdiction of several regulatory agencies. USACE exerts jurisdiction over waters of the United States, including all waters that are subject to the ebb and flow of the tide; wetlands and other waters such as lakes, rivers, streams (including intermittent or ephemeral streams), mudflats, sandflats, sloughs, prairie potholes, vernal pools, wet meadows, playa lakes, or natural ponds; and tributaries of the above features.

The extent of waters of the U.S. is generally defined as that portion that falls within the limits of an ordinary high-water mark (OHWM). Typically, the OHWM corresponds to the water surface elevation of a 2-year flood event (USACE 2008). In addition, waters of the United States may include wetlands, including swamps, bogs, seasonal wetlands, seeps, marshes, and similar areas, defined by USACE as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3(b); 40 CFR 230.3(t)). Indicators of three wetland parameters (i.e., hydric soils, hydrophytic vegetation, and wetlands hydrology), as determined by field investigation, must be present for a site to be classified as a wetland by USACE.

2.2 State Regulations

2.2.1 California Endangered Species Act

CDFW administers the California Endangered Species Act (CESA), which prohibits the take of plant and wildlife species designated by the Fish and Game Commission as endangered or threatened in California. Under CESA Section 86, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

CESA defines an endangered species as "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." CESA defines a threatened species as "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 required by this chapter. Any wildlife determined by the Commission as rare on or before January 1, 1985, is a threatened species." A candidate species is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Commission has formally noticed as being under review by the department for addition to either the list of

endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list." CESA does not list invertebrate species.

2.2.2 California Fish and Game Code

Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code outline protection for fully protected species of birds, mammals, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the "take" of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of CDFW to maintain viable populations of all native species. Toward that end, CDFW has designated certain vertebrate species as Species of Special Concern (SSC), because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

Section 1602

Under Section 1602 of the California Fish and Game Code, a project operator is required to notify CDFW prior to any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the code, a "stream" is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that supports or has supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial watercourses valuable to fish and wildlife are subject to CDFW jurisdiction. CDFW also has jurisdiction over dry washes that carry water during storm events.

Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement, which becomes part of the plans, specifications, and bid documents for the project.

Nesting Birds

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

2.2.3 California Native Plant Protection Act

The Native Plant Protection Act of 1977 (see Section 1900 et seq. of the California Fish and Game Code) directed CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take. CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the California Fish and Game Code. To align with federal regulations, CESA created the categories of "threatened" and "endangered"

species. It converted all "rare" wildlife into the act as threatened species but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent.

2.2.4 California Environmental Quality

CEQA requires identification of a Project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. CEQA also provides guidelines and thresholds for use by lead agencies for evaluating the significance of potential impacts.

Special-Status Plants and Wildlife

The CEQA Guidelines define endangered wildlife or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15380(b)(1)). A rare wildlife or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not currently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … (t)he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, a wildlife or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing as defined further in CEQA Guidelines Section 15380(c).

Special-Status Vegetation Communities

Section IV, Appendix G (Environmental Checklist Form) of the CEQA Guidelines (14 CCR 15000 et seq.) requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or the USFWS."

2.3 Local Regulations

2.3.1 Los Angeles County 2035 General Plan

The General Plan includes guiding principles that inform the County's goals, policies, and implementation actions. The following goals and polices are relevant to the Project and applicable to biological resources (County of Los Angeles 2015):

> ***Goal C/NR 1:*** Open space areas that meet the diverse needs of Los Angeles County.
>
> ***Policy C/NR 1.3:*** Support the acquisition of new available open space areas. Augment this strategy by leveraging County resources in concert with the compatible open space stewardship actions of other agencies, as feasible and appropriate.
>
> ***Goal C/NR 2:*** Effective collaboration in open space resource preservation.
>
> ***Policy C/NR 2.2:*** Encourage the development of multi-benefit dedicated open spaces.

Policy C/NR 3.8: Discourage development in areas with identified significant biological resources, such as Significant Ecological Areas (SEAs).

2.3.2 County of Los Angeles Significant Ecological Areas

SEAs are officially designated areas within the County with irreplaceable biological resources. The SEA program objective is to conserve genetic and physical diversity within the County by designating biological resource areas that can sustain themselves into the future. The SEA also protects native trees and provides a list of the protected species and the size of the diameter of the trunk that triggers protection. The SEA Ordinance establishes the permitting, design standards, and review process for development within SEAs, balancing preservation of the County's natural biodiversity with private property rights. A discretionary SEA Conditional Use Permit application is required for development that cannot demonstrate compliance with Section 22.102.070 (Protected Tree Permit), or Sections 22.102.090 (SEA Development Standards) and 22.102.100 (Natural Open Space Preservation) of the County Code. County Planning has issued the SEA Ordinance Implementation Guide (County Planning 2020) to help proposed development comply with the ordinance.

The proposed Project is seeking an SEA Conditional Use Permit because it would have impacts to SEA Resource Categories (as defined below) that are greater than those allowed by SEA Development Standards and would remove more than two SEA Protected Trees that also include heritage trees.

SEA Resource Categories

The SEA Ordinance includes SEA Resource Categories 1 through 5. These categories are defined as (County Planning 2020):

- Category 1: FESA and CESA listed plant and wildlife species; CESA candidate species, California Rare Plant Ranks (CRPR) 1A or B, 2A or B, and 3 (CNPS 2023), critically imperiled natural communities (those that have a Global [G] and/or State [S] ranking of 1 (NatureServe 2023), and water resources
- Category 2: CDFW SSC and their occupied habitat, and imperiled natural communities (those that have are G2/S2) (NatureServe 2023)
- Category 3: Vulnerable natural communities that are G3/S3 (NatureServe 2023), sensitive local native resources, and oak woodlands
- Category 4: Apparently secure natural communities that are G4/S4 (NatureServe 2023), secure natural communities that are G5/S5 (NatureServe 2023), and CRPR 4 species
- Category 5: All other lands including those dominated by non-native vegetation, agricultural fields, hedges, early successional vegetation that has yet to form into a distinct natural community, cleared or disturbed areas, and non-native trees and shrubs.

On-Site Preservation for Significant Ecological Areas Conditional Use Permit CUP

To evaluate the appropriate location and mechanism for preserved natural open space, County staff will first need to determine whether an adequate amount of suitable habitat is present on site. Projects that do not have an adequate amount of suitable habitat available to protect on-site will need to provide any necessary natural open space preservation off site. Mitigation areas that fall short of SEA recommended mitigation ratios may be given added conservation value should they possess the following characteristics (County Planning 2020):

> "Added value" can be given to proposed natural open space areas if they also contain unique or valuable habitat linkage resources, additional special-status species, surface waters, or sensitive habitats, etc. Proposed open-space with such added-value characteristics may be allowed to be smaller than the area that would typically be required and still be determined to be consistent with the SEA Program goals subject to the discretion of the Department and a determination of consistency with the SEA Findings by SEATAC."

Table 1 lists the recommended preservation ratios for impacts to SEA Resources Categories for projects that require a Conditional Use Permit.

Table 1. Recommended[1] Preservation Ratios for SEA CUP

SEA Resources	Preservation Ratio
Category 1 • State or federally listed species and their habitats • California Rare Plant Ranks 1,2,3 • Natural communities ranked G1/S1 • Water resources (e.g., wetlands, streams, ponds, lakes, vernal pools, marshes) • Beach and dune	5:1
Category 2 • Natural communities ranked G2/S2 • Species of Special Concern and their habitats	4:1
Category 3 • Natural communities ranked G3/S3 • Oak woodland • Sensitive local native resources • Rock outcrops/rocklands	3:1
Category 4 • Natural communities ranked G4/S4/G5/S5 • California Rare Plant Rank 4 • Non-native grasslands	2:1
Category 5 • Wildlife linkage or corridor or open space buffer	1:1

Source: County Planning 2020.
Note: SEA = Significant Ecological Area; G = Global; S = State.
[1] Ratios are provided as a starting point. With a discretionary Conditional Use Permit, these ratios can be changed based on-site specific factors and Significant Ecological Area Technical Advisory Committee recommendations, to the satisfaction of the Hearing Officer or Commission.

SEA Protected Trees

The SEA Ordinance includes 60 tree species to be protected in addition to already protected oak trees (County Planning 2020). The SEA Protected Tree List specifies the species of tree protected in each individual SEA and the size of the tree when regulations are applied. A Protected Tree Permit from the County shall be required for development that complies with Section 22.102.090 (SEA Development Standards) except for Subsection 22.102.090.B (SEA Protected Trees) of the County Code, and which includes any of the following impacts:

1. Pruning or trimming of branches of SEA Protected Trees in excess of 2 inches in diameter or 25% of live foliage for one or more trees;
2. Encroachments of up to 30% into an SEA Protected Tree's protected zone; any encroachment of more than 30% into the protected zone of a tree shall be considered as a tree removal
3. Removal of up to two SEA Protected Trees that are not designated as heritage trees (single trunk that measures 36 inches or more in diameter, or two trunks that collectively measure 54 inches or more in diameter)
4. Tree relocation poses significant risk to the health or survival rate of a tree. Any relocation of an SEA Protected Tree shall, therefore, be processed as a removal

2.3.3 County of Los Angeles Oak Tree Ordinance

County Code, Chapter 22.174- Oak Tree Permits, was established for the following reasons:

> (a) to recognize oak trees as significant historical, aesthetic, and ecological resources, and as one of the most picturesque trees in Los Angeles County, lending beauty and charm to the natural and manmade landscape, enhancing the value of property, and the character of the communities in which they exist; and (b) to create favorable conditions for the preservation and propagation of this unique, threatened plant heritage, particularly those trees which may be classified as heritage oak trees, for the benefit of current and future residents of the County. It is the intent of the Oak Tree Permit to maintain and enhance the general health, safety, and welfare by assisting in counteracting air pollution and in minimizing soil erosion and other related environmental damage.

The County requires permits prior to removing or damaging oaks unless subject to exemptions (e.g., emergency, utility maintenance, and tree maintenance, and for trees planted in road rights-of-way to maintain line-of-site or to relocate trees causing damage to roadway improvements). Otherwise, in unincorporated areas, native oak trees that are at least 8 inches in diameter (or, for trees with multiple trunks with a combined diameter measuring at least 12 inches) at 4.5 feet above grade, shall not be cut, destroyed, removed, relocated, or damaged, unless an oak tree permit is first obtained as provided in the ordinance. The ordinance also extends to include encroachment with the protected zone of such trees. The “protected zone,” is that area within the dripline of an oak tree and extending therefrom to a point at least 5 feet outside the dripline, or 15 feet from the trunks of a tree, whichever distance is greater.

2.3.4 Los Angeles County Oak Woodlands

In response to regulations enacted by the State of California (California Public Resources Code, Section 21083.4), the County adopted the Los Angeles County Oak Woodlands Conservation Management Plan (August 23, 2011; County Planning 2011) and drafted the Oak Woodlands Conservation Management Plan Guide (March 18, 2014; County Planning 2014) as an implementing document for the Oak Woodlands Conservation Management Plan. The purpose of the regulations and the adopted Oak Woodlands Conservation Management Plan is to determine whether the development of a proposed project “may result in a conversion of oak woodlands that will have a significant effect on the environment” (County Planning 2011). Should the proposed project result in loss of oak woodlands, the County requires mitigation measures to offset the losses.

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3 Methods

Glenn Lukos Associates (GLA) was retained by the Project applicant to provide the biological resources field effort and analysis for the Project and off-site areas where brush thinning may occur (collectively identified as the "Study Area". GLA conducted a literature/database review, initial site reconnaissance, protocol/focused surveys for special-status species, protected tree surveys, and a jurisdictional waters delineation. Dudek was then chosen to finalize the report preparation, conducted a reconnaissance survey of the site to ensure conditions had not changed, and conducted additional protected tree surveys and analysis.

3.1 Literature/Database Review

Prior to conducting fieldwork, pertinent literature on the flora of the region was examined. A thorough archival review was conducted using available literature and other historical records. These resources included the following:

- California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California for the USGS 7.5' topographic quadrangles: Canoga Park, Calabasas, Mint Canyon, Newhall, Oat Mountain, San Fernando, Simi Valley East, Val Verde, and Van Nuys, California (online edition, v8-03 0.39) (CNPS 2022);
- CNDDB for the USGS 7.5' topographic quadrangles: Canoga Park, Calabasas, Mint Canyon, Newhall, Oat Mountain, San Fernando, Simi Valley East, Val Verde, and Van Nuys, California (CDFW 2022); and
- Review of the results of past focused species surveys conducted for a prior project at the site: Biological Resources of Lyons Canyon Ranch, Newhall, California (David Magney Environmental Consulting (DMEC) 2006; The Lyons Canyon Ranch Project (TTN 63653): Rare Plant Survey Update, 2015 Results (Rincon Consultants, Inc. (Rincon Consultants) 2015a; Summary Report of Focused Presence/Absence Surveys for the Lyons Canyon Ranch Project (TTN 63653), Santa Clarita Area, Unincorporated Los Angeles County, California (Rincon Consultants 2015b); and Least Bell's Vireo Focused Survey Report, Lyons Canyon Ranch Project, Los Angeles County, California (Rincon Consultants 2015c).

3.2 Field Effort

GLA conducted surveys on the Project site from May 2020 through April 2022 that consisted of 55 survey days. Dudek conducted one survey in January 2023 and one in February 2023 to determine if there had been any changes to on-site biological resources that GLA had documented and update tree survey data, as well as to conduct a general biological survey for Project-associated off-site improvements. Table 2 provides a summary list of survey dates, survey types and personnel.

Table 2. Summary of Biological Surveys for the Project

Survey Type	Survey Dates	Personnel[1]
General Biological Survey	2020: 5/22 and 8/24	CW, DM, ZW
Vegetation Mapping	2020:8/24 and 9/22	CW, JV, ZW
Protected Tree Mapping	2020: 8/24, 8/27, 9/22, 9/30, 10/19, 10/21, 12/1, and 12/3	CW, JF, JS
Jurisdictional Delineation	2020: 9/22 and 9/30	CW, TP, ZW

Table 2. Summary of Biological Surveys for the Project

Survey Type	Survey Dates	Personnel[1]
Burrowing Owl	2021: 4/10, 5/6, 6/22, and 7/13	DS, JF
Coastal California Gnatcatcher	2021: 4/26, 5/3, 5/10, 5/17, 5/24, and 6/2	KL
Bumble Bee	2021: 4/19 and 6/3	JA, JF, SC
Least Bell's Vireo	2021: 4/18, 4/29, 5/10, 5/20, 6/4, 6/19, 7/9, and 7/17	JA, JF
Southwestern Willow Flycatcher	2021: 5/20, 6/4, 6/19, 7/9, and 7/17	JA
Special-status Bats	2021: 4/19, 7/14, and 7/19	JA, SC
Special-status Plants	2021: 2/11, 4/16, 4/18, 4/19, 4/20, 4/29, 5/6, 5/10, and 5/19; 2022: 3/16, 4/6, 4/27, and 4/28	CW, JA, JF, JS, JV, SC
General Biological Survey	2023: 1/12	MC
Tree Survey	2023: 2/7	AC, ST
Tree Inventory Update	2023: June and July	AC, AP, CK, KB, JL, ST

Notes: [1] AC = Aida Castro (Dudek), AP = Anna Pfleeger (Dudek), CK = Christopher Kallstrand (Dudek), CW = Chris Waterston, DM = David Moskovitz, DS = David Smith, JA = Jeff Ahrens, JL = Jannette Ly (Dudek), JF = Jason Fitzgibbon, JS = Jillian Stephens, JV = Joseph Vu, KB = Katrina Burritt (Dudek), KL = Kevin Livergood, MC = Michael Cady (Dudek), ST = Sarah Tian (Dudek), SC = Stephanie Cashin, TP = Thienan Pfeiffer, ZW = Zack West

3.2.1 Vegetation Mapping

Vegetation communities within the Project site were mapped according to the List of Vegetation Alliances and Associations (or Natural Communities List). The list is based on A Manual of California Vegetation, Second Edition (Sawyer et al. 2009), which is the California expression of the National Vegetation Classification. Where necessary, refinements were made when areas did not fit into exact habitat descriptions (i.e., the Manual of California Vegetation, Second Edition "Membership Rules"). These vegetation communities were named based on the dominant plant species present, and were mapped to account for the SEA allowable disturbance thresholds, which included the following:

- SEA Resource Category 1 (vegetation communities ranked G1 or S1)–no disturbance allowance
- SEA Resource Category 2 (vegetation communities ranked G2 or S2)–less than or equal to 500 square feet
- SEA Resource Category 3 (vegetation communities ranked G3 S3)–less than or equal to 500 square feet
- SEA Resource Category 4 (vegetation communities ranked G4/G5 S4/S5)–less than or equal to 5,000 square feet. Plant communities were mapped in the field directly onto a 200-scale (1" =200') aerial photograph
- SEA Resource Category 5- does not include a disturbance threshold

3.2.2 General Wildlife Surveys

Wildlife species were evaluated and detected during field surveys by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the entire Project site by direct observation, including the use of binoculars. Observations of physical evidence and direct sightings of wildlife were recorded in field notes during the visit. Scientific nomenclature and common names for vertebrate species referred to in this report follow the Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFW 2016), Standard Common and Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians 6th Edition, Collins and Taggert (2009) for amphibians and reptiles, and the American Ornithologists' Union (AOU)

Checklist 7th Edition (AOU 2009) for birds. The methodology (including any applicable survey protocols) utilized to conduct general surveys, habitat assessments, and/or focused surveys for special-status wildlife are included below.

3.3 Special-Status Resources

Individual plants and wildlife species are evaluated in this report based on their "special-status." For this report, plants were considered "special-status" based on one or more of the following criteria:

- Listing through federal Endangered Species Act (FESA) or California Endangered Species Act (CESA);
- Occurrence in the CNPS Rare Plant Inventory (Rank 1A/1B, 2A/2B, 3, or 4);
- Occurrence in the CNDDB inventory; and
- Designated as an SEA protected species.

Wildlife species were considered "special-status" based on one or more of the following criteria:

- Listing through the FESA or CESA;
- Designation by the State as a Species of Special Concern (SSC) or California Fully Protected (CFP) species; and
- Avian species identified on the Los Angeles County Sensitive Bird List.

Vegetation communities and habitats were considered "special-status" based on one or more of the following criteria:

- Global (G) or State (S) ranking of category 1, 2, or 3 based on CDFW (see Section 3.2.2 below for further explanation); and
- Riparian habitat.

A site-specific survey program was designed to accurately document the botanical resources within the Project site, and consisted of six components: (1) a literature search; (2) preparation of a list of target special-status plant species and sensitive vegetation communities that could occur within the Project site; (3) general field reconnaissance surveys; (4) vegetation mapping according to the List of Vegetation Alliances and Associations; (5) habitat assessments, and (6) focused surveys for special-status plants, completed during the 2021 and 2022 spring/summer blooming periods.

Based upon the literature/database review, GLA biologists David Moskovitz and Zack West conducted habitat assessments for special-status wildlife species on May 22, 2020, and a follow up visit was conducted by GLA biologists Chris Waterston and Zack West on August 24, 2020. An aerial photograph, soil map and/or topographic map were used to determine the community types and other physical features that may support special-status and uncommon taxa within the Project site.

Focused surveys for special-status plant and wildlife species were conducted for the Project site during the 2021 and 2022 spring and summer survey season.

3.3.1 Focused Surveys for Special-Status Wildlife Species

Burrowing Owl

GLA conducted focused surveys for the burrowing owl (*Athene cunicularia*) for all suitable habitat areas within the Project site during the 2021 breeding season survey period (February 15 through July 15), as shown in Table 3. Surveys were conducted in accordance with survey guidelines described in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). The guidelines stipulate that four focused survey visits should be conducted between February 15 and July 15, with the first visit occurring between February 15 and April 15. The remaining three visits should be conducted three weeks apart from each other, with at least one visit occurring between June 15 and July 15. As recommended by the survey guidelines, the survey visits were conducted between morning civil twilight and 10:00 AM, and/or between two hours before sunset and evening civil twilight, when weather conditions during the surveys are conducive to a high level of bird activity.

Surveys were conducted by walking meandering transects throughout areas of suitable habitat. Transects were spaced between 7 meters and 20 meters apart, adjusting for vegetation height and density, to provide adequate visual coverage of the survey areas. At the start of each transect, and at least every 100 meters along transects, the survey area was scanned for burrowing owls using binoculars. All suitable burrows were inspected for diagnostic owl sign (e.g., pellets, prey remains, whitewash, feathers, bones, and/or decoration) to identify potentially occupied burrows.

Table 3. Summary of Burrowing Owl Surveys

Survey Date	Biologist	Start/End Time	Start/End Temperature (°F)	Wind Speed (mph)	Cloud Cover
4/10/21	Jason Fitzgibbon	0624-0900	52/67	0-4	Clear
5/6/21	Jason Fitzgibbon	0645-0910	57-63	3-4	Clear
6/22/21	Jason Fitzgibbon	0535-0900	67-73	0-4	Clear
7/13/21	David Smith	0540-0850	68-84	0-2	Clear

Coastal California Gnatcatcher

GLA conducted focused surveys for the coastal California gnatcatcher (*Polioptila californica californica*) for all suitable habitat areas within the Project site during the 2021 breeding season survey period (March 15 through June 30), with all survey activities conducted by permitted biologist Kevin Livergood (TE-172638-2). Surveys were conducted in accordance with the 1997 USFWS survey guidelines, which during the breeding season (March 15 through June 30) require a minimum of six surveys (per 80-acre habitat polygon) with at least one week separating each survey visit. Pursuant to the survey guidelines, the surveys were conducted between sunrise and 12:00 PM when weather conditions during the surveys are conducive to a high level of bird activity, as shown in Table 4.

Table 4. Summary of Coastal California Gnatcatcher Surveys

Survey Date	Biologist	Start/End Time	Start/End Temperature (°F)	Wind Speed (mph)	Cloud Cover
4/26/21	Kevin Livergood	0745-1200	52/61	2-5	90/80
5/3/21	Kevin Livergood	0750-1200	59/81	2-9	Clear
5/10/21	Kevin Livergood	0745-1200	58/70	2-6	100/Clear
5/17/21	Kevin Livergood	0830-1200	59/66	2-6	50/10
5/24/21	Kevin Livergood	0830-1200	69/84	4-8	Clear
6/2/21	Kevin Livergood	0800-1200	70/84	1-6	Clear

Least Bell's Vireo

GLA conducted focused surveys for the least Bell's vireo (*Vireo bellii pusillus*) for all suitable habitat areas within the Project site during the 2021 survey period, as shown in Table 5. Surveys were conducted in accordance with the USFWS survey guidelines (USFWS 2001), which stipulate eight surveys should be conducted between April 10 and July 31, with a minimum of ten days separating each survey visit. Pursuant to the survey guidelines, the surveys were conducted between sunrise and 11:00 AM, when weather conditions are conducive to a high level of bird activity.

Table 5. Summary of Least Bell's Vireo Surveys

Survey Date	Biologist	Start/End Time	Start/End Temperature (°F)	Wind Speed (mph)	Cloud Cover
4/18/21	Jason Fitzgibbon	0845/1100	70/88	7-12/7-12	Clear
4/29/21	Jason Fitzgibbon	0545/0900	56/68	2-3/2-3	Clear
5/10/21	Jason Fitzgibbon	0843/1100	63/74	1-5/1-5	Partly Cloudy-Clear
5/20/21	Jeff Ahrens	0700/1100	54/80	1-2/2-3	Clear
6/4/21	Jeff Ahrens	0630/1040	61/75	2-4/1-3	Clear
6/19/21	Jeff Ahrens	0625/1035	64/77	0-1/1-2	Partly Cloudy
7/9/21	Jeff Ahrens	0630/1040	67/85	2-3/2-3	Clear
7/17/21	Jeff Ahrens	0625/1030	63/80	1-3/1-2	Mostly Clear

Southwestern Willow Flycatcher

GLA conducted focused surveys for the southwestern willow flycatcher (*Empidonax traillii extimus*) for all suitable habitat areas within the Project site during the 2021 survey period, as shown in Table 6. Surveys were conducted in accordance with the USFWS approved survey guidelines (Sogge et al. 2010), which stipulate five surveys should be conducted between May 15 and July 17, divided into three survey periods. The southwestern willow flycatcher is one of four subspecies of willow flycatcher that occur within southern California but is the only subspecies that breeds in southern California. The other subspecies may occur in southern California during the first and second

surveys periods as they migrate through the area onwards to breeding areas but will not breed in southern California. Therefore, the presence of the southwestern willow flycatcher is determined by willow flycatchers that remain in southern California during the third survey period. Pursuant to the survey guidelines, the surveys were conducted between sunrise and 11:00 a.m. when weather conditions during the surveys are conducive to a high level of bird activity.

Table 6. Summary of Southwestern Willow Flycatcher Surveys

Survey Date	Biologist	Start/End Time	Start/End Temperature (°F)	Wind Speed (mph)	Cloud Cover
5/20/21	Jeff Ahrens	0700/1100	54/80	1-2/2-3	Clear
6/4/21	Jeff Ahrens	0630/1040	61/75	2-4/1-3	Clear
6/19/21	Jeff Ahrens	0625/1035	64/77	0-1/1-2	Partly Cloudy
7/9/21	Jeff Ahrens	0630/1040	67/85	2-3/2-3	Clear
7/17/21	Jeff Ahrens	0625/1030	63/80	1-3/1-2	Mostly Clear

Crotch Bumble Bee

GLA biologists performed focused surveys for the Crotch bumble bee (*Bombus crotchii*; CBB) within suitable habitat areas within the Project site during the 2021 survey period. Surveys followed a protocol developed by GLA, which largely encompasses the CBB flight season (March to September) when the queen, daughters, males, and new queens are generally active (The Xerces Society 2018). Surveys are preferably spaced out throughout the flight season to take advantage of different blooming periods and floral resources. The survey protocol recommends conducting three focused survey visits during the flight season, beginning within the three acres of habitat that contain the highest quality floral resources per every 50 acres of potential suitable habitat.

During each focused survey, two sampling approaches were implemented. During the first phase, the surveyor conducted one hour of visual survey effort within the three-acre flowering area identified as supporting the highest quality habitat as determined by the surveyor. If CBB were not detected during the first hour of searching, a second hour of survey effort was conducted. During the second hour, the surveyor could either choose to resurvey the same flowering area (if any Bombus species are detected prior) or the surveyor could choose to conduct a second hour of searching within another high quality three-acre flowering area on site. If CBB were not detected during the second hour of the survey effort, the second survey phase was implemented, in which the surveyor surveyed the best additional flowering areas throughout the site, as deemed appropriate. The surveyor scanned suitable flowering areas for bumble bee activity and focused on those areas. Minimal time was spent in lesser quality habitat. Depending on the size of the habitat area, the opportunistic survey effort generally did not exceed one hour. In addition, GLA biologists documented any bumble bee activity incidentally observed during all other biological surveys.

Pursuant to the survey guidelines, the surveys were conducted between an hour after sunrise up until two hours before sunset, as shown in Table 7, during times when weather conditions during the surveys are conducive to a high level of bee activity. The survey protocol recommends conducting three focused survey visits during the flight season; however, surveys were concluded after two survey visits, as the availability of suitable floral habitat resources had terminated for the flight season because of below average rainfall.

Table 7. Summary of Crotch Bumble Bee Surveys

Survey Date	Biologist[1]	Start/End Time	Start/End Temperature (°F)	Wind Speed (mph)	Cloud Cover
4/19/21	JA, JF	1312/1706	91/93	3/4	Clear
6/3/21	SC	0830/1130	72/84	4/9	Clear

Notes: [1] JA = Jeff Ahrens, JF = Jason Fitzgibbon, SC = Stephanie Cashin

Special-Status Bat Species

GLA biologists conducted focused bat surveys within the Project site during the 2021 survey period, as shown in Table 8. Prior to and continuing during the course of the focused surveys, diurnal roost assessments were conducted throughout the Project site to identify potential natural roosting habitat (e.g., rocky outcroppings, cliffs, trees with cavities, trees with loose bark, dead trees, riparian trees, palm trees, etc.) and man-made roosting structures (e.g., structures, roof tiles, openings below ground including wells, etc.) that could support roosting on site, including diurnal, nocturnal, hibernacula, and maternity roosts. Inspection of potential roost areas included a search for evidence of occupation including urine staining, guano or culled insect concentrations, audible social bat vocalizations, and odors often associated with occupied roosts. Those trees and/or structures identified as having the greatest potential of supporting roosting bats were the focus during emergence surveys.

Surveys incorporated a combination of acoustic and emergence (out flight or exit) surveys. Biologists utilized a thermal imager attached to an iPhone or iPad to assist in detecting heat signatures of bats within and exiting potential roost areas. Spotlights were used to aid in visual identification of bat species. In addition, ultrasonic acoustic recording devices were deployed throughout the Project site, with some devices remaining in a passive setting to collect ultrasonic recordings for more than 10 consecutive days. All acoustic data was recorded in full spectrum and was processed and analyzed with Sonobat 4.2.2 bat call analysis software using the California Southwest classifier for species identification. All acoustic calls were manually reviewed and vetted using multiple Sonobat acoustic reference libraries and reference materials.

Table 8. Summary of Special-Status Bat Surveys

Survey Date	Biologist[1]	Start/End Time	Start/End Temperature (°F)	Wind Speed (mph)	Cloud Cover
4/19/21	JA, JF	1939/2156	88/67	4/2	Clear
7/14/21	JA, SC	1800/2300	88/74	3/1	Clear
7/19/21	JA	1800/1045	92/80	2/3	Clear

Notes: [1] JA = Jeff Ahrens, JF = Jason Fitzgibbon, SC = Stephanie Cashin

3.3.2 Protected Tree Mapping

GLA mapped and collected tree attribute information for all Protected Trees within and immediately adjacent to the survey area. This data collection and mapping took place over the course of eight days in August, September, October, and December of 2020. The survey methodology consisted of walking throughout the survey area to identify the species of each individual tree and measure the diameter at breast heigh (DBH). If the tree species met the requirements for protection under Los Angeles County's SEA Ordinance, then the location of that tree was mapped using the ArcGIS Collector Application for iOS on a mobile device with submeter accuracy, and tree attribute

data was collected included species, single or multi-trunk individual, trunk DBH, structural conditions, canopy health, and general health rating. Upon completion of field data collection and mapping, raw data was post-processed and individual tree location data was compiled and updated utilizing Geographic Information System (GIS) technology. The digital tree locations were linked to individual tree identification numbers and associated tree attribute data. These data were then analyzed to evaluate tree impacts.

Dudek conducted an additional field survey to collect additional tree data on February 7, 2023, and total tree inventory in June and July 2023. The methodology and results are included in Appendix A, Significant Ecological Area Protected Tree Report.

3.4 Jurisdictional Waters Delineation

Prior to beginning the field delineation of potential jurisdictional waters, a color aerial photograph, a topographic base map of the property, the previously cited USGS topographic map, and a soils map were examined by GLA to determine the locations of potential areas of USACE, RWQCB, and CDFW jurisdiction. Suspected jurisdictional areas were field checked for evidence of stream activity and/or wetland vegetation, soils, and hydrology. Where applicable, reference was made to the 2008 Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (OWHM Manual) to identify the width of USACE jurisdiction and suspected federal wetland habitats on the site were evaluated using the methodology set forth in the USACE's 1987 Wetland Delineation Manual (Wetland Manual) and the 2008 Regional Supplement to the USACE of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement). Reference was also made to the 2019 State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Board Wetland Definition and Procedures) to identify suspected State wetland habitats. While in the field the potential limits of jurisdiction were recorded with a sub-meter Trimble GPS device in conjunction with a color aerial photograph using visible landmarks. Other data were recorded onto the appropriate datasheets.

4 Results

Representative photos of the Study Area and the biological resources described in this chapter are included in Appendix B. A plant compendium is included as Appendix C and a wildlife compendium is included as Appendix D.

4.1 Vegetation Communities and Land Covers

During vegetation mapping of the Project site, nineteen different vegetation alliances/land cover types were identified. Table 9 provides a summary of vegetation alliances/land cover types and the corresponding acreage on the Project site and in the off-site brush thinning zones, and Figure 4, Vegetation Communities and Land Covers. It should be noted that most of the Project site burned in the 2016 Sage Fire. As such, the communities within the fire perimeter are still recovering and shrub and tree density are lower than is typical. This has resulted in the interspatial areas consisting of a mix of native and non-native herbaceous annuals and non-native grasses.

Table 9. Vegetation Communities and Land Covers in the Study Area

Common Name	Alliance[1]	Ranking[2] (Global/State)	SEA Category	Acreage
Project Site				
Forest and Woodland Alliances				
California walnut grove	*Juglans californica* Forest and Woodland	G3/S3.2	3	0.09
Coast live oak woodland and forest	*Quercus agrifolia* Forest and Woodland	G5/S4	3	22.66
Goodding's willow–red willow riparian woodland and forest	*Salix gooddingii–Salix laevigata* Forest and Woodland	G4/S3	3	1.24
			Sub-Total:[3]	*24.00*
Shrubland and Grassland Alliances				
Chamise chaparral	*Adenostoma fasciculatum* Shrubland	G5/S5	4	96.62
Disturbed chamise chaparral	*Adenostoma fasciculatum* Shrubland–Disturbed	G5/S5	4	9.73
California sagebrush–(purple sage) scrub	*Artemisia californica–Salvia leucophylla* Shrubland	G5/S5	4	28.40
Disturbed California sagebrush–(purple sage) scrub	*Artemisia californica–Salvia leucophylla* Shrubland–Disturbed	G5/S5	4	10.66
Wild oats and annual brome grasslands	*Avena* spp.–*Bromus* spp. Herbaceous Semi-natural	NA/NA	4	2.62
Mulefat thickets	*Baccharis salicifolia Shrubland*	G4/S4	4	2.95
Upland mustards or star-thistle fields	*Brassica nigra–Centaurea melitensis* Herbaceous Semi-natural Stands	NA/NA	5	50.62
Salt grass flats	*Distichlis spicata* Herbaceous	GNR/S4	4	0.13

Table 9. Vegetation Communities and Land Covers in the Study Area

Common Name	Alliance[1]	Ranking[2] (Global/State)	SEA Category	Acreage
Palmer's goldenbush scrub	*Ericameria palmeri* Provisional Shrubland	G3/S3	3	0.67
Thick-leaf yerba santa scrub	*Eriodictyon crassifolium* Provisional Shrubland	G3/S3	3	0.83
*Davidson's wild buckwheat/doveweed annual grassland	*Eriogonum davidsonii/Croton setiger* Grassland	NA/NA	4	0.97
California buckwheat scrub	*Eriogonum fasciculatum* Shrubland	G5/S5	4	2.26
Needle grass–melic grass grassland	*Nassella (Stipa)* spp.–*Melica* spp. Herbaceous	G3G4/S3S4	3	0.07
Basket bush–river hawthorn–desert olive patches	*Rhus trilobata–Crataegus rivularis–Forestiera pubescens* Shrubland	G4/S3.2	3	0.03
			Sub-Total:[3]	*206.57*
Non-Vegetated Land Cover				
Developed land	NA	NA/NA	NA	2.92
			Project Site Total[3]	**233.49**
Off-site				
Forest and Woodland Alliances				
Coast live oak Woodland and Forest	*Quercus agrifolia* Forest and Woodland	G5/S4	3	1.58
Shrubland and Grassland Alliances				
Chamise chaparral	*Adenostoma fasciculatum* Shrubland	G5/S5	4	0.63
Upland mustards or star-thistle fields	*Brassica nigra–Centaurea melitensis* Herbaceous Semi-natural Stands	NA/NA	5	1.24
California buckwheat scrub	*Eriogonum fasciculatum* Shrubland	G5/S5	4	1.33
Basket bush–river hawthorn–desert olive patches	*Rhus trilobata–Crataegus rivularis–Forestiera pubescens* Shrubland	G4/S3.2	3	0.01
			Sub-Total[3]	*4.78*
Non-Vegetated Land Cover				
Developed land	NA	NA/NA	NA	1.38
			Off-site Total[3]	**6.17**
			Project and Off-site Total[3]	**239.66**

Notes: SEA = Significant Ecological Area; NA = not applicable.

1 The term semi-natural stands vs. alliance is used in the Manual of California Vegetation to distinguish between natural vegetation communities and vegetation types dominated by non-native plants (Sawyer et al. 2009).

2 The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2023): 1 = critically imperiled; 2 = imperiled; 3 = vulnerable to extirpation or extinction; 4 = apparently secure; 5 = demonstrably widespread, abundant, and secure; GNR = Global rank not yet assessed.

3 Totals may not sum due to rounding

[4] Indicates a vegetation alliance which is not recognized by, and a comparable alliance is not described by the Manual of California Vegetation, Second Edition. This alliance was developed based upon species representing dominants for this community with the Project site.

4.1.1 Forest and Woodland Alliances

Juglans californica Forest and Woodland Alliance

Juglans californica forest and woodland alliance, with Southern California black walnut (*Juglans californica*) as the dominant species within the tree canopy, is in the southern portion the site. The alliance has a G3/S3.2 rarity ranking, which means it a sensitive vegetation community. The membership rules for the alliance include the following: (1) California walnut represents greater than 50% relative cover in the tree canopy or greater than 30 % relative cover if coast live oak is present.

Quercus agrifolia Woodland Alliance

Quercus agrifolia woodland alliance, with coast live oak (*Quercus agrifolia*) as the dominant species within the tree canopy, is interspersed throughout the site. The alliance has a G5/S4 rarity ranking. The membership rules for the alliance include the following: (1) coast live oak represents greater than 50% relative cover in the tree canopy and if California bay (*Umbellularia californica*) is present, it represents less than 33% relative cover in the tree canopy; and (2) coast live oak represents greater than 60% relative cover in the tree canopy.

Salix gooddingii–Salix laevigata Forest and Woodland Alliance

Salix gooddingii-Salix laevigata forest and woodland alliance is in the southwestern portion of the site. The alliance has a rarity ranking of G4/S3. The membership rules for the alliance include the following: (1) red willow (*Salix laevigata*) represents greater than 50% relative cover in the tree canopy; (2) red willow represents greater than 5% absolute cover and is typically a dominant species in the tree canopy; may be a co-dominant species in the tree canopy with California buckeye (*Aesculus californica*), incense cedar (*Calocedrus* decurrens), foothill pine (*Pinus sabiniana*), or oak species (*Quercus* spp.); and (3) red willow represents 50% relative cover in the tree canopy, or greater than 30% relative cover with other tree willows and often with arroyo willow (*Salix lasiolepis*) in the sub-canopy.

4.1.2 Shrubland and Grassland Alliances

Adenostoma fasciculatum Shrubland Alliance

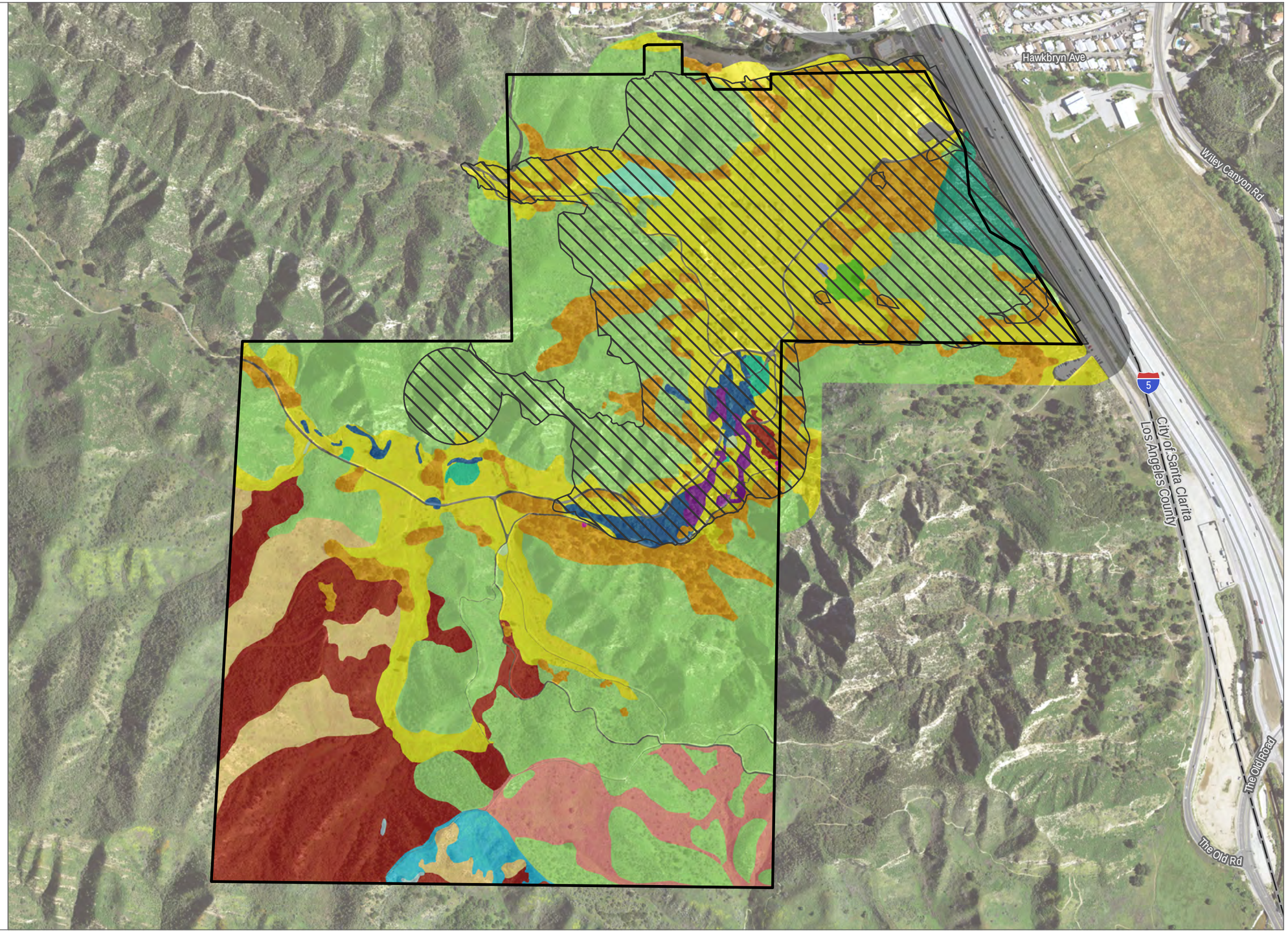
Adenostoma fasciculatum shrubland alliance is located on hillsides throughout the Project site. The alliance has a G5/S5 rarity ranking. The membership rules for the alliance include the following: (1) chamise (*Adenostoma fasciculatum*) represents greater than 50% relative cover in the shrub canopy when codominant with red shank (*Adenostoma sparsifolium*), manzanita (*Arctostaphylos glauca*; *A. glandulosa*), and ceanothus (*Ceanothus crassifolius*; *C. cuneatus*; *C. greggii*); and (2) chamise has greater than 60% relative cover in the shrub canopy.

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- Project Boundary
- Project Development Footprint
- City Boundary

Vegetation Communities and Land Covers

- Adenostoma fasciculatum Shrubland Alliance - Category 4
- Adenostoma fasciculatum Shrubland Alliance - Disturbed - Category 4
- Artemisia californica - Salvia leucophylla Shrubland Alliance - Category 4
- Artemisia californica - Salvia leucophylla Shrubland Alliance - Disturbed - Category 4
- Avena spp. - Bromus spp. Herbaceous Semi-natural Alliance - Category 4
- Baccharis salicifolia Shrubland Alliance - Category 4
- Brassica nigra - Centaurea melitensis Herbaceous Semi-natural Stands
- Distichlis spicata Herbaceous Alliance - Category 4
- Ericameria palmeri Provisional Shrubland Alliance - Category 3
- Eriodictyon crassifolium Provisional Shrubland Alliance - Category 3
- Eriogonum davisonii/Croton setiger Grassland Alliance - Category 4
- Eriogonum fasciculatum Shrubland Alliance - Category 4
- Juglans californica Forest and Woodland Alliance - Category 3
- Nassella [Stipa] spp. - Melica spp. Herbaceous Alliance - Category 3
- Quercus agrifolia Forest & Woodland Alliance - Category 3
- Rhus trilobata - Crataegus rivularis - Forestiera pubescens Shrubland Alliance - Category 3
- Salix Gooddingii - Salix laevigata Forest & Woodland Alliance - Category 3
- Developed



SOURCE: NAIP 2020, Open Streets Map 2019, Glen Lukos & Associates 2022

DUDEK

0 250 500 Feet

FIGURE 4

Vegetation Communities and Land Covers

Trails at Lyons Canyon Project

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This vegetation alliance appears to be the most heavily affected by the Sage Fire, which burned most of the Project site in 2016. As such, this vegetation is in an early seral stage of recovery, with much of the chamise on site occurring as basal resprouts, with fire-following species such as deerweed (*Acmispon glaber*) and chaparral mallow (*Malacothamnus fasciculatus*) currently occupying the interstitial areas between resprouts. Limited areas of this vegetation alliance within the Project site support a predominance of chamise, though mixed with patches of other chaparral species including black sage (*Saliva mellifera*), toyon (*Heteromeles arbutifolia*), and scrub oak (*Quercus berberidifolia*).

Adenostoma fasciculatum Shrubland Alliance–Disturbed

Adenostoma fasciculatum shrubland alliance-disturbed, which is a subset of the *Adenostoma fasciculatum* shrubland alliance, is located on hillsides along the southern portion of the Project site. This vegetation alliance has been extremely heavily affected by the Sage Fire, which burned most of the Project site in 2016. As such, this vegetation is in an early seral stage of recovery, with much of the chamise on site occurring as basal resprouts, but instead of pioneering fire-following native species, the interstitial areas are vegetated with non-natives, such as slender wild oat (*Avena fatua*), bromes (*Bromus* spp.), tocalote (*Centaurea melitensis*), and black mustard (*Brassica nigra*).

Artemisia californica–Salvia leucophylla Shrubland Alliance

Artemisia californica shrubland alliance is in the southern portion of the Project site. The *Artemisia californica* shrubland alliance has a G5/S5 rarity ranking. The membership rules for the alliance include the following: (1) California sagebrush (*Artemisia californica*) represents greater than three times cover of coyote brush (*Baccharis pilularis*) and other shrub species; (2) California sagebrush represents greater than 60% relative cover in the shrub canopy; (3) California sagebrush has greater than 60% relative cover in the shrub canopy, or laurel sumac (*Malosma laurina*) or orange bush monkeyflower (*Diplacus aurantiacus*) sometimes have greater than 30% relative cover; and (4) both California sagebrush and California buckwheat (*Eriogonum fasciculatum*) represent 30% to 60% relative cover in the shrub layer.

Artemisia californica–Salvia leucophylla Shrubland Alliance-Disturbed

Artemisia californica shrubland alliance–disturbed, which is a subset of the *Artemisia californica* shrubland alliance, is in the southern portion of the Project site. This vegetation alliance has been extremely heavily affected by the Sage Fire, which burned most of the Project site in 2016. As such, this vegetation is in an early seral stage of recovery, with occasional laurel sumac and broken stands of California sagebrush and purple sage. Much like the areas vegetated with the *Adenostoma fasciculatum* shrubland alliance-disturbed, the interstitial areas are vegetated with non-natives, such as bromes and occasional black mustard.

Avena spp.–*Bromus* spp. Semi-Natural Herbaceous Stands

Avena spp.–*Bromus* spp. semi-natural herbaceous stands are in the southern portion of the Project site. The community has not been assigned a global or state rarity ranking, as this alliance is not native to the region. The membership rules for the community include the following: (1) slender wild oat represents greater than 50% relative cover and native herbs are low in cover in the herbaceous layer; (2) wild oat (*Avena* spp.) represents greater than 50% relative cover and native herbs represent less than 10% relative cover in the herbaceous layer; (3) *Avena* spp. represents greater than 75% relative cover and other non-native plants represent less than 5% absolute cover, if present, in the herbaceous layer; (4) false brome (*Brachypodium distachyon*) represents greater than 60% relative

cover in the herbaceous layer; (5) ripgut brome (*Bromus diandrus*) represents greater than 60% relative cover, along with other non-natives, in the herbaceous layer and with a variety of annuals at low cover; (6) ripgut brome, soft chess (*Bromus hordeaceus*), and/or false brome represents greater than 80% relative cover separately or co-dominant with non-natives, and natives usually represent low or insignificant cover; (7) soft brome represents greater than 50% relative cover in the herbaceous layer; and (8) Avena spp., false brome, quaking grass (*Briza* spp.), bromes, filaree (*Erodium* spp.), and/or cat's-ear (*Hypochaeris* spp.) represent greater than 50% relative cover individually or in combination; and (9) *Avena* spp., false brome, quaking grass, bromes, filaree, and/or cat's-ear represent greater than 30% relative cover individually or share greater than 50% relative cover in the herbaceous layer.

Baccharis salicifolia Shrubland Alliance

Baccharis salicifolia shrubland alliance, located in the southern portion of the Project site. The alliance has a G4S4 rarity ranking. The membership rules for the alliance include the following: (1) mule fat (*Baccharis salicifolia*) represents greater than 30% relative cover in the shrub canopy with blue elderberry (*Sambucus nigra* [ssp. *caerulea*]); and (2) mule fat represents greater than 50% relative cover in the shrub canopy.

Brassica nigra/Centaurea melitensis–Semi-Natural Herbaceous Stands

Brassica nigra/Centaurea melitensis semi-natural herbaceous stands are interspersed throughout the Project site. The community has not been assigned a global or state rarity ranking, as this alliance is not native to the region. The membership rules for the community include the following: (1) black mustard, summer mustard (*Hirschfeldia incana*), radish (*Raphanus sativus*), or other mustards occur with non-native species at greater than 80% relative cover in the herbaceous layer, and mustards are the dominant herbs; (2) Geraldton carnation weed (*Euphorbia terracina*) represents 30% relative cover in the herbaceous layer with other non-natives, including black mustard; (3) Geraldton carnation weed or cardoon (*Cynara cardunculus*) represent 50% relative cover in the herbaceous layer with other non-natives including black mustard and ripgut grass; (4) tocalote represents greater than 90% relative cover with other non-natives in the herbaceous layer; (5) tocalote or yellow star-thistle (*Centaurea solstitialis*), along with false brome , represent greater than 90% relative cover in the herbaceous layer; (6) yellow star-thistle represents greater than 50% relative cover in the herbaceous layer; (7) yellow star-thistle represents greater than 90% relative cover with other non-natives in the herbaceous layer; and (8) black mustard, radish, Italian plumeless thistle (*Carduus pycnocephalus*), yellow star-thistle, or another non-native forb represent greater than 50% relative cover in the herbaceous layer.

Distichlis spicata Herbaceous Alliance

Distichlis spicata herbaceous alliance, as monotypic meadows of salt grass (*Distichlis spicata*), is located within the central portion of the Project site. The alliance has a GNR/S4 rarity ranking. The membership rules for the alliance include the following: (1) Salt grass represents greater than 30% relative cover in the herbaceous layer and glasswort (*Sarcocornia* spp.) or pickleweed (*Salicornia* spp.), if present, represent less than 30% relative cover; (2) salt grass represents greater than 50% relative cover in the herbaceous layer or salt grass represents higher cover than any other single grass species; (3) salt grass and/or Cooper's rush (*Juncus cooperi*) represent at least 30% relative cover with other herbs in the herbaceous layer; (4) southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) represent at greater than 50% relative cover in the herbaceous layer. This alliance may include lower cover of pickleweed, alkali heath (*Frankenia salina*), and other graminoids, including salt grass; (5) salt grass represents greater than 50% relative cover in the herbaceous layer; and (6) Salt grass represents greater than 50% relative

cover in the herbaceous layer, or greater than 30% relative cover in the herbaceous layer with alkali heath and/or marsh jaumea (*Jaumea carnosa*), and glasswort may be less than 30% relative cover.

Ericameria palmeri Provisional Shrubland Alliance

Ericameria palmeri provisional shrubland alliance, as monotypic stands of Palmer's goldenbush (*Ericameria palmeri*), is located within the northeastern portion of the Project site. The alliance has a G3/S3?[2] rarity ranking, which means it is a sensitive vegetation community. The membership rules for the alliance is Palmer's goldenbush is dominant in the shrub canopy with California buckwheat, California matchweed (*Gutierrezia californica*), and saw-tooth goldenbush (*Hazardia squarrosa*).

Eriodictyon crassifolium Provisional Shrubland Alliance

Eriodictyon crassifolium provisional shrubland alliance, as monotypic stands of hybrid thick leaf yerba santa (*Eriodictyon crassifolium*)/yerba santa (*Eriodictyon trichocalyx*) hybrids, is located within the southern portion of the Project site. The alliance has a G3/S3 rarity ranking, which means it is a sensitive vegetation community. The membership rules for the alliance include thick leaf yerba santa is dominant in the shrub canopy with chamise, red shank, California buckwheat, sugar bush (*Rhus ovata*), basket bush (*Rhus trilobata*), and black sage.

Eriogonum davidsonii/Croton setiger Grassland Alliance

Eriogonum *davidsonii/Croton setiger* grassland alliance is located within the northwestern portion of the Project site. The *Eriogonum davidsonii/Croton* setiger grassland alliance has not been assigned a global or state rarity ranking and does not have associated membership rules, as this alliance is not described by the Manual of California Vegetation, Second Edition, but was developed based on the species composition for this portion of the Project site. Davidson's buckwheat (*Eriogonum davidsonii*) and doveweed (*Croton setiger*) represented the dominants within this alliance on site, along with sparse occurrences of stunted individuals of summer mustard and wild oat, which did not represent dominants within this community. The vegetation community has been assigned as a Resources Category 4 because it has vegetative components in common with non-native grasslands.

Eriogonum fasciculatum Shrubland Alliance

Eriogonum fasciculatum shrubland alliance, as a monotypic stand of California buckwheat, is located within the eastern portion of the Project site. The alliance has a G5/S5 rarity ranking. The membership rules for the alliance include the following: (1) California buckwheat represents greater than 50% relative cover in the shrub canopy when other shrubs, if present, represent less than 50% relative cover; (2) California buckwheat represents greater than 50% relative cover in the shrub canopy or greater than 30% relative cover in the shrub canopy with brittlebush (*Encelia farinosa*); and (3) California buckwheat has greater than 50% relative cover in the shrub canopy.

Nassella (*Stipa*) spp.–*Melica* spp. Herbaceous Alliance

Nassella (*Stipa*) spp.–*Melica* spp. herbaceous alliance is located within the northeastern portion of the Project site. The alliance has a G3G4/S3S4 rarity ranking. The membership rules for the alliance include the following: (1) purple needle grass (*Nassella* [*Stipa*] *pulchra*) represents greater than 5% absolute cover as a dominant in the herbaceous layer; (2) purple needle grass represents greater than 10% relative cover in the herbaceous layer; (3) purple needle

[2] The "?" denotes an inexact numeric rank and further study is warranted to define the ranking (NatureServe 2021).

grass and/or nodding needle grass (*N.* [*Stipa*] *cernua*) represent greater than 2% absolute cover; (4) purple needle grass represent greater than 5% absolute cover in the herbaceous layer; (5) nodding needle grass represents greater than 30% relative cover in the herbaceous layer; (6) California melicgrass (*Melica californica*) and/or purple needle grass represents greater than 30% relative cover in the herbaceous layer. Other species including rice grass (*Achnatherum lemmonii*), wild oat, bromes, hayfield tarweed (*Hemizonia congesta*), perennial rye grass (*Festuca perennis* [*Lolium perenne*]), dwarf plantain (*Plantago erecta*), and/or narrowleaf plantain (*Plantago lanceolata*) may be present as dominants/co-dominants; (7) Torrey's melic (*Melica torreyana*) represents greater than 30% relative cover in the herbaceous layer often associated with serpentine soils; (7) big squirreltail (*Elymus multisetus*) and/or squirreltail (*E. elymoides*) represents greater than 30% relative cover in the herbaceous layer on serpentine soils; and (9) California melic, Torrey's melicgrass, and/or purple needlegrass represents greater than 30% relative cover. Wild oat, bromes, hayfield tarweed, perennial rye grass, dwarf plantain, and/or clover (*Trifolium* spp.) are present at greater than 50% cover or greater than 30% cover.

Rhus trilobata–Crataegus rivularis–Forestiera pubescens Shrubland Alliance

Rhus trilobata–Crataegus rivularis–Forestiera pubescens shrubland alliance is in the central portion of the Project site. The alliance has a G4/S3.2 rarity ranking. The membership rules for the alliance include the following: (1) desert olive (*Forestiera pubescens*) represents greater than 50% relative cover in the shrub layer; (2) basket bush represents greater than 50% relative cover in the shrub layer; and (3) blue elderberry represents greater than 50% relative cover in the shrub layer.

4.1.3 Non-Vegetated Land Cover

Developed Areas

Developed areas include existing dirt access roads, are interspersed throughout the Project site and the existing road shoulder associated with The Old Road, along the eastern boundary.

4.1.4 Special-Status Vegetation Communities

The CNDDB identifies the following thirteen special-status vegetation communities for the Calabasas, Canoga Park, Mint Canyon, Newhall, Oat Mountain, San Fernando, Simi Valley East, and Val Verde, Van Nuys, California quadrangle maps: California walnut woodland (*Juglans californica* forest and woodland alliance; G3/S3.2), cismontane alkali marsh (aggregation of *Frankenia salina* herbaceous alliance [G4/S3] and *Salicornia pacifica* herbaceous alliance [G4/S3]), mainland cherry forest (Prunus ilicifolia shrubland alliance; G5/S4), Riversidean alluvial fan sage scrub (*Lepidospartum squamatum* shrubland alliance; G3/S3), Southern California threespine stickleback stream, southern coast live oak riparian forest (*Quercus agrifolia* forest and woodland alliance [riparian associated]; G5/S4), southern cottonwood willow riparian forest (aggregation of *Populus fremontii–Salix gooddingii* forest and woodland alliance [G4/S3.2] and *Salix gooddingii–Salix laevigata* forest and woodland alliance [G4 S3]), southern mixed riparian forest (aggregation of *Populus fremontii–Salix gooddingii* forest and woodland alliance [G4/S3.2] and *Salix gooddingii–Salix laevigata* forest and woodland alliance [G4/S3]), southern riparian scrub (aggregation of *Salix laevigata* forest and woodland alliance [G4/S3] and *Baccharis salicifolia* shrubland alliance), southern sycamore alder riparian woodland (*Platanus racemosa–Quercus agrifolia* woodland alliance; G3/S3), southern willow scrub, valley needlegrass grassland (*Nassella* [*Stipa*] spp.–*Melica* spp. herbaceous alliance; G3G4/S3S4), and valley oak woodland (*Quercus lobata* woodland alliance; G3/S3).

The Project site contains the following special-status vegetation types: California walnut grove (*Juglans californica* forest and woodland alliance [G3/S3.2]); Palmer's goldenbush scrub (*Ericameria palmeri* provisional shrubland alliance [G3/S3?[3]]); salt grass flats (*Distichlis spicata* herbaceous alliance [GNR/S4]); basket bush–river hawthorn–desert olive patches (*Rhus trilobata–Crataegus rivularis–Forestiera pubescens* Shrubland Alliance [G4/S3.2]); southern coast live oak riparian forest (a riparian associated subset of *Quercus agrifolia* forest and woodland alliance); southern riparian scrub, which in this case is the aggregation of the *Salix laevigata* forest and woodland alliance and *Baccharis salicifolia* shrubland alliance; and valley needlegrass grassland (*Nassella* [*Stipa*] spp. herbaceous alliance).

4.2 Soils

The Natural Resources Conservation Service (NRCS) has mapped the following soil series, as shown in Figure 5, Soils, as occurring within the Project site (NRCS 2022): Castaic-Balcom silty clay loams, 30 to 50% slopes, eroded; Castaic and Saugus soils, 30 to 65% slopes, severely eroded; Hanford sandy loam, 2 to 9% slopes; Saugus loam, 30 to 50% slopes; Yolo loam, fan piedmont, 0 to 9% slopes, MLRA 20; Yolo loam, 2 to 9 % slopes.

4.3 Special-Status Plant Species Assessment

Table 10 lists the six special-status plant species that are within the Project site and off-site brush thinning areas, as shown in Figure 6, Special-Status Plant Locations. An additional 18 species have a low potential to occur based on suitable habitat being present and the Study Area being within the species' range, but years of focused surveys for rare plants have been negative for the species. Another 30 species are not expected to occur due to the absence of suitable habitat for the species on the Study Area or the Study Area being outside of the species recorded range. Appendix E provides the habitat assessment for all 54 species that have recorded occurrences in the database search criteria.

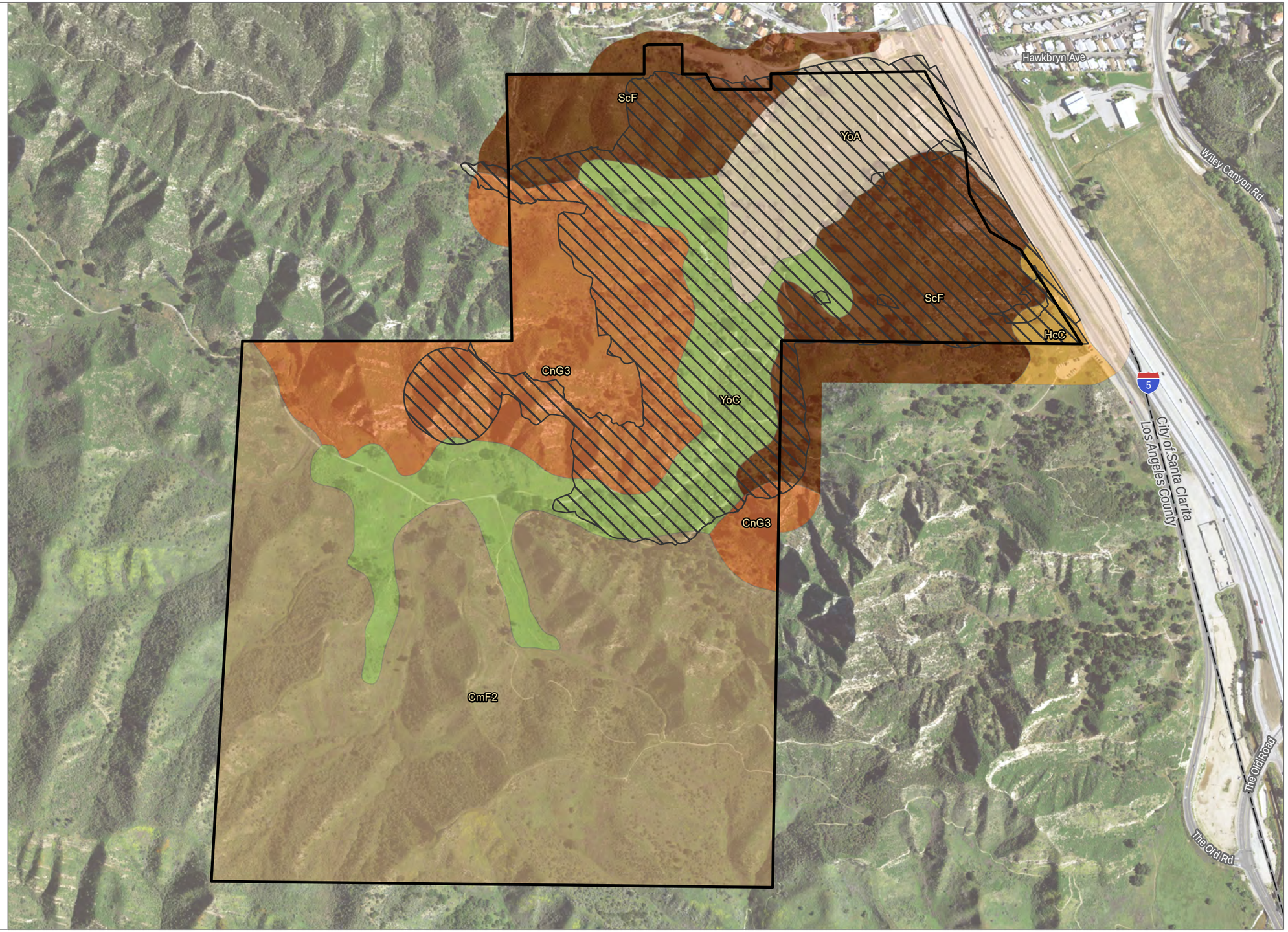
[3] The "?" denotes an inexact numeric rank and further study is warranted to define the ranking (NatureServe 2021).

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- Project Boundary
- Project Development Footprint
- City Boundary

Soils

- CmF2; Castaic-Balcom silty clay loams, 30 to 50 percent slopes, eroded
- CnG3; Castaic and Saugus soils, 30 to 65 percent slopes, severely eroded
- HcC; Hanford sandy loam, 2 to 9 percent slopes
- ScF; Saugus loam, 30 to 50 percent slopes
- YoA; Yolo loam, 0 to 2 percent slopes
- YoC; Yolo loam, 2 to 9 percent slopes



SOURCE: NAIP 2020, Open Streets Map 2019, USGS

DUDEK

0 250 500 Feet

FIGURE 5

Soils

Trails at Lyons Canyon Project

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Table 10. Special-Status Plant Species Occurring in the Project Site

Scientific Name	Common Name	Status[1] (Federal/State/CRPR)	Habitat Requirements	Potential to Occur
Calochortus clavatus var. *clavatus*	club-haired mariposa-lily	None/None/4.3	Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland. Usually occurring on serpentinite, clay, and rocky soils.	Present. The species was detected during focused surveys.
Calystegia peirsonii	Peirson's morning-glory	None/None/4.2	Chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland.	Present. The species was detected during focused surveys.
Calochortus plummerae	Plummer's mariposa lily	None/None/4.2	Granitic, rock soils within chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, valley and foothill grassland.	Present. The species was detected during focused surveys.
Calochortus clavatus var. *gracilis*	slender mariposa lily	None/None/1B.2	Chaparral and coastal sage scrub.	Present. The species was detected during focused surveys.
Juglans californica	Southern California black walnut	None/None/4.2	Chaparral, cismontane woodland, coastal sage scrub, alluvial surfaces.	Present. The species was detected during focused surveys.
Keckiella ternata	scarlet keckiella	None/None/None[2]	Chaparral, lower montane coniferous forest; canyons and slopes.	Present. The species was detected during focused surveys.

Notes:

[1] Recognized by the County of Los Angeles as a Sensitive Local Native Resource.

Status Abbreviations

CRPR: California Rare Plant Rank

1B: Plants rare, threatened, or endangered in California and elsewhere

4: Plants of limited distribution

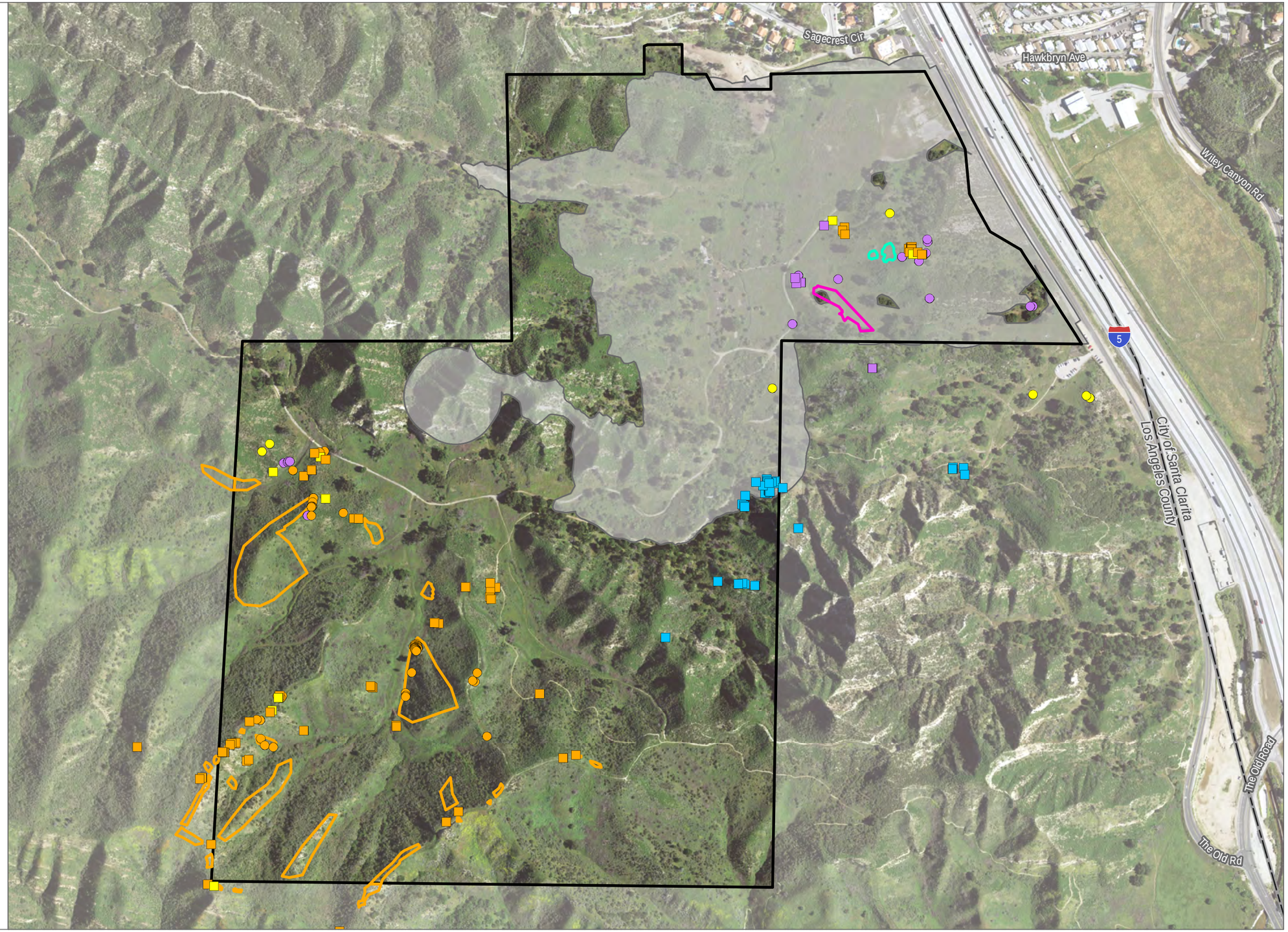
.2–Moderately threatened in California (20%-80% of occurrences threatened/moderate degree and immediacy of threat)

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- Project Boundary
- Project Development Footprint
- City Boundary

Rare Plants

- Clubhair Mariposa Lily
- Peirson's Morning-Glory
- Plummer's Mariposa Lily
- Clubhair Mariposa Lily
- Clubhair Mariposa Lily (2022)
- Plummer's Mariposa Lily
- Plummer's Mariposa Lily (2022)
- Scarlet Keckiella (2022)
- Slender Mariposa Lily
- Slender Mariposa Lily (2022)



SOURCE: NAIP 2020, Open Streets Map 2019, Glen Lukos & Associates 2022

DUDEK

0 250 500 Feet

FIGURE 6

Special-Status Plant Locations

Trails at Lyons Canyon Project

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4.3.1 Special-Status Plants Detected at the Project Site

Six special-status plant species were detected within the Project site, as shown in Figure 6, Special Status Plant Locations: club-haired mariposa-lily (*Calochortus clavatus* var. clavatus; California Rare Plant Rank (CRPR) 4.3; Category 4), Plummer's mariposa lily (*Calochortus plummerae*; CRPR 4.2; Category 4), Peirson's morning-glory (*Calystegia peirsonii*; CRPR 4.2; Category 4), scarlet keckiella (*Keckiella ternata*; Sensitive Local Native Resource; Category 3), slender mariposa lily (*Calochortus clavatus* var. *gracilis*; CRPR 1B.2; Category 1), and Southern California black walnut (CRPR 4.2; Category 4).

Club-Haired Mariposa Lily

Club-haired mariposa lily is a perennial bulbiferous herb designated as a CRPR 4.3 (Category 4) species. This species is known from Los Angeles, Santa Barbara, San Benito, San Luis Obispo, and Ventura Counties. Club-haired mariposa lily occurs primarily in serpentinite, clay and rocky soils in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. The blooming period for this species is typically May through July. This species was detected in the southwestern and northeastern portion of the Project site.

Pierson's Morning Glory

Peirson's morning glory is a perennial rhizomatous herb designated as a CRPR 4.2 (Category 4) species. This species is known from Los Angeles County. Peirson's morning glory occurs in chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland. The blooming period for this species is typically April through June. This species was detected within the eastern portion of the Project site.

Plummer's Mariposa Lily

Plummer's mariposa lily is a perennial bulbiferous herb designated as a CRPR 4.2 (Category 4) species. This species is known from Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. Plummer's mariposa lily occurs primarily in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland. The blooming period for this species is typically May through July. This species was detected in the eastern and western portion of the Project site.

Scarlet Keckiella

Scarlet keckiella is a perennial shrub and is considered a Sensitive Local Native Resource (Category 3) species. This species is known from Los Angeles, Kern, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, and Ventura Counties, but there are no other records (CDFW 2024, CNPS 2024) of the species within the Santa Susana Mountains and it is therefore considered rare within this region of the County. Scarlet keckiella occurs primarily in chaparral and cismontane woodland. The blooming period for this species is typically June through September. This species was detected in the central portion of the Project site.

Slender Mariposa Lily

Slender mariposa lily is a perennial bulbiferous herb designated as a CRPR 1B.2 (Category 1) species. This species is known from Los Angeles and Ventura Counties. Slender mariposa lily occurs mostly in chaparral, coastal scrub,

and valley and foothill grassland. The blooming period for this species is typically March through June. This species was detected in the eastern portion of the Project site.

Southern California Black Walnut

Southern California black walnut is a perennial deciduous tree designated as a CRPR 4.2 (Category 4) species. This species is known from Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura Counties. Southern California black walnut occurs primarily in chaparral, cismontane woodland, coastal scrub, and riparian woodland. The blooming period for this species is typically March through August, though it is generally detectable year-round. This species was detected in the western and southern portion of the Project site.

4.4 Special-Status Wildlife Species Assessment

Table 11 displays the 23 wildlife species that are present or have a moderate or high potential to occur on the Project site. An additional eight species have a low potential to occur based on suitable habitat being present and the Study Area being within the species' range, but years of surveys have been negative for the species. Another 29 species are not expected to occur due to the absence of suitable habitat for the species on the Study Area or the Study Area being outside of the species recorded range. Appendix F provides the habitat assessment for all 59 species that have recorded occurrences in the database search criteria. The protocol surveys for burrowing owl, southwestern willow flycatcher (full details in Appendix G), coastal California gnatcatcher (full details in Appendix H), and least Bell's vireo (full details in Appendix G) were all negative for the species.

Table 11. Special-Status Wildlife Species Occurring or That Have a Moderate or High Potential to Occur in the Project Site

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur[2]
Invertebrates				
Bombus crotchii	Crotch bumble bee	None/CSE	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert. Open grassland and scrub communities supporting suitable floral resources.	Present. The species was detected during focused surveys.
Danaus plexippus pop. 1	monarch butterfly (California overwintering population)	FC/None	Roosts in winter in wind-protected tree groves along the California coast from northern Mendocino to Baja California, Mexico.	Moderate potential to occur during spring/summer months only. Not expected to occur during winter roosting period.

Table 11. Special-Status Wildlife Species Occurring or That Have a Moderate or High Potential to Occur in the Project Site

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur[2]
Reptiles				
Anniella sp. 1	California legless lizard	None/SSC	Common in several habitats but especially in coastal dune, valley-foothill, chaparral, and coastal scrub types.	High potential to occur. Suitable habitat is present for the species and there are recent local records.
Arizona elegans occidentalis	California glossy snake	None/SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Present. The species was detected during focused surveys.
Aspidoscelis tigris stejnegeri	coastal whiptail	None/SSC	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	High potential to occur. Suitable habitat is present for the species and there are recent local records.
Phrynosoma blainvillii	coast horned lizard	None/SSC	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	High potential to occur. Suitable habitat is present for the species and there are recent local records.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Primarily occurs in riparian areas and oak woodlands, most commonly in montane canyons. Known to use urban areas, occupying trees among residential and commercial.	Present. The species was detected during biological surveys.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/None[1]	Oak woodlands, arid scrub, and grassland margins.	Present. The species was detected during biological surveys.
Artemisiospiza belli belli	Bell's sparrow	None/WL	Chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains.	Moderate potential to occur. Suitable habitat is present, but most records of the species are from further inland.

Table 11. Special-Status Wildlife Species Occurring or That Have a Moderate or High Potential to Occur in the Project Site

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur[2]
Athene cunicularia	Burrowing owl	None/CSE	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Moderate potential to occur (transient). Protocol surveys for the species were negative for any individuals or diagnostic sign of the species at burrows within the Project site (e.g., pellets, whitewash, and feathers). The Project site provides marginal habitat for the species, so it is not expected to support breeding or overwintering burrowing owl. However, the species can be opportunistic in choosing refugia in burrows or other suitable structures during dispersal and migration, and could be present on site temporarily during those activities.
Cardellina pusilla	Wilson's warbler	None/None[1]	Breeds across Canada and the western United States in willow, alder, and shrubby thickets near streams. Also uses forest edges or forest openings with a dense understory of flowering plants such as aspen stands.	Present. This species was observed foraging within the Project site, but was not observed nesting/breeding during 2003-2005, 2015, and 2020-2022 field efforts and it is not expected to nest on site since the Project site is outside the breeding range of the species.
Cathartes aura (breeding)	turkey vulture	None/None[1]	Wide range of foraging habitats in southern California. Nesting occurs on rocky cliffs, caves, mammal burrows and abandoned hawk or heron nests.	Present. This species was observed foraging within the Project site, but was not observed nesting/breeding during 2003-2005, 2015, and 2020-2022 field efforts and suitable nesting habitat is not present.

Table 11. Special-Status Wildlife Species Occurring or That Have a Moderate or High Potential to Occur in the Project Site

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur[2]
Chordeiles acutipennis	lesser nighthawk	None/None[1]	Open areas in arid and semi-arid lowlands. Eggs on the ground, often in areas with small pebbles.	Moderate potential to occur (foraging). Suitable habitat for foraging is present in the eastern portion of the Project site and there are recent records in the Project vicinity (eBird 2023). Not expected to occur for nesting. Suitable nesting habitat is not present.
Elanus leucurus (nesting)	white-tailed kite	None/FP	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	Present. This species was observed foraging within the Project site, but was not observed nesting/breeding during 2003-2005, 2015, and 2020-2022 field efforts.
Geococcyx occidentalis	greater roadrunner	None/None[21]	Arid scrub, chaparral, savannah, and open woodlands.	High potential to occur. Suitable habitat is present on the Project site and continues to the west.
Picoides villosus	hairy woodpecker	None/None[1]	Deciduous forests and forest edges.	Moderate potential to occur. Suitable habitat is present but there are many records of the species in the Project vicinity (eBird 2023).
Setophaga petechia (nesting)	yellow warbler	None/SSC	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Present. The species was detected during biological surveys and suitable nesting habitat is present.

Table 11. Special-Status Wildlife Species Occurring or That Have a Moderate or High Potential to Occur in the Project Site

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur[2]
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Present. The species was detected during focused surveys.
Eumops perotis californicus	western mastiff bat	None/SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Present. This species was detected in a foraging role during focused surveys.
Lasiurus cinereus	hoary bat	None/SSC	Prefers trees at the edge of clearings, but have been found in trees in heavy forests, open wooded glades, and shade trees along urban streets and in city parks.	Present. The species was detected during focused surveys.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/SSC	Occupies a variety of habitats but is most common among shortgrass habitats. Also occurs in sage scrub but needs open habitats.	Moderate potential to occur. Suitable habitat is present in the eastern portion and canyon bottoms of the Project site.
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	Present. The species was detected during focused surveys.
Puma concolor californica	California mountain lion	None/SC	A wide variety of habitats ranging from montane coniferous forest to low elevation desert scrublands.	Present. The species was detected during focused surveys.

Table 11. Special-Status Wildlife Species Occurring or That Have a Moderate or High Potential to Occur in the Project Site

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur[2]
Taxidea taxus	American badger	None/SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	Present. The species was detected during biological surveys.

Notes:
[1] Los Angeles County sensitive bird species.
Status Abbreviations
Federal
FC: Federal candidate for listing as endangered or threatened
State
CSE: Candidate for state listing as endangered
FP: California Fully Protected Species
SC: State candidate for listing as endangered or threatened

SSC: California Species of Special Concern
WL: CDFW Watch List species

4.4.1 Special-Status Wildlife Detected

Focused surveys were conducted for several special-status wildlife species for the Lyons Canyon Property in 2021 and 2022, and 14 species were observed. Eleven special-status wildlife species were detected within the Project site that may be residents on site or present during essential life functions (i.e., breeding): Crotch bumble bee, California glossy snake (*Arizona elegans occidentalis*), Cooper's hawk (*Accipiter cooperii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), yellow warbler (*Setophaga petechia*), pallid bat (*Antrozous pallidus*, western mastiff bat (*Eumops perotis californicus*), hoary bat (*Lasiurus cinereus*), San Diego desert woodrat (*Neotoma lepida intermedia*; DMEC 2006), California mountain lion (*Puma concolor californica*), and American badger (*Taxidea taxus*). An additional three special-status wildlife species (birds) were observed foraging on the Project site but are not expected to breed on site due to the absence of suitable habitat associated with breeding: Wilson's warbler (*Cardellina pusilla*), turkey vulture (*Cathartes aura*), and white-tailed kite (*Elanus leucurus*).

Invertebrates

Crotch Bumble Bee

Crotch bumble bee was voted as a candidate for listing by the California Fish and Game Commission in June of 2019. In a case filed by the Almond Alliance of California, the Sacramento Superior Court of California ruled that insects (including Crotch bumble bee) are not eligible for listing under CESA in November of 2020. In February 2021, the California Fish and Game Commission appealed this decision. On May 31, 2022, the California Appeals Court ruled that Crotch bumble bee could be regulated as a fish and eligible for protection under CESA, thereby reinstating this species' status as a candidate for listing (SC).

In California, Crotch bumble bee inhabits open grassland and scrub habitats. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills

through most of southwestern California. This species was historically common in the Central Valley of California, but now appears to be absent from most of it, especially in the center of its historic range.

Crotch bumble bee (Category 1) was detected within the southwest portion of the Project site within the on-site Conservation Area but was not detected within the Project footprint; however, it is considered to have a potential to occur within the Project footprint in the future, based on mobility and the presence of suitable foraging habitat contiguous with occupied habitat in the on-site Conservation Area. The species has potential to occur in the following alliances within the Project site: *Artemisia californica–Salvia leucophylla* shrubland, *Artemisia californica–Salvia leucophylla* shrubland–disturbed, *Avena* spp.–*Bromus* spp. herbaceous semi-natural, *Ericameria palmeri* provisional shrubland, *Eriodictyon crassifolium* provisional shrubland, *Eriogonum davidsonii*/Croton *setiger* grassland, *Eriogonum fasciculatum* shrubland, *Nassella* (*Stipa*) spp.–*Melica* spp. herbaceous, and *Rhus trilobata–Crataegus rivularis–Forestiera pubescens* shrubland.

Reptiles

California Glossy Snake

The California glossy snake (SSC; Category 2), was observed within the Project site during 2020 general biological surveys. This species inhabits chaparral, arid scrub, rocky washes, and open grasslands from the eastern San Francisco Bay Area at the northern end of its range to northwestern Baja California at the south end of its range but is absent from the Central Coast of California (California Herps 2021). The species has potential to occur in the following alliances within the Project site: *Adenostoma fasciculatum* shrubland, *Adenostoma fasciculatum* shrubland–disturbed, *Artemisia californica–Salvia leucophylla* shrubland, *Artemisia californica–Salvia leucophylla* shrubland–disturbed, *Avena* spp.–*Bromus* spp. herbaceous semi-natural, *Ericameria palmeri* provisional shrubland, *Eriodictyon crassifolium* provisional shrubland, *Eriogonum fasciculatum* shrubland, *Eriogonum davidsonii/Croton setiger* grassland, *Nassella* (*Stipa*) spp.–*Melica* spp. herbaceous, and Rhus *trilobata–Crataegus rivularis–Forestiera pubescens* shrubland.

Birds

Cooper's Hawk

Cooper's hawk was observed in the Project site and is on the CDFW Watch List (Category 3). Primarily occurs in riparian areas and oak woodlands, most commonly in montane canyons. Known to use urban areas, occupying trees among residential and commercial. While the species may forage throughout the Project site, the species is likely to only nest in the *Quercus agrifolia* forest and woodland alliance.

Southern California Rufous-Crowned Sparrow

Southern California rufous-crowned sparrow was observed in the Project site and is on the CDFW Watch List (Category 3). Southern California rufous-crowned sparrow is a resident species in Southern California. It breeds in dry upland habitats with grass and shrub components. The species has potential to occur in the following alliances within the Project site: *Artemisia californica–Salvia leucophylla* shrubland, *Artemisia californica–Salvia leucophylla* shrubland–disturbed, *Avena* spp.–*Bromus* spp. herbaceous semi-natural, *Ericameria palmeri* provisional shrubland, *Eriodictyon crassifolium* provisional shrubland, *Eriogonum davidsonii/Croton setiger* grassland, *Eriogonum fasciculatum* shrubland, *Nassella* (*Stipa*) spp.–*Melica* spp. herbaceous, and *Rhus trilobata–Crataegus rivularis–Forestiera pubescens* shrubland.

Turkey Vulture

Turkey vulture is Sensitive Local Native Resource (Category 3), as a Los Angeles County sensitive bird species. The species nests in rock crevices, caves, ledges, thickets, mammal burrows and hollow logs, fallen trees, abandoned hawk or heron nests, and abandoned buildings. Turkey vulture prefer to nest away from areas of human disturbance. As such, the species is not expected to nest on site by may forage on the carrion of medium to large wildlife within the more open spaces of the Project site, such as the wild oats and annual brome grasslands.

White-Tailed Kite

The white-tailed kite is a CFP species (Category 1) and has been documented utilizing the Project site in a foraging role, but was not observed nesting/breeding during 2003-2005, 2015, and 2020-2022 field efforts. This species inhabits low elevation, open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Riparian areas adjacent to open areas are primarily used for nesting (Dunk 1995). The species is not expected to nest on the Project site but may use the *Quercus agrifolia* forest and woodland alliance and *Avena* spp.–*Bromus* spp. herbaceous semi-natural alliance for foraging.

Wilson's Warbler

Wilson's warbler is Sensitive Local Native Resource (Category 3), as a Los Angeles County sensitive bird species. Wilson's warbler nests from northern Alaska eastward to Newfoundland and southward along the west coast to Southern California. This species migrates throughout much of North America and winters from Southern California southward into Mexico and Central America. It breeds in riparian woodlands and scrub from the Transverse Ranges in Southern California northward into Canada and Alaska. In Los Angeles County, the species only has historic breeding records (more than 75 years) from high elevations (approximately 7,000 feet) (Allen et al. 2016). As such, the species is not expected to breed on the Project site and is expected to only be a transient during migration.

Yellow Warbler

Yellow warbler (SSC, Category 2) was observed in the Project site. The species as a whole nests from northern Alaska eastward to Newfoundland and southward to northern Baja California and Georgia. The species migrates throughout much of North America and winters from Southern California, Arizona, and the Gulf Coast southward to central South America (AOU 1998). It breeds in riparian woodlands southward from the northern border of the state generally west of the Sierra Nevada range to the coastal slopes of Southern California and from coastal and desert lowlands up to 2,500 meters (8,000 feet) in the Sierra Nevada range and other montane chaparral and forest habitats (Grinnell and Miller 1944). The species is likely to only nest in trees on the Project site within the *Quercus agrifolia* forest and woodland alliance.

Mammals

Pallid Bat

Pallid bat (SSC; Category 2) was detected during 2021 focused special-status bat surveys. This species inhabits open, dry deserts, grasslands, shrublands, woodlands, and forests. Rock outcrops are the preferred roosting habitat, but this species is also known for tree-roosting. This species would forage throughout the airspace above the Project site and may roost in the trees on the Project site within the *Quercus agrifolia* forest and woodland alliance.

Western Mastiff Bat

Western mastiff bat (SSC; Category 2) was detected foraging over the Project site during 2021 focused special-status bat surveys. This species inhabits open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. This species would forage throughout the airspace above the Project site and may roost in the trees on the Project site within the *Quercus agrifolia* forest and woodland alliance.

Hoary Bat

Hoary bat (SSC; Category 2) was detected foraging over the Project site during 2021 focused special-status bat surveys. This species prefers trees at the edge of clearings, but have been found in trees in heavy forests, open wooded glades, and shade trees along urban streets and in city parks. This species would forage throughout the airspace above the Project site and may roost in the trees on the Project site within the *Quercus agrifolia* forest and woodland alliance.

San Diego Desert Woodrat

San Diego desert woodrat (SSC; Category 2) was observed within the Project site during survey efforts conducted under previous ownership for a prior project (DMEC 2006). This species occurs throughout the coastal plane and inland valleys of Southern California. Desert woodrats are found in a variety of shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth (Bleich 1973; Bleich and Schwartz 1975; Brown et al. 1972; Cameron and Rainy 1972; Thompson 1982). The most common natural habitats where this species occurs are chaparral and coastal sage scrub. *Adenostoma fasciculatum* shrubland, *Adenostoma fasciculatum* shrubland–disturbed, *Artemisia californica–Salvia leucophylla* shrubland, *Artemisia californica–Salvia leucophylla* shrubland–disturbed, *Ericameria palmeri* provisional shrubland, *Eriodictyon crassifolium* provisional shrubland, *Eriogonum davidsonii/Croton setiger* grassland, *Eriogonum fasciculatum* shrubland, *Nassella* (*Stipa*) spp.–*Melica* spp. herbaceous, and *Rhus trilobata–Crataegus rivularis–Forestiera pubescens* shrubland

California Mountain Lion

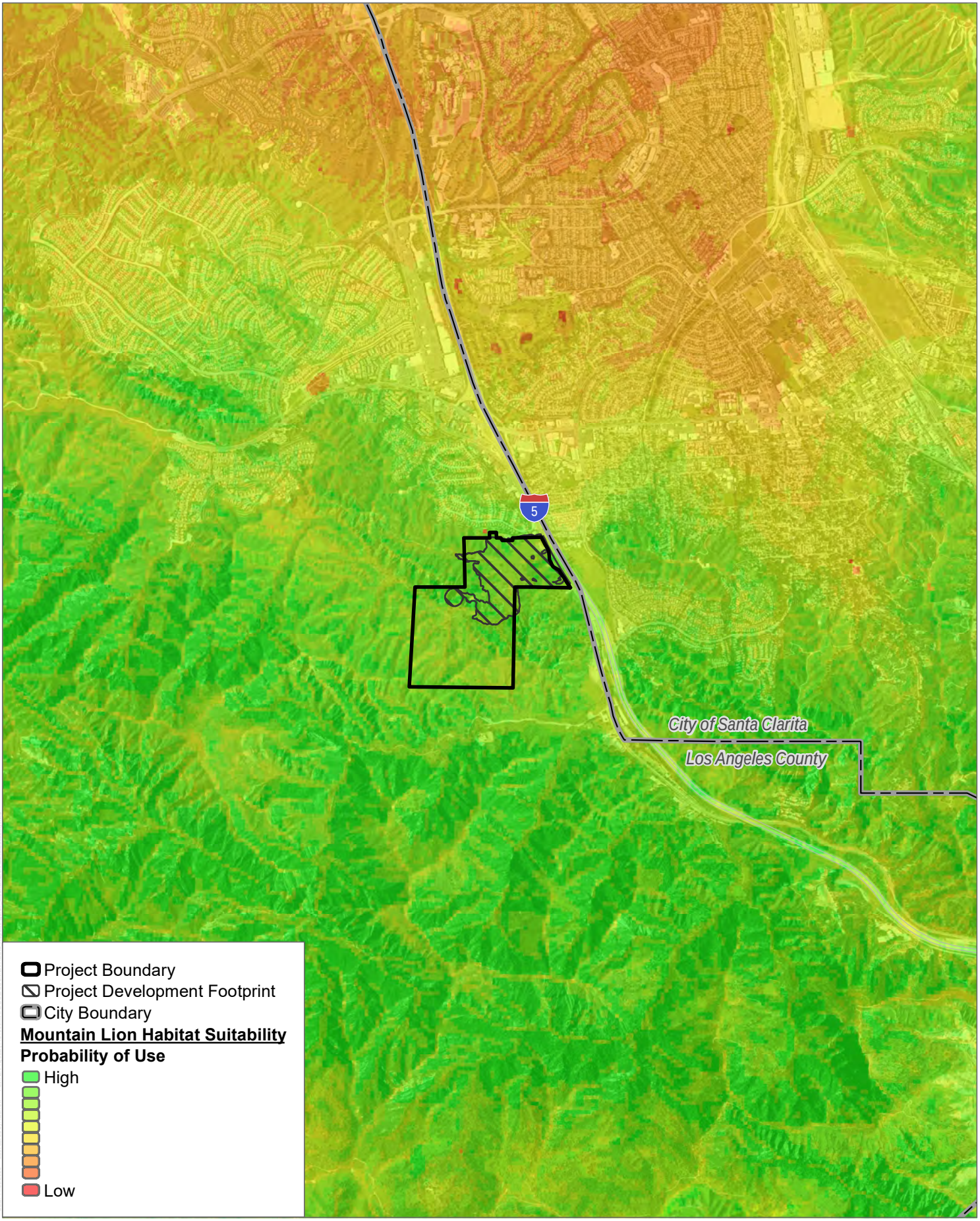
Mountain lions associated with the Southern California and Central Coast populations are designated as a State candidate endangered species. On April 16, 2020, the California Fish and Game Commission voted to designate the Southern California and Central Coast mountain lions as a candidate for listing as an endangered species under the CESA. The vote triggered a 1-year review by CDFW to determine whether these mountain lion populations should be formally protected under CESA; however, the listing status of this species is still currently unresolved at the time of this report.

The California mountain lion occurs throughout much of California open space, occurring in or moving through nearly all but the most urbanized settings. This species inhabits a wide range of habitat types where prey items such as mule deer (*Odocoileus hemionus*) and bighorn sheep (*Ovis canadensis*) are present, from interior, arid rocky scrublands, to upper montane coniferous forest, to chaparral, coastal scrub, and woodland habits along the coastal plain.

Tracks and scat of California mountain lion (Category 1) were detected throughout the Project site during the surveys. The proposed Project footprint consists primarily of low to medium ranked habitat by CDFW's Mountain Lion Habitat Suitability dataset (Dellinger et al. 2020), and Mountain Lion Predicted Habitat dataset (CDFW 2023b),

but a quarter of it is ranked as high, as shown in Figures 7, Mountain Lion Habitat Suitability Dataset, and 8, Mountain Lion Predicted Habitat Dataset. As such, the species could occur throughout most of the Project site during home range movement, dispersal, and foraging. The potential to occur is based on habitat suitability: scrub vegetation, presence of mule deer, and proximity to high-quality habitat on large swaths of public lands to the west and south. However, females keep their young in dens located in rocky terrain or in dense vegetation that provide cover but avoid roads and stay at a distance from human disturbance four times greater (approximately 600 meters) than non-reproductive mountain lions (Center for Biological Diversity 2019). The Project is located adjacent to residential neighborhoods to north, The Old Road and I-5 to the east, and the Riverdale Park and Open Space to the south (there are several hiking trails that connect with unauthorized hiking trails within the Project site), all of which have associated human presence. As such, females of the species are not expected to establish natal dens in the Project site.

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SOURCE: NAIP 2020, Open Streets Map 2019, CA DFW

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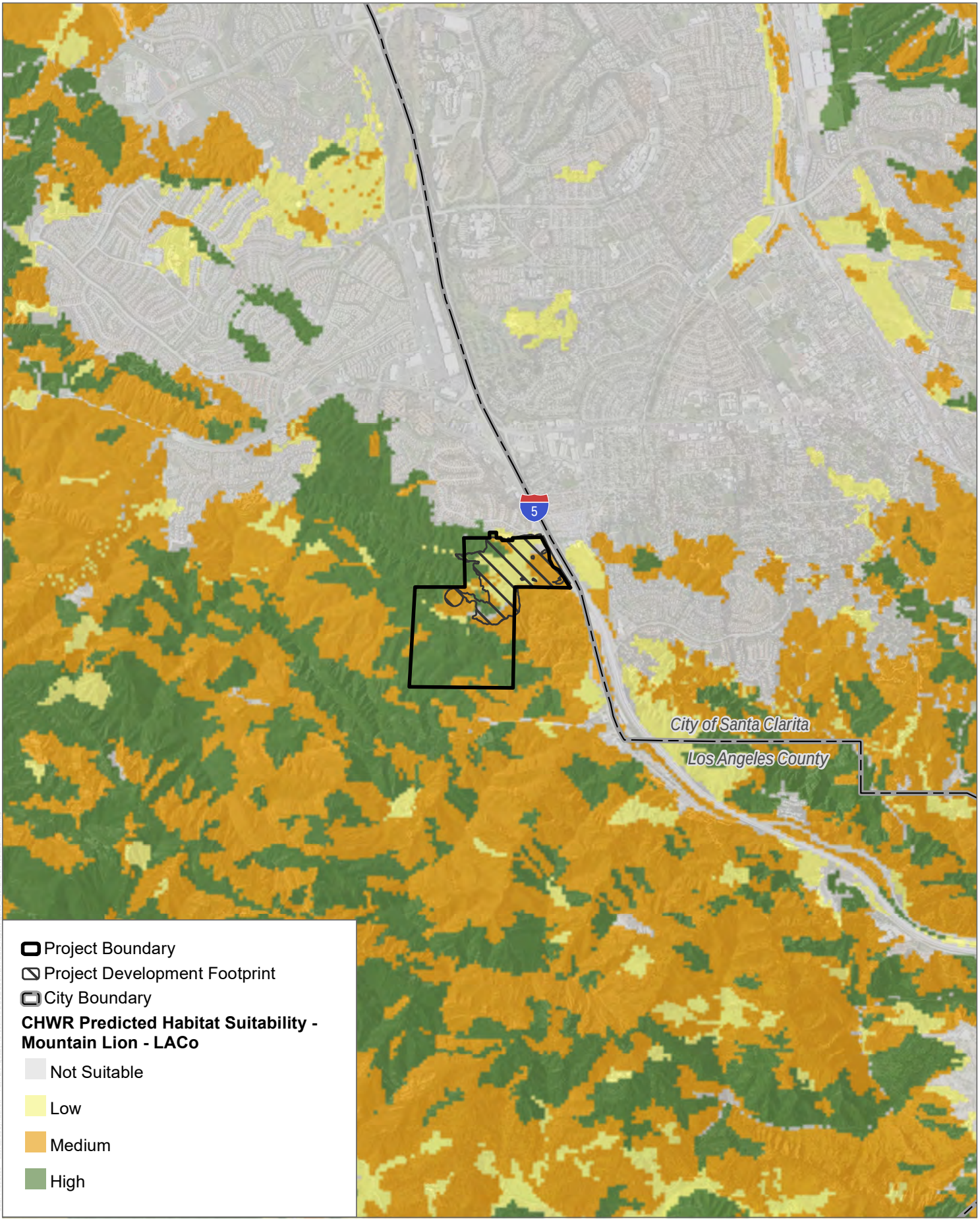
0 1,500 3,000 Feet

FIGURE 7

Mountain Lion Habitat Suitability

Trails at Lyons Canyon Project

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SOURCE: NAIP 2020, Open Streets Map 2019, CDFW CHWR

DUDEK

0 0.3 0.6 Miles

FIGURE 8

Mountain Lion Predicted Habitat

Trails at Lyons Canyon Project

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American Badger

Diagnostic sign (burrows with claw marks that are indicative of the species) of American badger (SSC; Category 2) was detected within the Project site. This species inhabits arid scrub, prairies, dry meadows, open grasslands, and agricultural areas. The species has potential to occur in the following alliances within the Project site: *Artemisia californica–Salvia leucophylla* shrubland, *Artemisia californica–Salvia leucophylla* shrubland–disturbed, *Avena* spp.–*Bromus* spp. herbaceous semi-natural, *Ericameria palmeri* Provisional shrubland, *Eriodictyon crassifolium* provisional shrubland, *Eriogonum davidsonii/Croton setiger* grassland, *Eriogonum fasciculatum* shrubland, *Nassella* (*Stipa*) spp.–*Melica* spp. herbaceous, and *Rhus trilobata–Crataegus rivularis–Forestiera pubescens* shrubland.

4.4.2 Special-Status Wildlife Species with Moderate or High Potential to Occur

State or Federally List or Candidate Species

Monarch

Monarch (*Danaus plexippus;* FC; Category 1) is designated as a federal candidate species. The butterfly is attaining near worldwide distribution but is primarily present in the Americas. Autumnal migrants occasionally go to England, have spread throughout the Pacific Ocean, and are well-established in Australia. However, essential overwintering areas for North American populations are limited to about 100 locations in coastal California and the mountains of Mexico. A few North American adults apparently occasionally overwinter elsewhere including southern Florida but their migration status is not clear.

Habitat is a complex issue for this species. In general, breeding areas are virtually all patches of milkweed (*Asclepias* spp.) in North America and some other regions. The critical conservation feature for North American populations is the overwintering habitats, which are primarily high-altitude Mexican conifer forests or coastal California conifer or eucalyptus groves, as identified in the literature. It appears that virtually all North American monarch overwinter in either one of these two areas (The Xerces Society 2014). Although the Project site does not support overwintering habitat, scrub, grassland, and woodland habitats within the Project site may have the potential to support spring and summer foraging and breeding; however, no distinctive stands of milkweed host plants were documented in the Project site, so the species has a low potential to breed on site.

Non-listed Special-Status Wildlife Species

Nine non-listed special-status wildlife species were determined to have a moderate or high potential to occupy the Project site throughout the various scrub, grassland, and woodland habitats present as year-round residents or nesting/breeding role. These species include California legless lizard (*Anniella* sp. 1; SSC; Category 2), coastal whiptail (*Aspidoscelis tigris stejnegeri*; SSC; Category 2), Blainville's horned lizard (*Phrynosoma blainvillii*; SSC; Category 2), Bell's sparrow (*Artemisiospiza belli belli*; WL; Category 3), burrowing owl (SSC; Category 2); and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*; SSC; Category 2). The remaining species are bird species identified as County sensitive bird species (Category 3) that were determined to have the potential to occupy the Project site throughout the various scrub, grassland, and woodland habitats present in a live-in or nesting/breeding role. These species include greater roadrunner (*Geococcyx occidentalis*), hairy woodpecker (*Picoides villosus*), and lesser nighthawk (*Chordeiles acutipennis*).

Burrowing owl is included despite the negative results of the protocol surveys for the species. Additionally, the Project site provides marginal habitat for a species that has a preferred habitat in California that is generally typified by short, sparse vegetation with few shrubs, level to gentle topography and well-drained soils (CDFG 2012). As such, the Project site is not expected to support breeding burrowing owl. However, the species can be opportunistic in choosing refugia in burrows or other suitable structure during dispersal, migration, and when overwintering. Since there are burrows present and there are local records of the species, there is a moderate potential for an individual to occur in suitable habitat (i.e., *Avena* spp.–*Bromus* spp. herbaceous semi-natural and *Eriogonum davidsonii/Croton setiger* grassland) in the Project site.

One invertebrate species with moderate potential to occur, Pacoima shoulderband (*Helminthoglypta traskii pacoimensis*; G1G2/T1), is not state or federally recognized as a special-status species or considered sensitive by SEA Guidelines, but hold high state and global rarity rankings and have the potential to occur within the Project site. Pacoima shoulderband has the potential to occur in association with bark peels and fallen logs within the *Quercus agrifolia* forest and woodland alliance within the Project site.

Nesting Birds and Raptors

The Project site contains trees, shrubs, and ground cover that provide suitable habitat for nesting migratory birds. Impacts to nesting birds are prohibited under the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. Southern California holds a diversity of birds of prey (raptors), and many of these species are in decline. For most of the declining species, foraging requirements include extensive open, undisturbed, or lightly disturbed areas, especially grasslands. A few species, such as red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), are somewhat adaptable to low-level human disturbance and can be readily observed adjacent to neighborhoods and other types of development. These species still require appropriate foraging habitat and low levels of disturbance in vicinity of nesting sites.

With the exception of existing developed areas associated with The Old Road along the eastern boundary of the Project site, the entirety of the Project site provides suitable foraging and/or nesting habitat for a number of raptor species, including special-status raptors, such as white-tailed kite.

4.5 Wildlife Corridors and Habitat Linkages

Typically, habitat in the County's various SEAs consists of large contiguous blocks (core habitat areas) with intervening areas of roads, rural residential development, and other low intensity disturbance. A primary goal of any land use within the County's various SEAs should be to maintain high levels of connectivity between core habitat areas via a network of core open space areas and wide linkages and corridors. Such linkages should make use of natural topographic features (ridge lines and drainages), vegetative cover (woodlands and scrub), water sources (streams, springs, and ponds), and road undercrossings (bridges and culverts).

Habitat linkages are areas that possess sufficient cover, food, water, or other essential elements and provide connection between two or more habitat areas that are often larger or superior in quality to the linkage. Such linkage sites can be quite small or constricted but can be vital to the long-term health of connected habitats. Linkage values are often addressed in terms of "gene flow" between populations, with movement taking potentially many generations. Considering that the Project site abuts existing development to the east and north (developed areas associated with The Old Road and I-5), it does not serve as a habitat linkage along its eastern margin. The southwestern portion of the Project site, however, includes a large canyon (Lyons Canyon is approximately 600 feet

wide at its narrowest point within the Project site), with topography and habitat that may provide a viable connection for wildlife populations occurring within adjacent undeveloped lands to the northwest, south and west of the Project site, which in include the Santa Clarita Woodlands Park and Rivendale Open Space. As such, this topographical feature has the potential to serve as a habitat linkage between existing natural open space to the northwest, west and south of the Project site.

Wildlife corridors are like linkages but provide specific opportunities for larger, more mobile species to disperse or migrate between areas, generally extensive but otherwise partially or wholly separated regions. Such areas generally are several hundred feet wide and unobstructed and usually possess cover, food, and water. Habitat in corridors may be quite different than that in the connected areas, but when used by the wildlife species of interest, will function as connections even with differing land cover types.

As shown in Figure 3, the Project site is located at the interface of the northeastern extent of a considerable tract of undeveloped land associated with the Santa Susana Mountains and Simi Hills SEA and the southwestern margin of contiguous development associated with the City and its associated sphere of influence. Although the Project site is located at the interface of undeveloped lands and existing development, it encompasses the northern 1,500 feet of habitat that provides movement for highly mobile species such as mountain lion, deer and badger from lands associated with the Santa Susana Mountains and Simi Hills SEA to undeveloped lands associated with the San Gabriel Mountains further east. Additionally, there is a substantial east-west movement route located in Towsley Canyon just south of the Project site, which would be used for more local movement through the Santa Susana Mountains since the I-5 creates a barrier on the eastern end.

I-5 in the vicinity of Project site is expected to continue to be a strong barrier to east-west movement for mountain lion between the Santa Susana Mountains and the San Gabriel Mountains. As such, the Project is on the very edge of natural open space and it is not expected to add substantially to this barrier or cause further habitat fragmentation. Residential development to the north of the Project site limits movement by wildlife in that direction. Existing wildlife movement opportunities in the unnamed northwestern canyon on the Project site would be severed, and Lyons Canyon would be narrowed by Project development. However, movement along Lyons Canyon between Rivendale Open Space, Towsley Canyon, and conserved areas to the northwest and west would remain possible due to the preservation of canyons and ridgelines within the Conservation Area. Rivendale Open Space and Towsley Canyon are the closest protected open space areas to the Calgrove Boulevard underpass, which could facilitate movement beneath I-5 and into Wildwood Canyon Open Space and Gates King Open Space. Additionally, the Resource Conservation District of the Santa Monica Mountains (RCDSMM) is working on a feasibility study for the Newhall Pass I-5 Wildlife Crossing, which is expected to provide connectivity between the Santa Susana Mountains and the San Gabriel Mountains. The Project site is at the northern limits of the study area and the potential locations being analyzed are south of the Project site, with the nearest location being near Towsley Canyon (approximately 0.6-mile south of the Project site), per communication with Clark Stevens, the Executive Officer at RCDSMM. The feasibility study uses indicator species that use a variety of habitats to model potential movement in the study area. Based on the discussion with Mr. Stevens, only one indicator species (greater roadrunner) was expected to have a high usage of the Project site during regional movement due to the onsite areas of chaparral and open woodland, of which the species is associated (Stevens, pers. comm., 2024).

4.6 Native Wildlife Nursery Sites

A colonial roost of canyon bats (*Parastrellus hesperus*) was detected during focused bat roost surveys, this roost is located within the on-site Conservation Area, approximately 400 feet west of the Project Footprint. Canyon bat is

not a special-status species, but a colony is a sensitive resource. The species prefers rocky canyon walls and cliffs in arid habitats and is active at any time of year (CDFW 2005). Canyon bat females either give birth alone or in small colonies of no more than a dozen individuals (Barbour 1969). The bat surveys were conducted in April and July, so it is assumed that the colony was a maternity colony since canyon bat females give birth in June and July (CDFW 2005). Most young are capable of flight in July (CDFW 2005).

4.7 Potential Jurisdictional Wetlands and Waters

The Project site is located within a single watershed, including a central unnamed blue-line drainage feature that originates in Lyon Canyon, west of the Project site. This feature, referred to as Drainage B, flows through the Project site in a southwesterly to northeasterly direction, and receives flows from eight tributaries, referred to as Drainages A and C and associated tributaries, within the Project site, including one additional blue-line drainage. Flows within this drainage complex are conveyed off site via an existing culvert beneath The Old Road and I-5 and flow approximately 4 miles to the northeast to the Santa Clara River via the South Fork of the Santa Clara River, and ultimately to the Pacific Ocean.

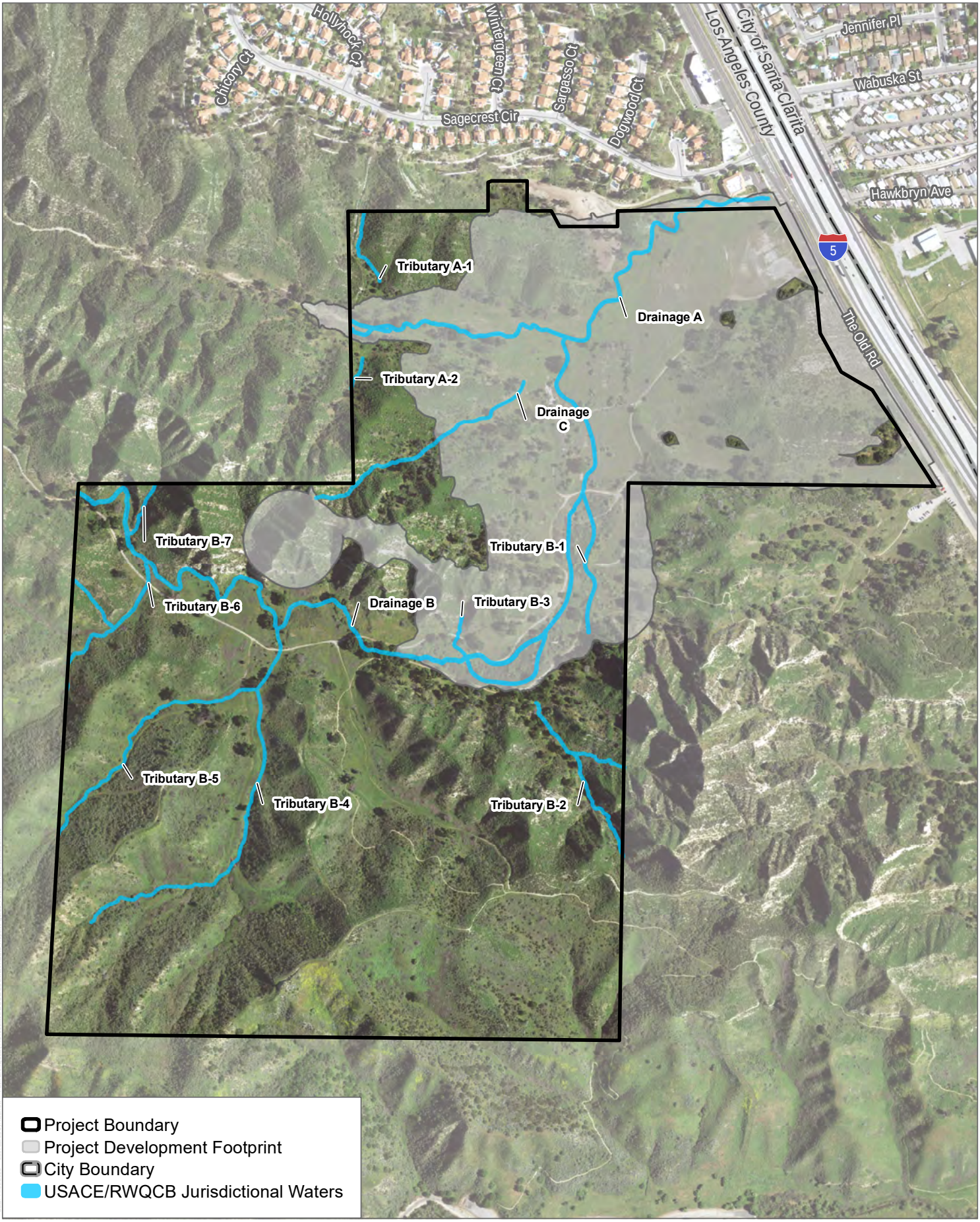
4.7.1 U.S. Army Corps of Engineers Jurisdiction

Table 10 summarizes potential USACE jurisdictional waters of the U.S. associated with the Project site and off-site areas, as shown in Figure 9, Potential Waters of the U.S. A description of the potential USACE jurisdictional drainage features associated with the Study Area is outlined below.

Table 10. Summary of Potential USACE Jurisdiction for the Study Area

Drainage Name	Area (Acres)		
	Non-Wetland Waters	Wetlands	Total
Project Site			
Drainage A	0.21	0.00	0.21
Tributary A-1	0.01	0.00	0.01
Tributary A-2	<0.01	0.00	<0.01
Drainage B (Lyons Canyon)	0.56	0.00	0.56
Tributary B-1	0.06	0.00	0.06
Tributary B-2	0.06	0.00	0.06
Tributary B-3	0.01	0.00	0.01
Tributary B-4	0.05	0.00	0.05
Tributary B-5	0.03	0.00	0.03
Tributary B-6	0.05	0.00	0.05
Tributary B-7	0.01	0.00	0.01
Drainage C	0.07	0.00	0.07
Totals[1]	**1.11**	**0.00**	**1.11**

Notes: [1] Totals may not add up due to rounding.



SOURCE: NAIP 2020, Open Streets Map 2019, Glen Lukos & Associates 2022

DUDEK

0 250 500 Feet

FIGURE 9

Potential Waters of the U.S.

Trails at Lyons Canyon Project

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Drainage A

Drainage A, including Tributaries A-1 and A-2, are considered potential non-wetland waters of the U.S. subject to Section 404 of the CWA. Drainage A is an earthen drainage feature located within the northern portion of the Project site. This feature is an historic blue-line drainage, as depicted on the Oat Mountain, California quadrangle. This feature enters the Project site from undeveloped land to the west and conveys flows west to east, where flows leave the Project site via an existing culvert beneath The Old Road and I-5. During field evaluations, this feature was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation, sediment sorting, and break in bank slope). As such, Drainage A and associated tributaries exhibit evidence of OHWM indicators and would be considered potential non-wetland waters of the U.S.

Vegetation associated with Drainage A consists of a mix of non-native grasses and forbs, such as bromes (Upland or Facultative Upland [UPL and FACU]), Mediterranean grass (*Schismus barbatus*; UPL), wild oat (UPL), and shortpod mustard (UPL). Several coast live oaks (UPL) are associated with the upper banks of this feature.

Drainage B (Lyons Canyon)

Potential USACE jurisdiction associated with the Drainage B, including Tributaries B-1, B-2, B-3, B-4, B-5, B-6, and B-7, are considered potential non-wetland waters of the U.S. subject to Section 404 of the CWA. Drainage B and associated tributaries is a drainage complex located within the central and southern portion of the Project site consisting of earthen channels. Drainage B is a historic blue-line drainage, as depicted on the Oat Mountain, California quadrangle. This feature enters the Project site from undeveloped land to the west and conveys flows west to northeast, where flows converge with Drainage A off the Project site. During field evaluations, this feature was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation, sediment sorting, water staining, and break in bank slope). As such, Drainage B and associated tributaries exhibit evidence of OHWM indicators and would be considered as potential non-wetland waters of the U.S.

Vegetation associated with Drainage B consists largely of a mix of phreatophytic hydrophytes, such as mule fat (Facultative [FAC]), Goodding's black willow (Facultative Wetland [FACW]), arroyo willow (FACW), and Fremont cottonwood (*Populus fremontii*; FAC) interspersed with unvegetated areas and areas vegetated with non-native grasses and forbs similar to those described for Drainage A, above. Several coast live oaks (UPL) are associated with the upper banks of this feature. Associated tributaries to Drainage B are largely vegetated with non-native grasses and forbs, with several coast live oaks associated with the upper banks.

Drainage C

Potential USACE jurisdiction associated with the Drainage C is considered potential non-wetland waters of the U.S. that are potentially subject to Section 404 of the CWA. Drainage C is an earthen drainage feature located within the central portion of the Project site. This feature originates within the Project site and conveys flows west to east, where surface flows dissipate prior to reaching downstream surface drainages. During field evaluations, this feature was dry but exhibited evidence of active flows (destruction of terrestrial vegetation and break in bank slope). As such, Drainage C exhibits evidence of OHWM indicators and would be considered as potential non-wetland waters of the U.S. Vegetation associated with Drainage C consists of a mix of non-native grasses and forbs with coast live oaks (UPL) associated with the upper banks of this feature.

4.7.2 Regional Water Quality Control Board Jurisdiction

The same areas identified as potential waters of the U.S. (i.e. areas subject to USACE jurisdiction) would be regulated by the RWQCB either pursuant to CWA Section 401 or Section 13050(e) of the California Water Code 13050, depending on the status of drainage features as waters of the U.S. Table 11 summarizes RWQCB jurisdiction within the Study Area and Figure 9 illustrates it.

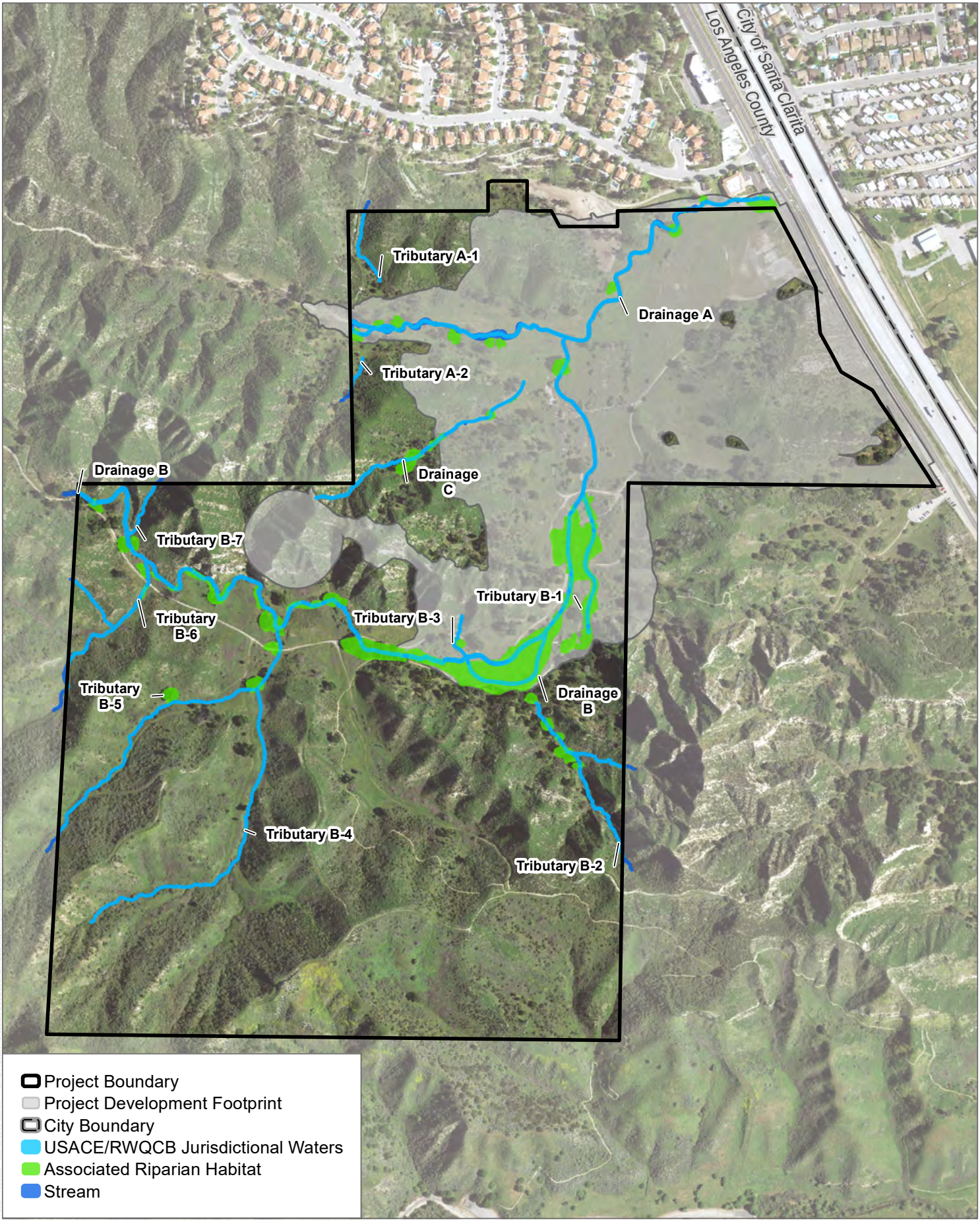
Table 11. Summary of RWQCB Jurisdiction for the Study Area

Drainage Name	Area (acres)			Linear Feet
	Non-wetland Waters	Wetlands	Total Acres	
Project Site				
Drainage A	0.21	0.00	0.21	2,469
Tributary A-1	0.01	0.00	0.01	380
Tributary A-2	<0.01	0.00	<0.01	159
Drainage B (Lyons Canyon)	0.56	0.00	0.56	5,506
Tributary B-1	0.06	0.00	0.06	703
Tributary B-2	0.06	0.00	0.06	1,184
Tributary B-3	0.01	0.00	0.01	236
Tributary B-4	0.05	0.00	0.05	2,016
Tributary B-5	0.03	0.00	0.03	1,323
Tributary B-6	0.05	0.00	0.05	1,022
Tributary B-7	0.01	0.00	0.01	293
Drainage C	0.07	0.00	0.07	1,213
Total[1]	**1.11**	**0.00**	**1.11**	**16,504**

Notes: RWQCB = Regional Water Quality Control Board.
[1] Totals may not add up due to rounding.

4.7.3 California Department of Fish and Wildlife Jurisdiction

As shown in Figure 10, Jurisdictional Streams and Associated Riparian Habitat, the Project site contains CDFW jurisdiction that consists of stream courses and riparian vegetation. Table 12 summarizes CDFW jurisdiction within the Project site. As areas of CDFW jurisdiction are determined by the outermost extent of the drip line of associated riparian canopy or top of bank measurement associated with non-riparian streambed, areas of CDFW jurisdiction represent SEA Water Resources within the Project site.



SOURCE: NAIP 2020, Open Streets Map 2019, Glen Lukos & Associates 2022

DUDEK

0 250 500 Feet

FIGURE 10

Jurisdictional Streams and Associated Riparian Habitat

Trails at Lyons Canyon Project

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Table 12. Summary of CDFW Jurisdiction for the Study Area

Drainage Name	Area (acres)		
	Non-riparian Streambed	Riparian Habitat	Total[1]
Project Site			
Drainage A	0.34	0.40	0.75
Tributary A-1	0.01	0.00	0.01
Tributary A-2	<0.01	0.00	<0.01
Drainage B (Lyons Canyon)	0.29	4.19	4.48
Tributary B-1	<0.01	0.91	0.91
Tributary B-2	0.05	0.25	0.30
Tributary B-3	0.01	0.04	0.05
Tributary B-4	0.04	0.16	0.20
Tributary B-5	0.03	0.08	0.11
Tributary B-6	0.04	0.06	0.10
Tributary B-7	0.01	0.00	0.01
Drainage C	0.05	0.24	0.29
Totals[1]	**0.86**	**6.33**	**7.19**

Notes: CDFW = California Department of Fish and Wildlife.
[1] Totals may not add up due to rounding.

Drainage A

Vegetation associated with Drainage A and its tributaries consists of a mix of non-native grasses and forbs, such as bromes, Mediterranean grass, wild oat, and shortpod mustard. Several coast live oaks are associated with the upper banks of this feature.

Drainage B (Lyons Canyon)

Vegetation associated with Drainage B and its tributaries consists largely of a mix of phreatophytes, such as mule fat, Goodding's black willow, arroyo willow, and Fremont cottonwood interspersed with unvegetated areas and areas vegetated with non-native grasses and forbs similar to those described for Drainage A, above. Several coast live oaks are associated with the upper banks of this feature. Associated tributaries to Drainage B are largely vegetated with non-native grasses and forbs, with several coast live oaks associated with the upper banks.

Drainage C

Drainage C is an earthen drainage feature located within the central portion of the Project site. Vegetation associated with Drainage C consists of a mix of non-native grasses and forbs with coast live oaks associated with the upper banks of this feature.

4.8 SEA Protected Trees

Table 13 provides a summary of the species mapped and evaluated within the Project site and Figure 11, SEA Protected Trees, shows the locations.

Table 13. Summary of SEA Protected Trees for the Study Area

Scientific Name	Common Name	Non-Heritage[1]	Heritage Trees
*Juglans californica**	Southern California black walnut*	17	0
Populus fremontii	Fremont cottonwood	15	0
Quercus agrifolia	coast live oak	478	46
Quercus berberidifolia	scrub oak	3	0
Quercus lobata	valley oak	13	5
Salix laevigata	red willow	24	0
Salix lasiolepis	arroyo willow	7	0
Sambucus nigra ssp. *caerulea*	blue elderberry	56	0
	Totals	**613**	**51**

Notes: *Southern California black walnut is a special-status species due to its California Rare Plant Rank of 4.2. This species is also ranked as G4 S4 species by the CNDDB, indicating it is uncommon but not rare.

For a detailed discussion of the SEA protected trees mapped within the Project site, including survey methods, size, and health rating, please see Appendix A.

4.9 County Oak Woodlands

Oak woodlands, as defined by the Los Angeles County Oak Woodlands Conservation Management Plan (County Planning 2011), constituted 24.40 acres of the Project site and 1.57 acres in the off-site brush thinning zone for a total of 27.71 acres, as shown in Figure 12, County Oak Woodlands. The oak woodlands consist of the *Quercus agrifolia* forest and woodland and additional areas where at least two oaks were together, as defined in the Los Angeles County Oak Woodlands Conservation Management Plan. The oak woodlands are primarily synonymous with the *Quercus agrifolia* forest and woodland description provided in Section 4.1 but were also found in areas where other species were dominant and defined the community per the Manual of California Vegetation, Second Edition.

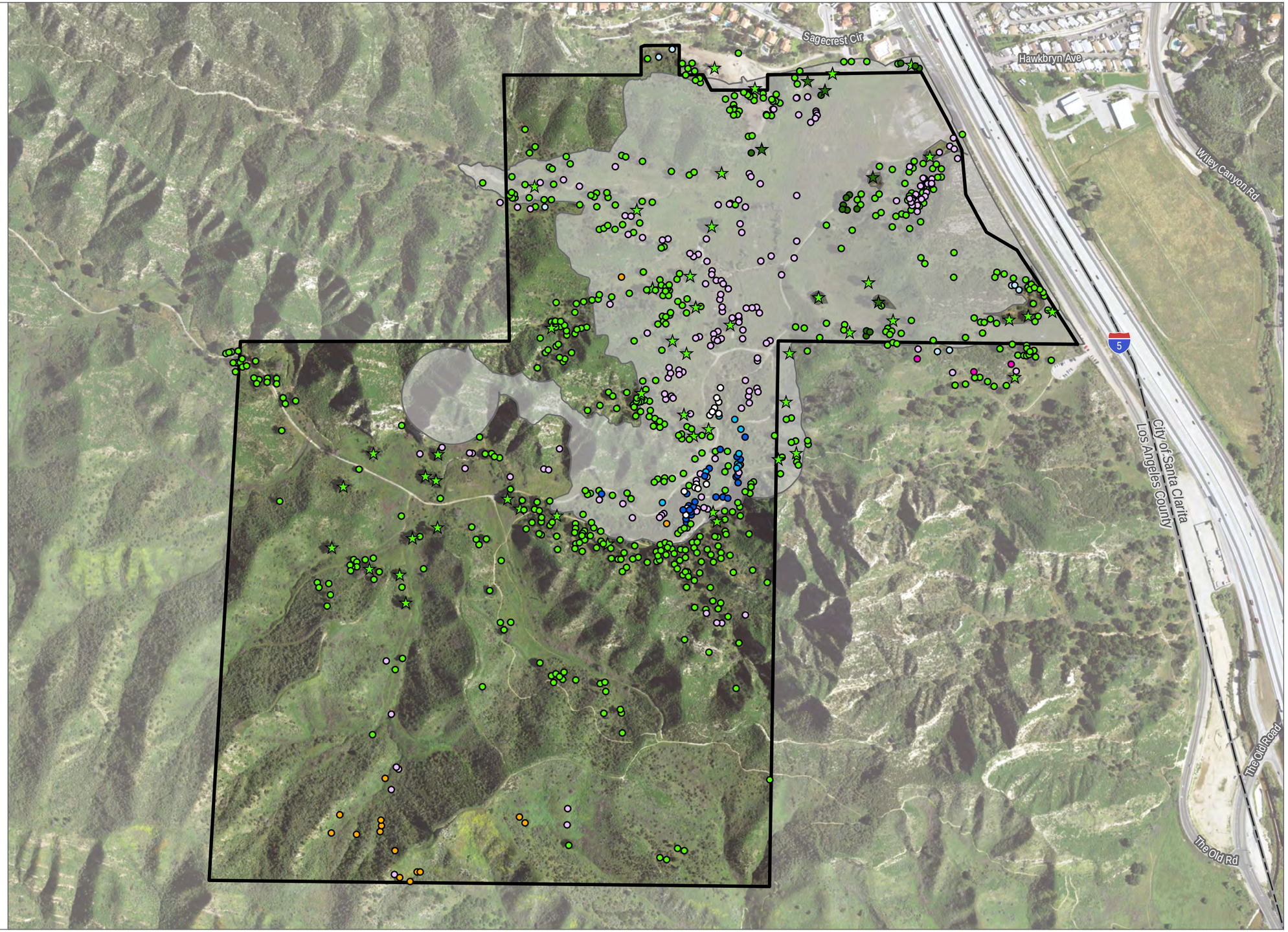
4.10 Local, Regional, or State Habitat Conservation Plans

The Study Area is not within any HCP, natural community conservation plan (NCCP), or other approved local, regional, or state HCP (CDFW 2019).

- Project Boundary
- Project Development Footprint
- City Boundary

Tree Species

- Arroyo Willow
- Blue Elderberry
- Fremont Cottonwood
- Red Willow
- Southern California Black Walnut
- Toyon
- Scrub Oak
- Coast Live Oak
- Heritage Coast Live Oak
- Valley Oak
- Heritage Valley Oak



SOURCE: ESRI World Imagery, Open Streets Map 2019, Glen Lukos and Associates 2022

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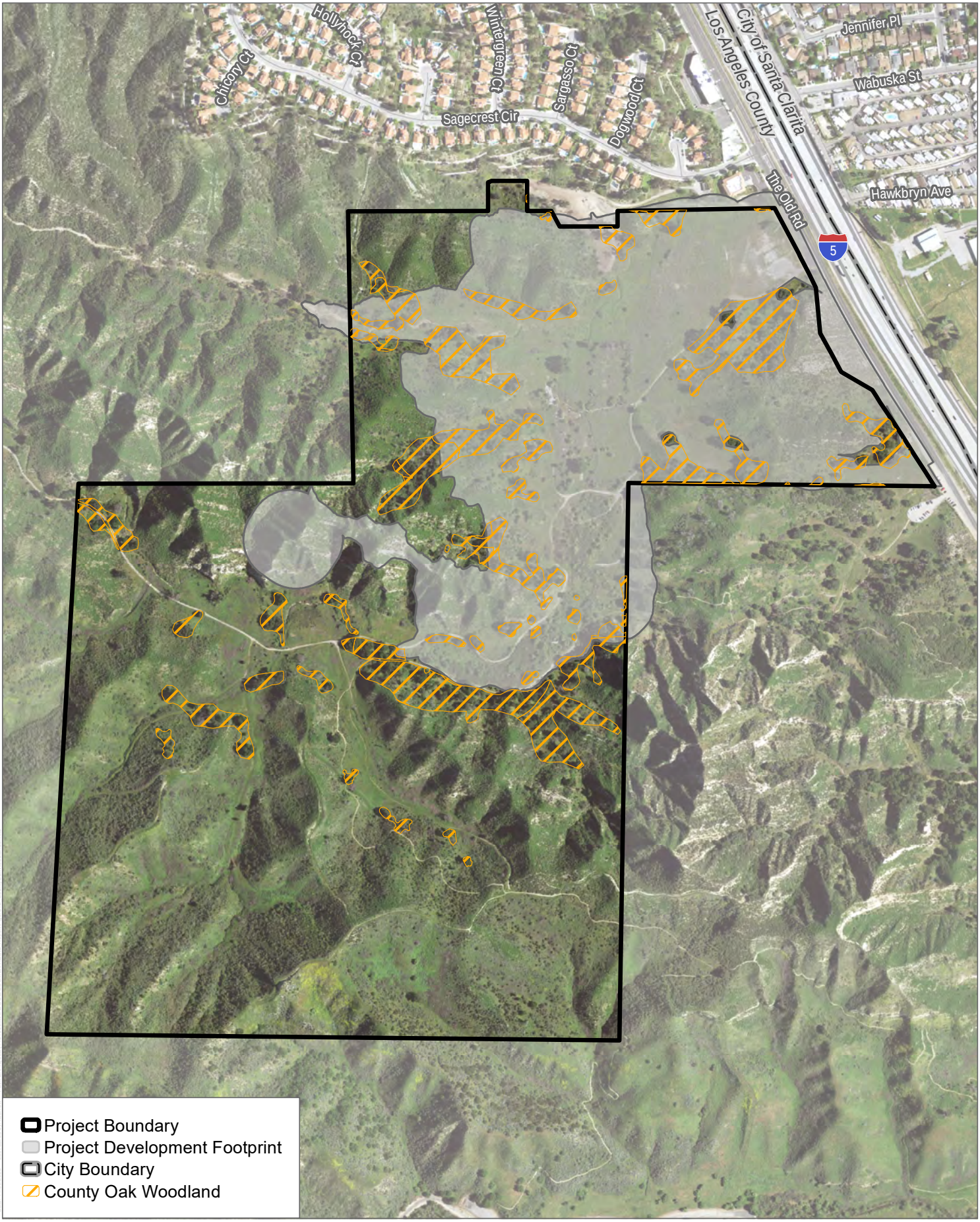
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FIGURE 11

SEA Protected Trees

Trails at Lyons Canyon Project

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SOURCE: ESRI World Imagery, Open Streets Map 2019, Glen Lukos and Associates 2022

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0 250 500 Feet

FIGURE 12

County Oak Woodlands

Trails at Lyons Canyon Project

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5 Project Impacts

This chapter addresses direct and indirect impacts to biological resources that would result from implementation of the proposed Project.

5.1 Definition of Impacts

5.1.1 Direct Permanent Impacts

Direct permanent impacts refer to the absolute and permanent physical loss of a biological resource due to clearing, grading, and/or construction of structures, which can be determined in four ways: (1) permanent loss of vegetation communities, land covers, and general wildlife and their habitat; (2) permanent loss of or harm to individuals of special-status plant and wildlife species; (3) permanent loss of suitable habitat for special-status species; and (4) permanent loss of wildlife movement and habitat connectivity.

5.1.2 Direct Temporary Impacts

Direct temporary impacts refer to a temporal loss of vegetation communities and land covers resulting from vegetation and land cover clearing. The main criterion for direct temporary impacts is that impacts would occur for a short period of time and would be reversible. Areas currently supporting native vegetation temporarily disturbed by construction activities would be restored and revegetated with a native species mix like that which existed prior to disturbance following completion of work in the area such that full biological function can be restored. Areas not currently supporting native vegetation would be adequately restored to prevent adverse effects such as erosion or establishment of invasive species following construction.

5.1.3 Indirect Impacts

Indirect impacts are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct construction disturbance zone that may occur during construction (i.e., short-term construction related indirect impacts) or later in time as a result of the development (i.e., long-term, or operational, indirect impacts). Indirect impacts may affect areas within the defined Study Area, but outside the construction disturbance zone. Indirect impacts include short-term effects immediately related to construction activities and long-term or chronic effects related to the human occupation of developed areas (i.e., development-related long-term effects) that are adjacent to naturalized areas.

For the proposed Project, it is assumed that the potential indirect impacts resulting from construction activities include fugitive dust from earthmoving activities, leaks or spills from construction equipment, noise from construction activities, and general human presence that may temporarily disrupt species and habitat vitality in developed areas as well as on recreational trails, as well construction-related soil erosion and runoff that could affect downstream resources.

5.1.4 Cumulative Impacts

"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a

single project or several separate projects. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period (Cal. Code Regs. tit. 14 § 15355).

5.1.5 Explanation of Project Consistency with SEA CUP Compatibility Criteria

When development does not meet the SEA Development Standards, an SEA CUP is required to consider whether the project is compatible with the goals and policies of the SEA Program. The natural open space preservation requirement for SEA CUPs is dependent on the amount of proposed development, degree of impact, type and quality (e.g., intactness) of SEA Resources being disturbed, location, and setting of those SEA Resources, and the project's ability to address the SEA Findings. Development in the SEAs must demonstrate how the proposed development is designed to:

- Be highly compatible with the SEA Resources, including the preservation of natural open space areas and providing for the long-term maintenance of ecosystem functions;
- Avoid or minimize impacts to the SEA Resources and wildlife movement through one or more of the following: avoiding habitat fragmentation, minimizing edge effects, or siting development in the least sensitive location;
- Buffer important habitat areas from development by retaining sufficient natural vegetation cover and/or natural open spaces and integrating sensitive design features;
- Maintain the ecological and hydrological functions of water bodies, watercourses, and their tributaries;
- Ensure that roads, access roads, driveways, and utilities do not conflict with Priority Biological Resources, habitat areas or migratory paths; and
- Promote the resiliency of the SEA to the greatest extent possible. For purposes of this finding, SEA resiliency cannot be preserved when the proposed development may cause any of the following:
  - Significant unmitigated loss of contiguity or connectivity of the SEA;
  - Significant unmitigated impact to a Priority Biological Resource;
  - Removal of habitat that is the only known location of a new or rediscovered species; or
  - Other factors as identified by SEATAC.

5.1.6 Explanation of Findings of Significance Under CEQA

Impacts to sensitive vegetation communities or riparian habitat, special-status plant species, special-status wildlife species, wildlife corridors and habitat connectivity, and regional resource planning must be analyzed to determine whether such impacts are significant. CEQA Guidelines Section 15064(b) states that an ironclad definition of "significant" effect is not possible because the significance of an activity may vary with the setting. However, CEQA Guidelines Section 15065(a) lists impacts that are helpful in defining whether a project may have a significant effect on the environment. Mandatory findings of significance occur when there is substantial evidence that a project could: (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or wildlife community, or (5) reduce the number or restrict the range of a rare or endangered plant or wildlife.

The following are the significance thresholds for biological resources provided in the CEQA Appendix G environmental checklist, which states that a project would potentially have a significant effect if it:

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS?

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites?

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Would the project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

The evaluation of whether an impact to a particular biological resource is significant must consider both the resource itself and the role of that resource in a regional context. Substantial impacts are those that contribute to, or result in, permanent loss of an important resource, such as a population of a rare plant or wildlife. Impacts may be important locally because they result in an adverse alteration of existing site conditions but considered not significant because they do not contribute substantially to the permanent loss of that resource regionally. The severity of an impact and the offsetting benefits of mitigation are the primary determinants of whether that impact can be mitigated to a less-than-significant level.

5.2 Impacts to Vegetation Communities

Table 14 summarizes the Project's on-site and off-site direct impacts to vegetation communities and land covers, as shown in Figure 4. Direct impacts would occur due to removal of vegetation, alteration of soils from grading, and the development of the Project. Additional impacts to *Brassica nigra-Centaurea melitensis* would occur due to proposed habitat restoration in the Conservation Area. Impacts to sensitive vegetation communities would substantially degrade the quality of the environment and would be significant under CEQA and require mitigation. Impacts to SEA Resource Categories 1 through 4 would not comply with the SEA Ordinance and would require preservation.,

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Table 14. Impacts to Vegetation Communities on the Project Site and Off-Site

Alliance	On-Site Impact (acres)	Off-Site Impact (acres)	Total Impacts (acres)	Preservation Ratio[1]	Preserved Land Needed	Preserved Acres On-Site[2]	Off-Site Preserved Acres Needed
SEA Resource Category 1							
Baccharis salicifolia Shrubland[3, 4]	2.43	0	2.43	5:1	12.17	0.52	11.65
Salix gooddingii–Salix laevigata Forest and Woodland[3, 4]	1.24	0	1.24	5:1	6.22	0	6.22
Sub-Totals:	*3.68*	*0*	*3.68*	5:1	*18.39*	*0.52*	*17.87*
SEA Resource Category 3							
Ericameria palmeri Provisional Shrubland[3]	0.67	0	0.67	3:1	2.00	0	2.00
Eriodictyon crassifolium Provisional Shrubland[3]	0.42	0	0.42	3:1	1.25	0.41	0.84
Juglans californica Forest and Woodland[3]	0	0	0	3:1	0	0.09	0
Nassella (*Stipa*) spp.–*Melica* spp. Herbaceous[3]	0.07	0	0.07	3:1	0.20	0	0.20
Quercus agrifolia Forest and Woodland	12.02	1.57	13.59	3:1	40.78	10.28	30.50
Rhus trilobata–Crataegus rivularis–Forestiera pubescens Shrubland[3]	0.02	0.01	0.03	3:1	0.08	0.01	0.07
Sub-Totals:	*13.20*	*1.57*	*14.77*	3:1	*44.31*	*10.79*	*33.61*
SEA Resource Category 4[5]							
Adenostoma fasciculatum Shrubland	26.85	0.60	27.44	2:1	54.50	64.88	0
Adenostoma fasciculatum Shrubland–Disturbed	0	0	0	2:1	0	9.73	0

Table 14. Impacts to Vegetation Communities on the Project Site and Off-Site

Alliance	On-Site Impact (acres)	Off-Site Impact (acres)	Total Impacts (acres)	Preservation Ratio[1]	Preserved Land Needed	Preserved Acres On-Site[2]	Off-Site Preserved Acres Needed
Artemisia californica–Salvia leucophylla Shrubland	0.39	0	0.39	2:1	0.78	28.01	0
Artemisia californica–Salvia leucophylla Shrubland–Disturbed	0	0	0	2:1	0	10.66	0
Avena spp.–*Bromus* spp. Herbaceous Semi-natural	0	0	0	2:1	0	2.62	0
Distichlis spicata Herbaceous	0.07	0	0.07	2:1	0.14	0.07	0
Eriogonum davidsonii/Croton setiger Grassland	0.97	0	0.97	2:1	1.94	0	0
Eriogonum fasciculatum Shrubland	2.26	1.26	3.53	2:1	6.74	0.01	0
Sub-Totals:	*30.54*	*1.86*	*32.40*	2:1	*64.80*	*115.98*	*0*
SEA Resource Category 5[5]							
Brassica nigra–Centaurea melitensis Herbaceous Semi-natural Stands	34.15[6]	1.46	35.61	NA	NA	16.24[6]	NA
Non-SEA Resource Category							
Developed	1.61	1.27	1.85	NA	NA	1.31	NA
Total	**83.17**	**6.17**	**89.31**	**NA**	**127.50**	**144.43**	**NA**

Notes: SEA = Significant Ecological Area; NA = not available.
Totals may not add up due to rounding.

1 SEA Ordinance Implementation Guide (County Planning 2020).
2 Within the Conservation Area.
3 Considered as a sensitive community or riparian habitat under the California Environmental Quality Act.
4 Considered a Category 1 due to association with a Water Resource.
5 Category Resource 4 and 5 vegetation communities can be preserved with out-of-kind communities of the same category or a higher value category.
6 An additional 16.24 acres could be impacted due to restoration activities within the Conservation Area.

With the implementation of MM-BIO-1, On-site Vegetation Communities/Habitat Preservation, the remaining vegetation communities on the Project site outside of the Project Footprint, within the Conservation Area, would be preserved in perpetuity. MM-BIO-2, Off-site Vegetation Communities/Habitat Preservation, would provide preservation of communities or appropriate similar communities with comparable ecological value in off-site parcels that would have conservation easements established. MM-BIO-3, Habitat Mitigation and Monitoring Plan, would be implemented to restore and enhance these preserved vegetation communities. As such, MM-BIO-1, MM-BIO-2, and MM-BIO-3 would provide sufficient preservation to comply with the SEA Ordinance and direct impacts to sensitive vegetation communities would be reduced to less than significant under CEQA.

MM-BIO-4, Biological Monitoring, MM-BIO-5, Demarcation of Disturbance Limits, and MM-BIO-6, Invasive Species Prevention, would avoid inadvertent impacts to vegetation communities by providing an on-site biologist to ensure mitigation measures are implemented, confining Project activities to the defined Project Footprint and avoiding the introduction of invasive plant species. Temporary impacts could occur from generation of fugitive dust during construction that could cover leaves and limit photosynthesis; however, it is expected the Project would comply with the South Coast Air Quality Management District's Rule 403 (Fugitive Dust). With the implementation of MM-BIO-4, MM-BIO-5, and MM-BIO-6, inadvertent direct impacts to SEA Resources would be avoided and minimized and inadvertent direct impacts to sensitive vegetation communities would be reduced to less than significant.

Indirect impacts could occur through the introduction of invasive, non-native plant species for the long-term landscaping of the completed Project. MM-BIO-7, Landscaping Plan, would require that steps be taken to avoid and minimize the introduction of invasive, non-native plant species during construction and operation of the Project. Indirect impacts could also occur during the operations of the Project by the residents of the proposed housing. MM-BIO-8, Homeowners' Association Covenants, Conditions, and Restrictions, would provide rules that avoid and minimize actions by the residents that could be detrimental With the implementation of MM-BIO-7 and MM-BIO-8, and compliance with existing rules, indirect impacts to vegetation communities would be reduced to less than significant and provides the necessary acres of preservation for the Project to be compatible with SEA Resources.

Sensitive Vegetation Communities

SEA Resource Category 1 Communities

The Project will impact *Baccharis salicifolia* Shrubland Alliance and *Salix gooddingii–Salix laevigata* Forest and Woodland Alliance, which are considered Resource Category 1 due to being associated with a Water Resource (County Planning 2020). Impacts to these communities would not be compatible with SEA Resources. *Salix gooddingii–Salix laevigata* Forest and Woodland Alliance is also considered sensitive (NatureServe 2021), and impacts to this communities would be significant under CEQA due to substantial degradation of the quality of the environment. These communities would be mitigated at a minimum ratio of 5:1. Proposed mitigation includes a combination of on-site preservation (MM-BIO-1, through a conservation easement) and off-site preservation (MM-BIO-2) of the two communities or appropriate similar Resource Category 1 riparian scrub communities with comparable ecological value to satisfy the County SEA preservation requirements. As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-4, MM-BIO-5, and MM-BIO-6, impacts to these communities would be reduced to less than significant and provides the necessary acres of preservation for the Project to be compatible with SEA Resources.

SEA Resource Category 3 Communities

Five Resource Category 3 vegetation communities would be impacted by the Project: *Ericameria palmeri* Provisional Shrubland, *Eriodictyon crassifolium* Provisional Shrubland, *Juglans californica* Forest and Woodland, *Nassella* (*Stipa*) spp.–*Melica* spp. Herbaceous, *Quercus agrifolia* Forest and Woodland, and *Rhus trilobata–Crataegus rivularis–Forestiera pubescens* Shrubland. Impacts to these communities would not be compatible with SEA Resources. Four of these communities are also considered sensitive (NatureServe 2021), and impacts to these communities would be significant under CEQA due to substantial degradation of the quality of the environment. These communities would be mitigated at a minimum ratio of 3:1. Proposed mitigation includes a combination of on-site preservation (MM-BIO-1, as managed in perpetuity through a conservation easement), off-site preservation (MM-BIO-2) of the communities or appropriate similar Resource Category 3 communities with comparable ecological value, and on-site restoration (MM-BIO-3) to satisfy the County SEA preservation requirements. MM-BIO-4 As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, and MM-BIO-6, impacts to these communities would be reduced to less than significant and provides the necessary acres of preservation for the Project to be compatible with SEA Resources.

Non-Sensitive Vegetation Communities

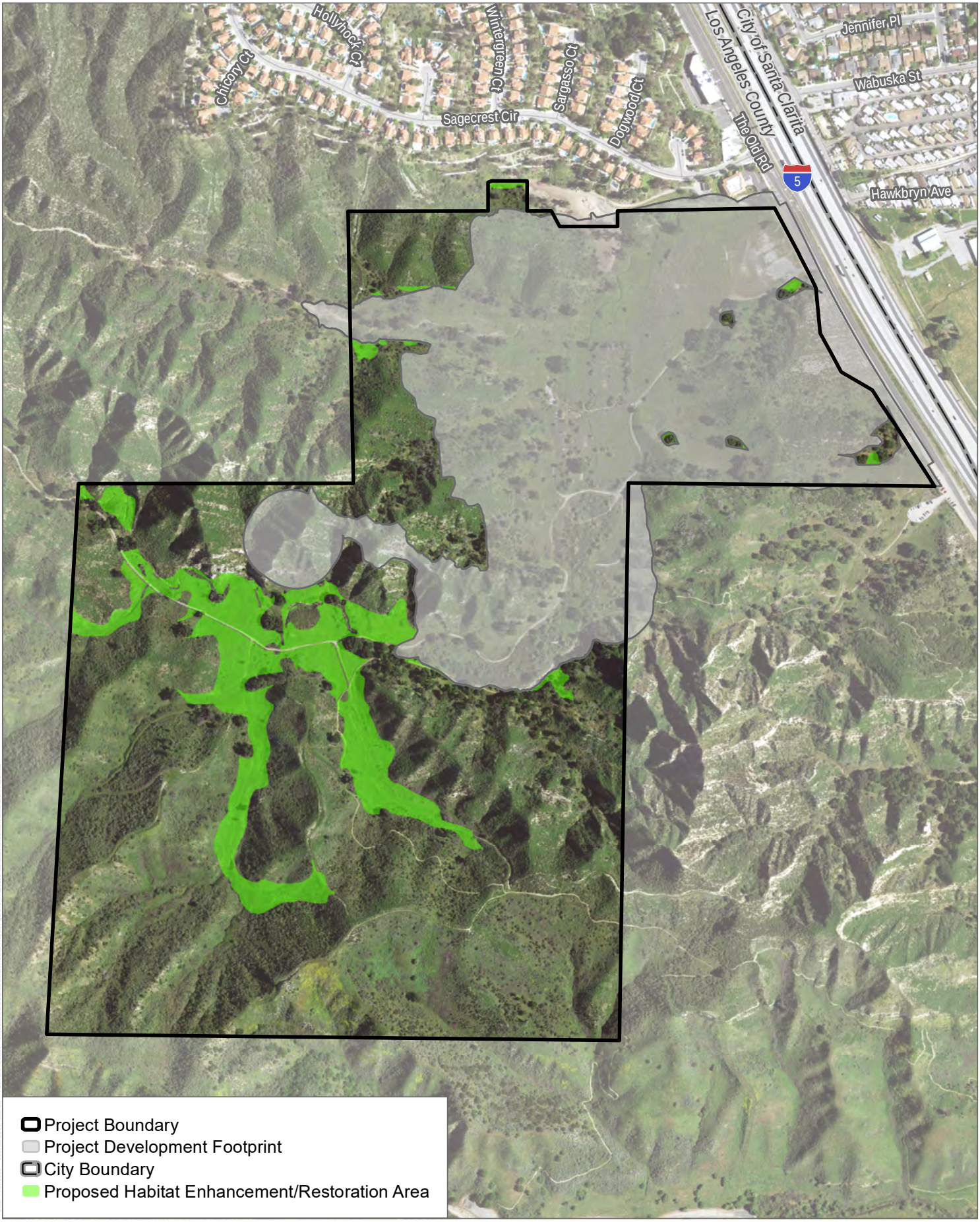
SEA Resource Category 4 and 5 Communities

Eight Resource Category 4 vegetation communities (*Adenostoma fasciculatum* Shrubland, *Adenostoma fasciculatum* Shrubland–Disturbed, *Artemisia californica–Salvia leucophylla* Shrubland, *Artemisia californica–Salvia leucophylla* Shrubland–Disturbed, *Avena* spp.–*Bromus* spp. Herbaceous Semi-natural, *Distichlis spicata* Herbaceous, *Eriogonum davidsonii/Croton setiger* Grassland, and *Eriogonum fasciculatum* Shrubland) and one Category 5 vegetation community (*Brassica nigra–Centaurea melitensis* Herbaceous Semi-natural Stands) would be impacted by the Project. An additional 16.47 acres of *Brassica nigra–Centaurea melitensis* Herbaceous Semi-natural Stands may be impacted in the Conservation Area (see Figure 13, Proposed Habitat Enhancement/Restoration Areas, for potential locations) due to the establishment of SEA Resource Category 3 vegetation communities (MM-BIO-3).

None of the SEA Resource Category 4 and 5 communities are considered sensitive by CDFW (NatureServe 2021); however, these impacts are significant under the SEA Ordinance. Category 4 communities would be mitigated at a minimum of 2:1. No preservation ratio is needed for Category 5 resources if the values that are supported (such as movement opportunities) are preserved by the project. Additionally, Category 5 resources can be converted to restoration areas to help mitigate for impacts to higher value categories if their setting and configuration lend themselves to effective restoration. The preservation of Category 4 and 5 communities within the Conservation Area (MM-BIO-1, as managed in perpetuity through a conservation easement) provides the necessary acres of preservation of those resources for the Project to be compatible with SEA Resources.

5.3 Impacts to Special-Status Plants

The proposed Project will impact six non-listed special-status plant species, as shown in Figure 6: club-haired mariposa lily (CRPR 4.3; Category 4), Peirson's morning glory (CRPR 4.2; Category 4), Plummer's mariposa lily (CRPR 4.2; Category 4), scarlet keckiella (Sensitive Native Local Resource; Category 3), slender mariposa lily (CRPR 1B.2; Category 1), and Southern California black walnut (CRPR 4.2; Category 4). Black walnut impacts, preservation, and mitigation are discussed in the context of SEA Protected Trees (see Section 6.14). Impacts to the remaining five



SOURCE: NAIP 2020, Open Streets Map 2019, Glen Lukos & Associates 2022

DUDEK

0 250 500 Feet

FIGURE 13

Proposed Habitat Enhancement/Restoration Areas

Trails at Lyons Canyon Project

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species (club-haired mariposa lily, Peirson's morning glory, Plummer's mariposa lily, scarlet keckiella, and slender mariposa lily) would occur due to the loss of individuals and habitat that supports bulbs and the seedbank of the species during vegetation removal and grading. Impacts would be significant under CEQA by reducing the numbers of rare plant species and would not be compatible with SEA Resources. Table 15 summarizes the impacts to each of the species and the proposed preservation required.

Table 15. Impacts to Special-Status Plants

Species	Category	Preservation Ratio[1]	Impacted	Preserved[1]	Additional Preservation Needed (Individuals)
club-haired mariposa lily	4	2:1	15	100	0
Peirson's morning glory	4	2:1	300	0	600
Plummer's mariposa lily	4	2:1	67	6	134
scarlet keckiella	3	3:1	19[2]	13	44
slender mariposa lily	1	5:1	6	5	25

Notes:
1 Per the Significant Ecological Area Ordinance Implementation Guide.
2 Individuals documented in the proposed Conservation Area (MM-BIO-1).
3 18 on the Project site and 1 in the off-site brush thinning zone.

MM-BIO-9, Special-Status Plants Seed and Bulb Survey, Salvage and Translocation, would provide a program to collect, propagate, and disseminate these species into the Conservation Area (see Figure 13). MM-BIO-1 would demonstrate recordation of a conservation easement for the Conservation Area where the seeds and bulbs would be translocated within the On-site Conservation Area. MM-BIO-3 would improve the conditions of portions of the Conservation Area where seeds and bulbs could be translocated. MM-BIO-4 would provide monitoring to avoid any inadvertent impacts. MM-BIO-5 would delineate the Project Footprint to help avoid any inadvertent impacts to special-status plants. MM-BIO-6 and MM-BIO-7 would minimize the introduction of non-native plant species that could compete for habitat space with special-status species. As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-4, MM-BIO-5, MM-BIO-6, and MM-BIO-9, impacts to these species would be reduced to less than significant and provide the necessary acres of preservation for the Project to be compatible with SEA Resources.

5.4 Impacts to Special-Status Wildlife

Appendix G(a) of the CEQA guidelines asks if a project is likely to "have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service." For the purpose of this biological technical report, several factors were considered when determining whether the Project would have a substantial adverse effect on a special-status species, including the range/distribution of the species, the relative sensitivity of the species, the size and geographic context of the Project site, the amount of habitat for each species, and the context of use of the site. The loss of habitat for a special-status species is not considered as a substantial adverse effect, and therefore not considered a potentially significant impact, simply because there is an impact. That impact must also be shown to have a substantial adverse effect on the resource. In the case of an individual species, the effect of the habitat loss must be substantial and adverse relative to the range of the species (i.e., that the loss of habitat by a particular development activity

would adversely affect the species as a whole, and not simply the affect that a development activity would have on a specific population).

Invertebrates

The Project will remove habitat with the potential to support three special-status invertebrate species, specifically Crotch bumble bee (Candidate for State listing; Category 1), monarch butterfly (Federal Candidate), and the Pacoima shoulderband.

Crotch Bumble Bee

Crotch bumble bee typically nests underground, so nesting individuals could be highly vulnerable to injury and mortality during construction, which could crush nests and individuals, if present on site. Harm to or the loss of individuals during construction could be significant under CEQA due to reducing the numbers of a rare wildlife species and would require mitigation. MM-BIO-10, Crotch Bumble Bee Pre-Construction Surveys, would require pre-construction surveys for Crotch bumble bee nests, with buffers established around active nests until the nests are deemed inactive.

Crotch bumble bee is a generalist forager and could forage anywhere on site where suitable floral resources are present. The proposed Project would impact 18.31 acres of habitat with the potential to support foraging by California Crotch bumble bee (SC; Category 1) in the form of coastal scrub, oak woodland, herbaceous, and grassland habitats. Impacts to 18.31 acres of habitat with the potential to support this species would be a significant impact prior to mitigation under CEQA and the Project would not be compatible with SEA Resources. SEA Guidelines recommend preservation of suitable habitat at a 5:1 mitigation ratio, for a total of 91.55 acres of recommended preservation of suitable habitat for this species. As proposed by MM-BIO-1, the Project would preserve 144.43 acres of native coastal scrub, chaparral, oak woodland, herbaceous, and grassland communities on-site within the Conservation Area that would provide nesting and foraging opportunities for the species. Additional habitat preservation would be provided through implementation of MM-BIO-2.

Indirect impacts to Crotch bumble bee could occur due to the use of herbicides and pesticides, and competition with western honeybee (*Apis mellifera*) (The Xerces Society 2018). The use of herbicides to control weeds can indirectly harm Crotch bumble bee through removal of flowering species that once provided them with pollen and nectar resources (The Xerces Society 2018). Foraging bumble bees can be poisoned by pesticides when they absorb toxic substances directly through their exoskeleton, drink contaminated nectar, gather contaminated pollen, or when larvae consume contaminated pollen (The Xerces Society 2018). MM-BIO-1 shall require a Conservation Management Plan (CMP) for the Conservation Area, and it shall include a condition that discourages herbicides and pesticides, and only CDFW-approved herbicides and pesticides may be used. Research has documented that under controlled conditions, honeybees displaced native bees from flowers, altered the suite of flowers that native bees were visiting, had a negative impact on native bee reproduction, and increased the spread of disease between bees (The Xerces Society 2018). The CMP required by MM-BIO-1 shall also have a condition that no commercial bee operations be allowed to use the Conservation Area for storing their apiaries,

MM-BIO-1 shall demonstrate recordation of a conservation easement for the On-Site Conservation Area, and with MM-BIO-2 would preserve areas that are expected to provide forage and nest locations. MM-BIO-3 would improve the conditions of portions of the Conservation Area by providing additional foraging opportunities. MM-BIO-4 would provide monitoring to avoid any inadvertent impacts to potential foraging opportunities by ensuring inadvertent impacts outside of the Project footprint and mitigation measures are implemented. MM-BIO-5 would delineate the

Project footprint to help avoid any inadvertent impacts to foraging opportunities by avoiding additional impacts to native vegetation. MM-BIO-6 and MM-BIO-7 would avoid and minimize the introduction of non-native plant species that could compete for habitat space with plants that the species forages on by ensuring that vehicles and equipment used during construction are weed free and prohibiting the use of invasive species in the landscaping. MM-BIO-10 would avoid direct impacts to nests by requiring pre-construction surveys and avoidance buffers. As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-4, MM-BIO-5, MM-BIO-6, MM-BIO-7, and MM-BIO-10, impacts to Crotch bumble bee would be reduced to less than significant and provides the necessary preservation for the Project to be compatible with SEA Resources.

Monarch

Suitable overwintering habitat for monarch does not occur within the Project Footprint, and no distinctive stands of milkweed host plants were noted occurring within the Project footprint, so no direct take of monarch butterfly is expected to occur as a result of the proposed Project. The proposed Project would impact approximately 18.31 acres of habitat with the potential to support foraging monarch butterfly (FC, Category 1) during spring and summer months. Suitable spring and summer foraging habitat occur within the Project site in the form of arid scrub, oak woodland, herbaceous, and grassland habitats. Impacts to 18.31 acres of foraging habitat with the potential to support this species would be a significant impact prior to mitigation under CEQA and the Project would not be compatible with SEA Resources. SEA guidelines recommend preservation of suitable habitat at a 5:1 mitigation ratio, for a total of 91.55 acres of recommended preservation of suitable habitat for this species. As proposed, the Project would preserve 144.43 acres of native arid scrub, chaparral, oak woodland, herbaceous, and grassland communities on-site within the Conservation Area. Given that the Conservation Area is contiguous with large tracts of conserved open natural space that exhibit similar levels of habitat suitability, the on-site conserved habitat possesses added value in that it represents a valuable habitat linkage for monarch butterfly. Additionally, the Conservation Area represents a significant topographical component of a viable wildlife corridor that can benefit long-term movement and genetic health of the species by allowing for foraging and dispersal opportunities between the Santa Susana Mountains/Simi Hills and the San Gabriel Mountains. SEA guidelines recommended preservation would be addressed making the Project compatible with SEA Resources and would reduce proposed impacts to below a level of significance under CEQA.

Direct and Indirect impacts to individual monarch could occur due to the use of herbicides and pesticides, and the establishment of non-native milkweed species (The Xerces Society 2014). The use of herbicides to control weeds can indirectly harm monarch through killing host milkweeds and altering nectar plant quality and abundance (The Xerces Society 2014). Larvae and adults, and under some circumstances, eggs and pupae, of monarch can be killed or impaired by exposure to pesticides via contact from overspray, drift of spray particles and vapor, runoff, dust, and through ingestion of pesticide-contaminated food and water (The Xerces Society 2014). MM-BIO-1 shall require a CMP for the Conservation Area, and it shall include a condition that discourages herbicides and pesticides, and only CDFW-approved herbicides and pesticides may be used. Tropical or scarlet milkweed (*Asclepias curassavica*) is a non-native milkweed that is often planted in backyard gardens and its leaves do not die back at the end of summer as do native milkweeds. In the absence of winter dieback, spores of the parasite *Ophryocystis elektroscirrha* accumulate on leaves over time and spread infections to monarch larvae (The Xerces Society 2014). With the implementation of MM-BIO-6 and MM-BIO-7, indirect impacts from non-native milkweeds would be avoided and minimized.

MM-BIO-1 shall demonstrate recordation of a conservation easement for the On-Site Conservation Area, and with MM-BIO-2 would preserve areas that are expected to provide foraging and breeding opportunities. MM-BIO-3 would

improve the conditions of portions of the Conservation Area by providing additional foraging and breeding opportunities. MM-BIO-4 would provide monitoring to avoid any inadvertent impacts to potential foraging opportunities. MM-BIO-5 would delineate the Project footprint to help avoid any inadvertent impacts to foraging and breeding opportunities. MM-BIO-6 and MM-BIO-7 would minimize the introduction of non-native plant species that could compete for habitat space with plants that the species forages and breeds on. As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-4, MM-BIO-5, MM-BIO-6, and MM-BIO-7, impacts to monarch would be reduced to less than significant and provides the necessary preservation for the Project to be compatible with SEA Resources.

Reptiles

The Project will remove habitat that supports or has the potential to support several special-status reptile species: California glossy snake, California legless lizard, Blainville's horned lizard, and coastal whiptail, which are all SEA Resource Category 2. Direct impacts to these species include being struck by moving vehicles or equipment if present on-site during construction. These species are also vulnerable to mortality or injury during vegetation and ground disturbing activities associated with construction because they tend to be cryptic, slow moving, and below ground or under rocks or debris during cooler periods. Indirect impacts to these species would be from the substantial loss of foraging and breeding habitat, as shown in Table 16, and would be significant under CEQA prior to mitigation and the Project would not be compatible with SEA Resources.

Table 16. Impacts to Special-Status Reptiles

Species	Category	Preservation Ratio	Impacted Habitat (acres)	Preserved Habitat Needed (acres)	On-site Preserved Habitat [1] (acres)
California glossy snake	2	4:1	34.27	137.08	115.49
California legless lizard	2	4:1	17.38	69.52	51.05
Blainville's horned lizard	2	4:1	5.11	20.44	39.07
coastal whiptail	2	4:1	34.27	137.08	115.49

Notes:
[1] Habitat within the proposed Conservation Area (MM-BIO-1).

MM-BIO-1 shall demonstrate recordation of a conservation easement for the On-Site Conservation Area, and with MM-BIO-2, shall preserve areas that are expected to provide forage and breeding opportunities. Per Chapter 8 of the SEA Ordinance Implementation Guide, proposed mitigation areas that fall short of SEA recommended mitigation ratios may be given added conservation value should they possess the following characteristics (County Planning 2020):

> "Added value" can be given to proposed natural open space areas if they also contain unique or valuable habitat linkage resources, additional special-status species, surface waters, or sensitive habitats, etc. Proposed open-space with such added-value characteristics may be allowed to be smaller than the area that would typically be required and still be determined to be consistent with the SEA Program goals subject to the discretion of the Department and a determination of consistency with the SEA Findings by SEATAC."

Given that the proposed 144.43-acre Conservation Area is contiguous with large tracts of conserved open natural space (Santa Clarita Woodlands Park, Rivendale Open Space, Ed Davis Park, and other Mountains Recreation and Conservation Authority managed lands) that exhibit similar levels of habitat suitability, the 144.43 acres of conserved habitat possesses added value in that it represents a valuable habitat linkage for wildlife. Additionally, the Conservation Area represents a significant topographical component of a viable wildlife corridor that can benefit long-term movement and genetic health of the species by allowing for breeding, foraging, and dispersal opportunities between the Santa Susana Mountains/Simi Hills and the San Gabriel Mountains.

MM-BIO-11, Special-Status Wildlife Relocation Plan, would provide a methodology for pre-construction surveys, and relocation of individuals. MM-BIO-3 would improve the conditions of portions of the Conservation Area by providing additional foraging and breeding opportunities. MM-BIO-4 would provide monitoring to avoid any inadvertent impacts to potential foraging and breeding opportunities. MM-BIO-5 would delineate the project footprint to help avoid any inadvertent impacts to foraging and breeding opportunities. MM-BIO-6 and MM-BIO-7 would minimize the introduction of non-native plant species that could compete for habitat space with plants that the species' prey forages on. As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-4, MM-BIO-5, MM-BIO-6, MM-BIO-7, MM-BIO-8, and MM-BIO-10, impacts to special-status reptiles would be reduced to less than significant and provides the necessary preservation for the Project to be compatible with SEA Resources.

Birds

The Project will remove nesting habitat that supports or has the potential to support several special-status bird species, which would not be compatible with SEA Resources. Additionally, common bird species protected under MBTA and California Fish and Game Code could nest on the Project site and direct impacts could occur to this species by the removal of active nests that result in mortality to eggs or nestlings. Indirect impacts would include construction activities causing adults to abandoned active nests and in the loss of breeding and foraging habitat. Indirect impacts would also occur due to the substantial loss of potential breeding and foraging habitat, as shown in Table 17, which would not be compatible with SEA Resources.

Table 17. Impacts to Special-Status Birds Nesting Habitat

Species	Category	Preservation Ratio	Impacted Habitat (acres)	Preserved Habitat Needed (acres)	Preserved Habitat[1] (acres)
Cooper's hawk	3	3:1	13.09	39.27	12.11
Southern California rufous-crowned sparrow	3	3:1	33.16	99.48	112.10
Bell's sage sparrow	3	3:1	33.16	99.48	112.10
greater roadrunner	3	3:1	33.16	99.48	112.10
hairy woodpecker	3	3:1	0.75	2.25	0
yellow warbler	2	4:1	0.75	2.25	0

Notes:
[1] Habitat within the proposed Conservation Area (MM-BIO-1).

MM-BIO-1 shall demonstrate recordation of a conservation easement for the On-Site Conservation Area, and with MM-BIO-2 shall preserve areas that are expected to provide foraging and breeding opportunities. Per Chapter 8 of the SEA Ordinance Implementation Guide, proposed mitigation areas that fall short of SEA recommended mitigation

ratios may be given added conservation value should they possess the following characteristics (County Planning 2020):

> "Added value" can be given to proposed natural open space areas if they also contain unique or valuable habitat linkage resources, additional special-status species, surface waters, or sensitive habitats, etc. Proposed open-space with such added-value characteristics may be allowed to be smaller than the area that would typically be required and still be determined to be consistent with the SEA Program goals subject to the discretion of the Department and a determination of consistency with the SEA Findings by SEATAC."

Given that the proposed 144.43-acre Conservation Area is contiguous with large tracts of conserved open natural space that exhibit similar levels of habitat suitability, the conserved habitat possesses added value in that it represents a valuable habitat linkage for wildlife. Additionally, the Conservation Area represents a significant topographical component of a viable wildlife corridor that can benefit long-term movement and genetic health of the species by allowing for breeding, foraging, and dispersal opportunities between the Santa Susana Mountains/Simi Hills and the San Gabriel Mountains.

MM-BIO-12, Nesting Bird Avoidance, would require nesting bird surveys during the typical breeding season, and avoidance buffers and monitoring would be established to avoid impacts to nests. MM-BIO-3 would improve the conditions of portions of the Conservation Area by providing additional foraging and breeding opportunities. MM-BIO-4 would provide monitoring to avoid any inadvertent impacts to potential foraging and breeding opportunities. MM-BIO-5 would delineate the Project footprint to help avoid any inadvertent impacts to foraging and breeding opportunities. MM-BIO-6 and MM-BIO-7 would minimize the introduction of non-native plant species that could compete for habitat space with plants that the species' prey forages on. As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-4, MM-BIO-5, MM-BIO-6, MM-BIO-7, and MM-BIO-12, impacts to special-status birds would be reduced to less than significant and provides the necessary preservation for the Project to be compatible with SEA Resources.

Non-Special-Status Nesting Birds

The project has the potential to impact active nests of non-special-status bird species if vegetation is removed during the nesting season (February 1 to August 31). Impacts to nesting birds are prohibited by the MBTA and California Fish and Game Code. Direct impacts could occur to this species by the removal of active nests that result in mortality to eggs or nestlings. Indirect impacts would include construction activities that cause adults to abandoned active nests and that result in the loss of breeding and foraging habitat and impacts would be significant prior to mitigation. Implementation of MM-BIO-12 would reduce impacts to less than significant.

Mammals

The Project would remove habitat that supports or has the potential to support special-status mammals, including the American badger, San Diego black-tailed jackrabbit, San Diego desert wood rat, and Southern California mountain lion. Table 18 summarizes the impacts to the habitat that could support American badger, San Diego black-tailed jackrabbit, and San Diego desert wood rat, with mountain lion being discussed separately. Direct impacts to these species include being struck by moving vehicles or equipment if present on-site during construction. Direct impacts could also occur to occupied burrows and middens. Indirect impacts to these species would be from the loss of foraging and breeding habitat, as shown in Table 18.

Table 18. Impacts to Special-Status Mammals

Species	Category	Preservation Ratio	Impacted Habitat (acres)	Preserved Habitat Needed (acres)	Preserved Habitat[1] (acres)
American Badger	2	4:1	18.49	73.96	53.73
Mountain lion	1	5:1	82.67	413.35	144.43
San Diego black-tailed jackrabbit	2	4:1	6.15	24.60	41.75
San Diego desert woodrat	2	4:1	33.13	132.52	112.81

Notes: [1] Habitat within the proposed Conservation Area (MM-BIO-1).

The Project would consolidate light sources toward the northeast portion of the Project site where there are currently light and glare sources from streetlights and vehicles traveling along The Old Road and I-5 to the east, the existing commercial lighting from the commercial building and parking lot to the north (which includes security lighting), and residential lighting from the residential development to the north. However, indirect impacts to mammals, including bats, could occur from new lighting established by the completed Project and its operations. Therefore, the indirect impact associated with lighting during operation could be significant. Implementation of MM-BIO-13, Lighting Plan, would reduce indirect impacts from lighting during operation of the Project to less than significant.

MM-BIO-1 shall require recordation of a conservation easement for the required open space in the Conservation Area that is expected to provide foraging and breeding opportunities for the species. MM-BIO-2 would improve the conditions of portions of the Conservation Area by preserving remaining foraging and breeding opportunities. MM-BIO-4 would provide monitoring to avoid any inadvertent impacts to potential foraging opportunities. MM-BIO-5 would delineate the Project footprint to help avoid any inadvertent impacts to foraging and breeding opportunities. MM-BIO-6 would minimize the introduction of non-native plant species that could compete for habitat space with vegetation that the species or their prey rely on. MM-BIO-9 would provide guidance on the relocation of the species (outside the breeding season). As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-4, MM-BIO-5, MM-BIO-6, and MM-BIO-9, impacts to these special-status mammals would be reduced to less than significant and provides the necessary preservation for the Project to be compatible with SEA Resources.

California Mountain Lion

Direct Impacts

Because California mountain lion is an SC species, Project impacts resulting in direct take of California mountain lion would require an ITP under CESA through coordination with CDFW; however, no natal dens have been detected during field efforts that have resulted in extensive cover of the Project site, and none are expected. Therefore, no direct take of California mountain lion is expected to occur because of the proposed Project.

Indirect Impacts

Habitat Use

The species could be indirectly affected by the Project due to the loss of potential habitat used by the species and increasing the potential of mountain lion-human interactions. A study titled “Big Cats in the Big City: Spatial Ecology of Mountain Lions in Greater Los Angeles” by Seth Riley, Jeff Sikich, and John Benson was published by the Journal

of Wildlife Management in November 2021 (Riley et al. 2021). The focus of the study as described in the article was to better understand mountain lion habitat use near urban and managed areas, which included three predictors: home range, landscape use, and resources selection. To analyze these predictors, researchers used GPS collar telemetry data and modeling software. Two adult males had home ranges that included the Project site and one sub-adult male had a range that was just south of the site (Riley et al. 2021). The proposed Project would impact 82.67 acres of habitat with the potential to support mountain lion. For reference, the mean home range for adult male mountain lions is 91,923 acres, and the mean home range for sub-adult males is 71,178 acres (Riley et al. 2021). Therefore, even if the entire Project site were part of the territory of a mountain lion, impacts by the Project would only consist of a very small percentage of its territory (i.e., 0.0009% of the average home range for an adult male and 0.12% of the average home range for a sub-adult males). Radio-tracked mountain lions retained mean distances from development that ranged from 1,280 meters (subadult males) to 1,930 meters (adult males) across the four age and sex classes (adult females, adult males, subadult females, subadult males). As such, the species use of the Project site is expected to be transient during foraging, range movement, and looking for mates.

Based upon the premise that female mountain lions do not establish natal dens within 600 meters of human development (Center for Biological Diversity 2019), the Project would reduce habitat suitable for denning by an additional 172 acres beyond the current 600-meter buffer around existing residential development to the north and The Old Road and I-5 to the east and southeast. This would constitute 0.005% of the 33,122 acres average home range for a hypothetical female in the study. Based upon retained mean distances from development maintained by mountain lions, the potential for the use of the 172 acres for establishing natal dens is currently low.

It should be noted that the study found that no mountain lions crossed I-5 in the Project vicinity, with the only crossing of the interstate by a male using the Santa Clara River wash underpass (Riley et al. 2021), which is located approximately 3.90 miles to the north-northwest of the Project site. I-5 in the vicinity of Project site is expected to continue to be a strong barrier to east-west movement for mountain lion between the Santa Susana Mountains and the San Gabriel Mountains. As such, the Project is on the very edge of the home range of the two mountain lions detected on site, and it is not expected to intensify this barrier or increase habitat fragmentation. Residential development to the north of the Project site limits movement by the species in that direction. Mountain lion movement from northwest and west to the south is expected to remain functional despite some constriction along its northern edge by the Project since there are geographic features (ridges and canyons), with hiking trails, within the Conservation Area that have connectivity to Rivendale Open Space which is adjacent to the open space in Towsley Canyon. These two open space areas are the closest to the Calgrove Boulevard underpass, which could facilitate movement beneath I-5 and into Wildwood Canyon Open Space and Gates King Open Space. Additionally, the Newhall Pass I-5 Wildlife Crossing project is expected to provide connectivity between the Santa Susana Mountains and the San Gabriel Mountains. The Project site is at the northern limits of the study area and the potential locations being analyzed are south of the Project site, with the nearest location being near Towsley Canyon (approximately 0.6-mile south of the Project site), per communication with Clark Stevens, the Executive Officer at RCDSMM. The feasibility study uses indicator species that use a variety of habitats to model potential movement in the study area. Based on the discussion with Mr. Stevens, only one indicator species (greater roadrunner) was expected to have a high usage of the Project site during regional movement due to the onsite areas of chaparral and open woodland, of which the species is associated (Stevens, pers. comm., 2024). With the distance from the Project site to the nearest potential crossing location, and the Conservation Area providing connectivity from the portions of the Santa Susana Mountains to the west and northwest to the northernmost potential crossing location, the Project is expected to have less than a significant impact on potential mountain lion movement through the proposed I-5 crossing.

SEA guidelines recommend preservation of suitable habitat at a 5:1 mitigation ratio, for a total of 413.35 acres of recommended preservation of suitable habitat for this species. As proposed, and as required by Section 22.102.090 (SEA Development Standards) of the County Code, the Project would preserve 144.43 acres of suitable habitat for this species on-site within the Conservation Area (MM-BIO-1, as preserved in perpetuity through recordation of a conservation easement) and additional habitat is expected to be preserved off-site (MM-BIO-2). The on-site Conservation Area is located in the southern and western portion of the Project site and is contiguous with large tracts of dedicated natural open space associated with the Santa Clarita Woodlands Park and Rivendale Open Space, the former of which comprises a large block of publicly conserved natural land identified by the Natural Landscape Blocks dataset (CDFW 2017). Both of these adjacent natural open space areas already provide suitable live-in, breeding, foraging, cover, and dispersal habitat for mountain lion; ranked moderate to high for probability of use by CDFW's Mountain Lion Habitat Suitability Dataset (Dellinger et al. 2020), as shown in Figure 7, and ranked medium to high by CDFW's Mountain Lion Predicted Habitat Dataset (CDFW 2022), as shown in Figure 8. Additionally, the proposed on-site Conservation Area consists of Lyons Canyon and associated valleys, which also provide moderate to high levels of suitable live-in, breeding, foraging, cover, and dispersal habitat. The proposed on-site Conservation Area also provides line-of-sight connections to valley and canyon complexes located within the adjacent Santa Clarita Woodlands Park, Rivendale Open Space, and beyond to the Santa Susana Mountains complex, Simi Hills, and the additional conserved lands within them.

Given that the proposed 144.43-acre Conservation Area consists of areas identified as medium to high in terms of suitability for live-in foraging, cover, and movement of mountain lions, and that it is also contiguous with large tracts of conserved open natural space that exhibit similar levels of habitat suitability and function, the proposed Conserved Area possesses added value in that it represents a valuable habitat linkage for mountain lion. Additionally, the Conservation Area represents a significant topographical component of a viable wildlife corridor that can benefit mountain lion movement and the genetic health of local mountain lion populations in the long-term by facilitating movement between the Santa Susana Mountains/Simi Hills and the San Gabriel Mountains, by way of the Calgrove Boulevard undercrossing, one of very few recognized crossing points of I-5.

MM-BIO-2 is expected to provide additional habitat for the species to use. MM-BIO-3 would improve the conditions of portions of the Conservation Area by providing additional foraging opportunities for the species' prey. MM-BIO-4 would provide monitoring to avoid any inadvertent impacts to potential foraging opportunities for the species' prey. MM-BIO-5 would delineate the Project footprint to help avoid any inadvertent impacts to foraging opportunities for the species' prey. MM-BIO-6 and MM-BIO-7 would minimize the introduction of non-native plant species that could compete for habitat space with vegetation that the species or their prey rely on. As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-4, MM-BIO-5, MM-BIO-6, and MM-BIO-7, impacts to mountain lion would be reduced to less than significant and provides the necessary preservation for the Project to be compatible with SEA Resources.

Human Influence

Following the completion of the Project, indirect and inadvertent impact to mountain lion could occur due to human occupancy of the Project site and people using the recreational trails in the Conservation Area. These impacts include traffic collisions; human-mountain lion interactions due to the attraction of prey, the use of rodenticides, lighting, and through increased use by recreationalists. MM-BIO-8 requires that that the community be informed through signage about the potential presence of mountain lions in the community. As such, with the implementation of MM-BIO-8, impacts to mountain lion from human influence would be reduced to less than significant.

Foraging Habitat for Special-Status Wildlife Species

The Project, as proposed, will impact substantial suitable foraging habitat for grasshopper sparrow (*Ammodramus savannarum*; SSC; Category 2), Wilson's warbler (Sensitive Local Native Resources; Category 3), lesser nighthawk (Sensitive Local Native Resources; Category 3); white-tailed kite (CFP; Category 1), pallid bat (SSC; Category 2), western mastiff bat (SSC; Category 2), and for several special-status species that have a potential to forage within the site, including California condor (*Gymnogyps californianus*; FE, SE, CFP; Category 1), golden eagle (*Aquila chrysaetos*; CFP; Category 1), Swainson's hawk (*Buteo swainsoni*; ST; Category 1), California leaf-nosed bat (*Macrotus californicus*; SSC; Category 2), and Townsend's big-eared bat (*Corynorhinus townsendii*; SSC; Category 2). Impacts to 82.67 acres of foraging habitat for these species would be potentially significant prior to mitigation under CEQA due to the substantial reduction of habitat for wildlife species and would not be compatible with SEA Resources.

MM-BIO-1 and MM-BIO-2 shall record a conservation easement for the conservation of the area that is expected to provide forage opportunities. MM-BIO-3 would improve the conditions of portions of the Conservation Area by providing additional foraging opportunities. MM-BIO-4 would provide monitoring to avoid any inadvertent impacts to potential foraging opportunities. MM-BIO-5 would delineate the Project footprint to help avoid any inadvertent impacts to foraging opportunities. MM-BIO-6 and MM-BIO-7 would minimize the introduction of non-native plant species that could compete for habitat space with plants that the species forage on the species' prey forages on. As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-4, MM-BIO-5, MM-BIO-6, and MM-BIO-7, impacts to foraging habitat to special-status wildlife species would be reduced to less than significant, and the project would provide the necessary preservation for the Project to be compatible with SEA Resources.

5.5 Impacts to Jurisdictional Waters

Direct impacts to potential jurisdictional waters and associated riparian vegetation would occur due to vegetation removal and grading.

Direct Impacts

The proposed Project would impact potential jurisdictional waters, none of which support wetlands as shown in Figure 9. The impacts are summarized in Table 19 below. The Project site includes additional areas of potential USACE jurisdiction where impacts would not occur, including approximately 0.52-acre of non-wetland waters preserved within the on-site Conservation Area. Impacts to potential jurisdictional waters would be a significant impact under CEQA and would not be compatible with SEA Resources. MM-BIO-1 would require recordation of a conservation easement, and thus would conserve the area with the remaining on-site jurisdictional waters. MM-BIO-2 would provide additional preservation of jurisdictional waters in off-site parcels. MM-BIO-3 would provide enhancement of existing jurisdictional waters in the Conservation Area. MM-BIO-14, Jurisdictional Waters Compensation, would require off-site compensation to offset the loss of on-site jurisdictional waters if the implementation of MM-BIO-1, MM-BIO-2, and MM-BIO-3 do not provide sufficient preservation. MM-BIO-4 would provide monitoring to avoid any inadvertent impacts to potential jurisdictional waters and the implementation of mitigation measures. MM-BIO-5 would delineate the Project Footprint to help avoid any inadvertent impacts to jurisdictional waters and to confine. MM-BIO-6 and MM-BIO-7 would avoid and minimize the introduction of non-native plant species to jurisdictional waters. As such, with the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-4, MM-BIO-5, MM-BIO-6, MM-BIO-7, and MM-BIO-14, impacts to jurisdictional waters would be reduced to less than significant and provides the necessary preservation for the Project to be compatible with SEA Resources.

Table 19. Proposed Impacts to Potential Waters of the U.S. (USACE and RWQCB Jurisdiction) on the Project Site and Off-Site

Drainage Name	Area (acres)		
	Non-wetland Waters	Wetlands	Total
Project Site			
Drainage A	0.24	0	0.24
Tributary A-1	0	0	0
Drainage B	0.29	0	0.29
Tributary B-1	0.06	0	0.06
Tributary B-3	0.01	0	0.01
Drainage C	0.02	0	0.02
Totals[1]	**0.62**	**0**	**0.62**

Notes: USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board.
[1] Totals may not add up due to rounding.

The proposed Project would impact potential CDFW jurisdiction streams and SEA Water Resources, as shown in Figure 10, portions of which consist of the *Baccharis salicifolia* shrubland alliance and *Salix gooddingii-Salix laevigata* forest and woodland alliance that are already discussed under vegetation communities. The remaining riparian habitat consists of individual coast live oaks associated with the upper banks of the stream courses present within the Project site. Impacts to riparian habitat would be significant under CEQA prior to mitigation, as a sensitive vegetation community and are given SEA consideration as water SEA Water Resources. Table 20 summarizes impacts to CDFW jurisdiction and SEA Water Resources.

Table 20. Proposed Impacts to CDFW Jurisdictional Streams and Associated Riparian Habitat (CDFW Jurisdiction and SEA Water Resources) on the Project Site and Off-Site

Drainage Name	Area (acres)		
	Riparian Habitat	Streambed and Bank	Total[1]
Project Site			
Drainage A	0.55	0.36	0.92
Tributary A-1	0	0	0
Drainage B	2.90	0.11	3.00
Tributary B-1	0.91	<0.01	0.91
Tributary B-3	0.04	<0.01	0.04
Drainage C	0.05	0.02	0.07
Totals[1]	*4.45*	*0.49*	*4.94*

Notes: CDFW = California Department of Fish and Wildlife; SEA = Significant Ecological Area.
[1] Totals may not add up due to rounding.

Indirect Impacts

Potential temporary indirect impacts to the South Fork of the Santa Clara River and the on-site drainages could result from construction activities and would include impacts from the generation of fugitive dust and the potential

introduction of chemical pollutants (including herbicides). Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration and transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect wetlands/ jurisdictional waters. The release of chemical pollutants can reduce the water quality downstream and degrade adjacent habitats. However, during construction, erosion-control measures would be implemented as part of the storm water pollution prevention plan (SWPPP) for the Project. Because the entirety of the Project development footprint would be graded at one time, but construction would occur over time in phases, the erosion measures would need to be maintained until all graded areas are constructed/landscaped. Prior to the start of construction activities, the Contractor is required to file a Permit Registration Document with the State Water Resources Control Board in order to obtain coverage under the National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2009-009-DWQ, NPDES No. CAS000002) or the latest approved general permit. This permit is required for earthwork that results in the disturbance of one acre or more of total land area. The required SWPPP will mandate the implementation of best management practices to reduce or eliminate construction-related pollutants in the runoff, including sediment, for all exposed soils. Therefore, temporary indirect impacts would be less than significant due to compliance with regulations.

5.6 Impacts to Wildlife Corridors and Nursery Sites

The Project, as proposed, would potentially impact local wildlife movement by impeding localized movement from undeveloped land in the southern portion of the Project site, privately owned undeveloped lands to the west, and dedicated open space associated with Santa Clarita Woodlands Park and the Rivendale Open Space, to the undeveloped box canyon located within the northwestern portion of the Project site, which extends an additional approximately 0.5 miles to the northwest before terminating at existing single-family development associated with the Stevenson Ranch development.

Dedication of the on-site Conservation Area (MM-BIO-1) would protect in perpetuity a valuable (but presently unprotected) connection between large tracts of conserved natural open space associated with the Santa Clarita Woodlands Park and the Rivendale Open Space, contributing to a contiguous corridor of conserved natural open space that connects lands to the west to the Calgrove Boulevard undercrossing, a recognized undercrossing of I-5 that supports east/west movement between the Santa Susana Mountains/Simi Hills SEA and the Gateway Ranch Open Space, Gates King Open Space, and San Gabriel Mountains to the east, as shown in Figure 3; therefore, preserving, and thereby avoiding further encroachment on, movement opportunities between regional conserved habitat blocks, and reducing potential Project impacts to SEA Resources.

The colonial roost of canyon bats that was detected during focused bat roost surveys within the on-site Conservation Area is approximately 400 feet west of the Project footprint. This roost would not be directly impacted by the Project; however, noise impacts from Project construction and night lighting from the completed Project could cause indirect impacts. MM-BIO-15, Roosting Bat Survey, would require a roosting bat survey to determine if the roost is still present. MM-BIO-4 would require the roost to be monitored during Project construction activities and MM-BIO-13 would require lighting plan that prohibits lighting being focused into the open space areas. No additional resources that represent a wildlife nursery site under CEQA were detected within the Project site; therefore, significant impacts to wildlife nursery sites would not result from proposed Project development.

5.7 Impacts to SEA Protected Trees

Non-Heritage Tree Impacts

Table 21 provides a summary of proposed impacts to non-heritage SEA protected trees located within the Project site. The 312 non-heritage tree impacts are comprised of 251 removals (trees that have a trunk on or within 2 feet of the grading limits) and 11 encroachments (trees that are not removed, but root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds are anticipated), and 50 trees that are located within a debris basin.[4] Trees in which the Project footprint encroaches into the tree protection zone (TPZ) are considered as "directly impacted" by the proposed Project, as set forth by the Los Angeles County SEA Ordinance. Direct impacts include tree removal, root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds. Impacts to protected non-heritage trees would be considered as potentially significant prior to mitigation under CEQA due to substantially degrading the quality of the environment. MM-BIO-16, SEA Protected Tree Replacement/Compensation, addresses SEA guidelines recommended preservation making the Project compatible with SEA Resources and reduces proposed impacts to below a level of significance under CEQA.

Table 21. Summary of Impacts to Significant Ecological Area Protected Trees (Non-Heritage)

Scientific Name	Common Name	Removal	Encroachment	Debris Basins
Juglans californica	Southern California black walnut	2	0	1
Populus fremontii	Fremont cottonwood	9	0	6
Quercus agrifolia	coast live oak	167	8	24
Quercus berberidifolia	scrub oak	1	0	0
Quercus lobata	valley oak	10	0	0
Salix laevigata	red willow	10	0	14
Salix lasiolepis	arroyo willow	7	0	0
Sambucus nigra ssp. *caerulea*	blue elderberry	45	3	5
	Total	**251**	**11**	**50**

Heritage Tree Impacts

Table 22 provides a summary of proposed impacts to SEA Heritage Trees located within the Project site. In total, 22 Heritage Trees would be directly impacted by the Project. The 22 Heritage Tree impacts are comprised off 14 Heritage Tree removals, five Heritage Tree encroachments, and 3 heritage trees that are located within debris basins.[5] Heritage Trees in which the Project footprint encroaches into the TPZ are considered as "directly impacted" by the proposed Project, as set forth by the Los Angeles County SEA Ordinance. Direct impacts include tree removal, root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds. Impacts to

[4] It should be noted that the 50 trees located within the debris basin will not be removed but are considered impacted due to the potential of future damage as a result of the creation of the debris basins and associated flooding.

[5] It should be noted that the 3 Heritage Trees located within debris basins will not be removed but are considered impacted due to the potential of future damage as a result of the creation of the debris basins and any associated flooding.

protected heritage trees would be considered as potentially significant prior to mitigation under CEQA. MM-BIO-16 addresses SEA guidelines recommended preservation making the Project compatible with SEA Resources and reduces proposed impacts to below a level of significance under CEQA by requiring the replacement of removed trees at 10:1.

Table 22. Summary of Impacts to Significant Ecological Area Heritage Trees

Scientific Name	Common Name	Removal	Encroachment	Debris Basin
Heteromeles arbutifolia	toyon	0	0	0
Juglans californica	Southern California black walnut	0	0	0
Populus fremontii	Fremont cottonwood	0	0	0
Quercus agrifolia	coast live oak	12	3	3
Quercus berberidifolia	scrub oak	0	0	0
Quercus lobata	valley oak	2	2	0
Salix laevigata	red willow	0	0	0
Salix lasiolepis	arroyo willow	0	0	0
Sambucus nigra ssp. *caerulea*	blue elderberry	0	0	0
	Total	**14**	**5**	**3**

Source: Appendix A

5.8 Impacts to County Oak Woodlands

Direct impacts would occur to 12.95 acres of oak woodlands, as defined by the Los Angeles County Oak Woodlands Conservation Management Plan (County Planning 2011), on the Project site and 1.57 acres in the off-site brush thinning zone, for a total of 14.52 acres, as shown on Figure 12. Impacts to oak woodlands would be considered as significant prior to mitigation under CEQA due to conflicting with the plan. This requires 3:1 mitigation resulting in the need to preserve 43.56 acres.

With the implementation of MM-BIO-1, the remaining oak woodland within the Conservation Area would be preserved in perpetuity. MM-BIO-2 would require the preservation of off-site oak woodland. MM-BIO-3, Habitat Mitigation and Monitoring Plan, would be implemented to restore and enhance these preserved vegetation communities. MM-BIO-16 would require the replacement trees be planted in the Conservation Area. As such, MM-BIO-1, MM-BIO-2, MM-BIO-3, and MM-BIO-16 would meet SEA guidelines recommended preservation making the Project compatible with SEA Resources and would reduce proposed impacts to below a level of significance under CEQA. MM-BIO-4, Biological Monitoring, MM-BIO-5, Demarcation of Disturbance Limits, MM-BIO-6, Invasive Species Prevention, and MM-BIO-7, Landscaping Plan, would avoid and minimize inadvertent impacts to SEA Resources. With the implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, MM-BIO-06, MM-BIO-7, and MM-BIO-16, impacts to oak woodland would be reduced to less than significant and provides the necessary preservation for the Project to be compatible with SEA Resources.

5.9 Impact to HCP/NCCP

The Study Area is not within any HCP, NCCP, or other approved local, regional, or state HCP (CDFW 2019). Therefore, there is no impacts to HCP, NCCP, or other approved local, regional, or state HCP.

5.10 Cumulative Impacts

Regarding sensitive biological resources, the analysis determined that implementation of MM-BIO-1 through MM-BIO-16 would reduce all impacts to less than significant for the Project and provides the necessary preservation for the Project to be compatible with SEA Resources. The cumulative projects in the immediate vicinity of the Project site consist of Cumulative Project #1, Canyon View Estates, Cumulative Project #2, TTM No. 74979, and Cumulative Project #3, Wiley Canyon Project. Cumulative Project #1 has similar vegetation communities and supports a special status plant (slender mariposa lily) also found on the Project site. Cumulative Project #2 and #3 do not have publicly available environmental documents for review. In fact, Cumulative Project #2 has been on hold since 2018[6]. Cumulative Project #2 is between the Project and Cumulative Project #1, so it would be expected to have potential to support the same sensitive resources as the two projects. As such, it would be expected that the CEQA analysis for Cumulative Project #2 would result in similar mitigation measures should sensitive resources be documented on site. Cumulative Project #3 is located east of I-5 and has substantially different vegetation communities than the Project site based on aerial imagery, so it would be expected to have potential to support different sensitive resources. As such, it would be expected that the CEQA analysis for Cumulative Project #2 would result in similar mitigation measures should special status species be documented on site.

The Project's impacts to sensitive biological resources would be less than significant with mitigation incorporated. Further, all other cumulative projects would be subject to existing and/or future permit restrictions that satisfy regulatory/resource agency requirements. Therefore, the Project would not contribute to cumulatively considerable significant impacts on sensitive biological resources.

[6] Los Angeles County Subdivision Committee Report, May 10, 2018, https://planning.lacounty.gov/assets/upl/case/2017-005165_drp-report.pdf.

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6 Mitigation Measures

The following mitigation measures shall be implemented during the proposed Project to reduce the significant impacts identified in Chapter 6 to a less-than-significant level.

Preservation Measures

MM-BIO-1 would demonstrate recordation of a conservation easement for the On-site Conservation Area to preserve the remaining vegetation communities and wildlife habitats on the Project site. Per Chapter 8 (pg. 77) of the SEA Ordinance Implementation Guide, proposed mitigation areas that fall short of SEA recommended mitigation ratios may be recognized as having added conservation value should they possess the following characteristics:

> "Added value" can be given to proposed natural open space areas if they also contain unique or valuable habitat linkage resources, additional special-status species, surface waters, or sensitive habitats, etc. Proposed open-space with such added-value characteristics may be allowed to be smaller than the area that would typically be required and still be determined to be consistent with the SEA Program goals subject to the discretion of the Department and a determination of consistency with the SEA Findings by SEATAC."

Given that the proposed 144.43 acres of suitable conserved habitat is contiguous with large tracts of conserved open natural space that exhibit similar levels of habitat suitability, the proposed 144.43 acres of conserved habitat possesses added value in that it represents a valuable habitat linkage for wildlife. Additionally, the Conservation Area represents a significant topographical component of a viable wildlife corridor that can benefit long-term movement and genetic health of the species by allowing for breeding, foraging, and dispersal opportunities between the Santa Susana Mountains/Simi Hills and the San Gabriel Mountains.

The remaining preservation acreages for vegetation communities would be done off-site per MM-BIO-2. This mitigation measure provides mitigation options based on increasing multipliers on the ratios required for the acres needed if in-kind preservation within the Santa Susana Mountains and Simi Hills SEA is not feasible. Table 23 list the impacts and required preservation acreages, as well as potential mitigation options proposed for preserving at a minimum the required acreage. The number of acres needed for preservation increases for out-of-kind preservation and preservation withing the Santa Clara River SEA that is contiguous with the Santa Susana Mountains and Simi Hills SEA. The Habitat Mitigation and Monitoring Plan (MM-BIO-3) would be implemented to create and enhance vegetation communities in the Conservation Area if available off-site preservation is not sufficient, and where special-status plant species would be seeded and translocated.

To preserve special-status plants, seed and bulb survey, salvage, and translocation would be required by MM-BIO-9 and implemented within the Conservation Area (MM-BIO-1) per MM-BIO-3. Mitigation for jurisdictional waters impacted by the Project would also be addressed by implementing MM-BIO-3 to enhance portions of the remaining streams within the Conservation Area, with any additional acreage needed being acquired via a mitigation bank per MM-BIO-14. Impacts to SEA Protected Trees would be mitigated by the establishment of trees within the Conservation Area per MM-BIO-3 and MM-BIO-16.

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Table 23. Impacts to Vegetation Communities and Required Preservation Options

Alliance	Total Impacts (Acres)	Preservation Requirement (Acres)	On-site Preservation Acres[1]	On-site Preservation Deficit (Acres)[2]	Potential Acres Created Onsite[3]	In-Kind Vegetation Communities Preserved Off-Site in the Santa Susana Mountains and Simi Hills SEA	Out-of-Kind Vegetation Communities Preserved Within the Santa Susana Mountains and Simi Hills SEA		Vegetation Communities Preserved Within the Santa Clara River SEA		
							Out-of-Kind-Same Resource Category Preserved Acres (1.5 Multiplier)	Out-of-Kind-Higher Resource Category Preserved Acres (1.25 Multiplier)	In-Kind Preserved Acres (2 Multiplier)	Out-of-Kind-Same Resource Category (2.5 Multiplier)	Out-of-Kind-Higher Resource Category Preserved Acres (2.25 Multiplier)
SEA Resource Category 1 (recommended mitigation ratio 5:1 per SEA Ordinance Implementation Guide)											
Baccharis salicifolia Shrubland	2.43	12.17	0.52	11.65	0	11.65	17.47	NA	23.30	29.12	NA
Salix gooddingii–Salix laevigata Forest and Woodland	1.24	6.22	0	6.22	0	6.22	9.33	NA	12.45	15.56	NA
Subtotal	*3.68*	*18.39*	*0.52*	*17.87*	*0*	*17.87*	*26.81*	*0.00*	*35.74*	*44.68*	*0.00*
SEA Resource Category 3 (recommended mitigation ratio 3:1 per SEA Ordinance Implementation Guide)											
Ericameria palmeri Provisional Shrubland	0.67	2.00	0	2.00	0	2.00	3.00	2.50	4.00	5.00	4.50
Eriodictyon crassifolium Provisional Shrubland	0.42	1.25	0.41	0.84	0.84	0.84	1.26	1.05	1.67	2.09	1.88
Juglans californica Forest and Woodland	0	0	0.09	0	0	0	0	0	0	0	0
Nassella (*Stipa*) spp.–*Melica* spp. Herbaceous	0.07	0.20	0	0.20	0	0.20	0.31	0.25	0.41	0.51	0.46
Quercus agrifolia Forest and Woodland	13.59	40.78	10.28	30.50	15.20	30.50	45.75	38.13	61.00	76.25	68.63
Rhus trilobata–Crataegus rivularis–Forestiera pubescens Shrubland	0.03	0.08	0.01	0	0.07	0.07	0.10	0.08	0.13	0.17	0.15
Subtotal	*14.77*	*44.31*	*11.15*	*33.61*	*16.47*	*33.25*	*50.42*	*42.01*	*67.21*	*84.02*	*75.62*
SEA Resource Category 4 (recommended mitigation ratio 2:1 per SEA Ordinance Implementation Guide)											
Adenostoma fasciculatum Shrubland	27.44	54.50	64.68	0	0	0	0	0	0	0	0
Adenostoma fasciculatum Shrubland–Disturbed	0	0	9.73	0	0	0	0	0	0	0	0
Artemisia californica–Salvia leucophylla Shrubland	0.39	0.78	28.01	0	0	0	0	0	0	0	0
Artemisia californica–Salvia leucophylla Shrubland–Disturbed	0	0	10.66	0	0	0	0	0	0	0	0
Avena spp.–*Bromus* spp. Herbaceous Semi-natural	0	0	2.62	0	0	0	0	0	0	0	0
Distichlis spicata Herbaceous	0.07	0.14	0.07	0	0	0	0	0	0	0	0
Eriogonum davidsonii/Croton setiger Grassland	0.97	1.94	0	0	0	0	0	0	0	0	0
Eriogonum fasciculatum Shrubland	3.51	7.02	0	0	0	0	0	0	0	0	0

Table 23. Impacts to Vegetation Communities and Required Preservation Options

Alliance	Total Impacts (Acres)	Preservation Requirement (Acres)	On-site Preservation Acres[1]	On-site Preservation Deficit (Acres)[2]	Potential Acres Created Onsite[3]	In-Kind Vegetation Communities Preserved Off-Site in the Santa Susana Mountains and Simi Hills SEA	Out-of-Kind Vegetation Communities Preserved Within the Santa Susana Mountains and Simi Hills SEA		Vegetation Communities Preserved Within the Santa Clara River SEA		
							Out-of-Kind-Same Resource Category Preserved Acres (1.5 Multiplier)	Out-of-Kind-Higher Resource Category Preserved Acres (1.25 Multiplier)	In-Kind Preserved Acres (2 Multiplier)	Out-of-Kind-Same Resource Category (2.5 Multiplier)	Out-of-Kind-Higher Resource Category Preserved Acres (2.25 Multiplier)
Sub-Total	*33.07*	*66.16*	*120.87*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
SEA Resource Category 5											
Brassica nigra–Centaurea melitensis Herbaceous Semi-natural Stands	35.61[4]	NA	0	0	0	0	0	0	0	0	0
Non-SEA Resource Category											
Developed	2.85	NA	1.31	0	0	0	0	0	0	0	0
Total	**89.31**		**144.43**	**51.48**	**16.24**	**51.48**	**77.23**	**42.01**	**102.95**	**128.70**	**75.62**

Notes: [1] Preserved in the Conservation Area established by MM-BIO-1.
[2] Preserved off-site per MM-BIO-2.
[3] Created per the Habitat Mitigation and Monitoring Plan required by MM-BIO-3 if sufficient preservation cannot be found using MM-BIO-1 and MM-BIO-2.
[4] An additional 16.24 acres within the Conservation Area could be converted to native vegetation communities.

Pre-Construction Avoidance and Minimization Measures

MM-BIO-10 requires surveys for Crotch bumble bee during the species' active season, with avoidance buffers being implemented for any active nests detected. Similarly, MM-BIO-12 would provide the same protections for nesting birds during the breeding bird season. MM-BIO-11 requires a relocation plan be prepared for terrestrial wildlife species that would be implemented during construction. Lastly, the limits of construction would be demarcated to ensure the Project impacts stay within the approved limits.

Construction Avoidance and Minimization Measures

MM-BIO-4 would require a County-approved biologist be on site daily to monitor the vegetation removal and initial grading. The Biological Monitor(s) would be responsible for ensuring the integrity of any buffers established during the implementation of MM-BIO-10 and MM-BIO-12, as well as checking that the limits of construction are demarcated per MM-BIO-5. The Biological Monitor(s) would also make sure the provisions of MM-BIO-6 are implemented to avoid and minimize the introduction of non-native plant species into the Project site.

Project Operation Avoidance and Minimization Measures

After construction is completed, MM-BIO-7 would require that the landscape plan for the Project does not include invasive plant species that could spread into adjacent open space areas. MM-BIO-8 provides provisions that must be implemented by the Homeowners Association that shall avoid and minimize impacts to wildlife and the habitats in the adjacent open space areas. MM-BIO-13 requires a Lighting Plan be implemented that avoids and minimizes light pollution into adjacent open space.

6.1 MM-BIO-1: On-Site Habitat Preservation

Prior to final map recordation, the on-site conservation easement area shall be designated on the final map. Additionally, a letter of intent shall be obtained from the Conservation Easement holder. Prior to the issuance of a grading permit, the Applicant shall demonstrate recordation of a conservation easement, as defined by California Civil Code section 815.1, that permanently preserves 144.43 acres of open space within the Project boundaries for long-term conservation and management as a natural conservation area ("Conservation Area"). The following table documents the vegetation communities that would be preserved. The Conservation Area provides sufficient preservation for Project-related impacts to vegetation communities within SEA Ordinance Implementation Guide Resource Categories 4 and 5.

Table 24. Vegetation Communities Preserved on the Project Site

Alliance	Unimpacted Acres (Open Space)	Preserved via Conservation Easement
SEA Resource Category 1		
Baccharis salicifolia Shrubland	0.52	0.52
Salix gooddingii–Salix laevigata Forest and Woodland	0	0
Sub-Total	*0.52*	*0.52*

Table 24. Vegetation Communities Preserved on the Project Site

Alliance	Unimpacted Acres (Open Space)	Preserved via Conservation Easement
SEA Resource Category 3		
Ericameria palmeri Provisional Shrubland	0	0
Eriodictyon crassifolium Provisional Shrubland	0.41	0.41
Juglans californica Forest and Woodland	0.09	0.09
Nassella (*Stipa*) spp.–*Melica* spp. Herbaceous	0	0
Quercus agrifolia Forest and Woodland	10.64	10.28
Rhus trilobata–Crataegus rivularis–Forestiera pubescens Shrubland	0.01	0.01
Sub-Total	*11.15*	*10.79*
SEA Resource Category 4		
Adenostoma fasciculatum Shrubland	69.77	64.68
Adenostoma fasciculatum Shrubland–Disturbed	9.73	9.73
Artemisia californica–Salvia leucophylla Shrubland	28.01	28.01
Artemisia californica–Salvia leucophylla Shrubland–Disturbed	10.66	10.66
Avena spp.–*Bromus* spp. Herbaceous Semi-natural	2.62	2.62
Distichlis spicata Herbaceous	0.07	0.07
Eriogonum davidsonii/Croton setiger Grassland	0	0
Eriogonum fasciculatum Shrubland	0	0
Sub-Total	*120.87*	*115.78*
SEA Resource Category 5		
Brassica nigra–Centaurea melitensis Herbaceous Semi-natural Stands	16.47	16.24[a]
Non-SEA Resource Category		
Developed[1]	1.31	1.31
Total Acres	**150.31**	**144.43**

Notes:

[a] 16.24 acres of this community are proposed to be restored to native communities per MM-BIO-3.

[1] Existing trails.

Conservation Management Plan

As part of recording the conservation easement, a Conservation Management Plan (CMP) applicable to the On-Site Conservation Area shall be prepared and submitted to the County for approval. The CMP shall identify the required resource management activities and the entities that shall be responsible for managing those activities in perpetuity. The CMP shall set forth the following requirements that shall be implemented by the entity that holds the conservation easement and/or manages and stewards the Conservation Area: (1) there shall be no grading or other construction activities within the Conservation Area, except for the proposed habitat enhancement/restoration, construction and maintenance of signage, and trail maintenance; (2) off-trail activities (e.g., hiking, biking, horseback riding) shall be prohibited; (3) signage shall be installed at the trailheads and at any

access points to the On-site Conservation Area, which shall include information on the organization that holds the conservation easement, brief descriptions of the restoration activities, protection of biological resources, and restrictions to human activities; (4) signage shall be placed in visible locations and shall require that humans and domesticated pets shall remain within the limits of designated hiking trails, all domesticated pets shall be on leashes, owners shall clean up after domesticated pets, and that smoking is prohibited; (5) no fencing or other barriers to wildlife movement shall be installed; (6) dog waste bag dispensers and wildlife-proof receptacles for trash shall be provided at appropriate locations on the trail; (7) gasoline-powered maintenance equipment shall be prohibited; (8) commercial honeybee operations shall not be allowed to use the Conservation Area for storing their apiaries; (9) rodenticides shall be prohibited; (10) herbicides and pesticides shall be discouraged, and only those typically used for invasive plant management in California wildlands shall be allowed, per the California Invasive Plant Council & Pesticide Research Institute's Best Management Practices (BMPs) for Wildland Stewardship[7]; (11) arborists certified by the International Society of Arboriculture (ISA) shall conduct surveys every five years that shall include an assessment of potential infestations of invasive shothole borer beetle and other pathogens or invasive insects that can threaten native habitat; (12) at least one annual walk-through survey shall be conducted by a biologist to qualitatively monitor the general condition of on-site habitats and to check for any new introduction or expansion of invasive plant species; (13) collect and remove trash, repair vandalized signs, and rectify trespass impacts; and (14) provide annual reporting that document the conditions of the Conservation Area.

Approved work shall be outlined in the CMP and in the conservation easement, including monitoring and maintenance efforts or for other activities associated with preserve management, and prohibited activities shall be delineated. The conservation easement holder shall be an entity which has as part of its mission the protection of the environment, including lands, plant species, and/or wildlife species, and can be expected by its organization and history to remain in existence for the foreseeable future. The California Department of Fish and Wildlife per Government Code Section 65967(c) shall review the entity. The entity that holds the endowment shall first meet the criteria outlined in Government Code section 65968(b). Funding for implementation of the tasks in the CMP shall be provided by a traditional endowment, establishing a community facilities district or landscape management district, or through contractual obligation with the Homeowners' Association or other equivalent mechanism(s).

6.2 MM-BIO-2: Off-Site Habitat Preservation

Prior to final map recordation, the Applicant shall obtain a Letter of Intent from the future Conservation Easement holder. Prior to issuance of a grading permit, the Applicant shall demonstrate recordation of a conservation easement, as defined by California Civil Code section 815.1, that permanently preserves off-site habitat for long-term conservation and management. As part of recording the conservation easement for any off-site parcel(s), a Conservation Management Plan (CMP) applicable to the Conservation Area shall be prepared and submitted to County Planning for approval. The CMP shall identify the required resource management activities and the entities that shall be responsible for managing those activities in perpetuity. The conservation easement holder shall be an entity which has as part of its mission the protection of the environment, including lands, plant species, and/or wildlife species, and can be expected by its organization and history to remain in existence for the foreseeable future. The California Department of Fish and Wildlife per Government Code Section 65967(c) shall review the entity. The entity that holds the endowment shall first meet the criteria outlined in Government Code section 65968, subdivision (b).

[7] California Invasive Plant Council & Pesticide Research Institute. 2015. Best Management Practices (BMPs) for Wildland Stewardship. Accessed October 2023. https://cal-ipc.org/docs/bmps/dd9jwo1ml8vttq9527zjhek99qr/BMPHerbicide.pdf.

One or more of the following options shall be used to provide adequate preservation for Project-related impacts to vegetation communities and wildlife habitat within SEA Ordinance Implementation Guide SEA Resource Categories 1 and 3. The proposed off-site preservation lands must support resources similar to those disturbed by the project (i.e., sensitive vegetation communities, special-status plant and wildlife habitats, jurisdictional waters, and protected trees) and be connected with other natural open space areas. To determine that these conditions are present, the Applicant will fund a biological resources assessment by a County Planning-approved Biologist for any parcel proposed for preservation and the results of the assessment will be submitted to County Planning for their approval to be used as mitigation.

In-Kind and Off-Site in the Santa Susana Mountains and Simi Hills Significant Ecological Area

For parcels within the SEA that support in-kind vegetation communities as those found in the Project site, the preservation ratios for each of the SEA Resource Categories listed would be in accordance with the SEA Ordinance Implementation Guide. The following table indicates the minimum preserved acres required for off-site preservation of in-kind vegetation communities (communities classified as the same as those being impacted by the Project) within the SEA.

Table 25. In-Kind Vegetation Communities Preserved Off-Site in the Santa Susana Mountains and Simi Hills Significant Ecological Area

Alliance	Required In-Kind Preserved Acres
SEA Resource Category 1 (Mitigated at 5:1)	
Baccharis salicifolia Shrubland	11.65
Salix gooddingii–Salix laevigata Forest and Woodland	6.22
Sub-Total	*17.87*
SEA Resource Category 3 (Mitigated at 3:1)	
Ericameria palmeri Provisional Shrubland	2.00
Eriodictyon crassifolium Provisional Shrubland	0.84[1]
Nassella (*Stipa*) spp.–*Melica* spp. Herbaceous	0.20
Quercus agrifolia Forest and Woodland	30.50[2]
Rhus trilobata–Crataegus rivularis–Forestiera pubescens Shrubland	0.07[1]
Sub-Total	*33.61*
Total	**51.48**

Notes: [1] None would be needed if MM-BIO-3, Habitat Mitigation and Monitoring Plan, is implemented.
[2] 15.30 acres will be needed if MM-BIO-3 is implemented.

Out-of-Kind and Within the Santa Susana Mountains and Simi Hills Significant Ecological Area

Preservation of out-of-kind vegetation communities (communities classified as being different than those being impacted by the Project) that are in the same group (defined by combinations of relatively narrow sets of diagnostic plant species (including dominants and co-dominants), broadly similar composition, and diagnostic growth forms

that reflect biogeographic differences in mesoclimate, geology, substrates, hydrology, and disturbance regimes[8]) as the impacted vegetation communities (as defined by the U.S. National Vegetation Classification Standards) can be satisfied with the acquisition of parcels within the Santa Susana Mountains and Simi Hills SEA. For preserved lands within the same Resource Category, a multiplier of 1.5 shall be applied to increase lands for preservation. For preserved lands within a higher sensitivity Resource Category, a multiplier of 1.25 shall be applied. Lower sensitivity Resource Categories may not satisfy mitigation requirements for higher sensitivity Resource Categories. For the two Resource Category 1 communities, preservation shall be a riparian associated vegetation community.

Table 26. Out-of-Kind Vegetation Communities Preserved Within the Santa Susana Mountains and Simi Hills Significant Ecological Area

Alliance	Out-of-Kind-Same Resource Category Preserved Acres	Out-of-Kind-Higher Resource Category Preserved Acres
SEA Resource Category 1 (Mitigated at 5:1)	**1.5 Multiplier**	**1.25 Multiplier**
Baccharis salicifolia Shrubland	17.47	NA
Salix gooddingii–Salix laevigata Forest and Woodland	9.33	NA
Subtotal	*26.81*	*NA*
SEA Resource Category 3 (Mitigated at 3:1)	**1.5 Multiplier**	**1.25 Multiplier**
Ericameria palmeri Provisional Shrubland	3.00	2.50
Eriodictyon crassifolium Provisional Shrubland	1.26[1]	1.05[1]
Nassella (*Stipa*) spp.–*Melica* spp. Herbaceous	0.31	0.25
Quercus agrifolia Forest and Woodland	45.75[2]	38.13[3]
Rhus trilobata–Crataegus rivularis–Forestiera pubescens Shrubland	0.10[1]	0.08[1]
Subtotal	*50.42*	*42.01*
	77.23	**42.01**

Notes: NA = Not Applicable (due to there being no higher Resource Category)

1 None would be needed if MM-BIO-3, Habitat Mitigation and Monitoring Plan, is implemented.

2 22.95 acres will need to be preserved if MM-BIO-3 is implemented.

3 19.13 acres will need to be preserved if MM-BIO-3 is implemented.

Vegetation Communities Preserved Within the Santa Clara River Significant Ecological Area

Off-site preservation within portions of the Santa Clara River SEA that are contiguous with the Santa Susana Mountains and Simi Hills SEA shall be considered if the area supports the same resource values as the Project site and is connected with other natural open space. Preservation of vegetation communities shall be acquired within the adjacent Santa Clara River SEA at a multiplier of 2 for in-kind preservation, multiplier of 2.5 for out-of-kind preservation but within the same Resource Category, and a multiplier of 2.25 for out-of-kind preservation but a

8 Federal Geographic Data Committee. 2006. National Vegetation Classification Standard, Version 2 – Working Draft. https://www.fgdc.gov/standards/projects/vegetation/index_html.

higher level Resource Category. For the two Resource Category 1 communities, preservation shall be a riparian associated vegetation community.

Table 27. Vegetation Communities Preserved Within the Santa Clara River Significant Ecological Area

Alliance	In-Kind Preserved Acres	Out-of-Kind-Same Resource Category Preserved Acres	Out-of-Kind-Higher Resource Category Preserved Acres
SEA Resource Category 1 (Mitigated at 5:1)	**2 Multiplier**	**2.5 Multiplier**	**2.25 Multiplier**
Baccharis salicifolia Shrubland	23.30	29.12	NA
Salix gooddingii–Salix laevigata Forest and Woodland	12.45	15.56	NA
Sub-Total	*35.74*	*44.68*	*NA*
SEA Resource Category 3 (Mitigated at 3:1)	**2 Multiplier**	**2.5 Multiplier**	**2.25 Multiplier**
Ericameria palmeri Provisional Shrubland	4.00	5.00	4.50
Eriodictyon crassifolium Provisional Shrubland	1.67[1]	2.09[1]	1.88[1]
Nassella (*Stipa*) spp.–*Melica* spp. Herbaceous	0.41	0.51	0.46
Quercus agrifolia Forest and Woodland	61.00[2]	76.25[3]	68.63[4]
Rhus trilobata–Crataegus rivularis–Forestiera pubescens Shrubland	0.13[1]	0.17[1]	0.15[1]
Sub-Total	*67.21*	*84.02*	*75.62*
	102.95	**128.70**	**75.62**

Notes: NA = Not Applicable (due to there being no higher Resource Category

1 None would be needed to be preserved off-site if MM-BIO-3 is implemented.
2 30.60 acres would be needed if MM-BIO-3 is implemented.
3 38.25 acres would be needed to be preserved if MM-BIO-3 is implemented.
4 34.43 acres would be needed to be preserved if MM-BIO-3 is implemented.

Preservation of Assessor's Parcel Numbers 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-041, 2826-014-057, and 2826-014-067

Assessor Parcels Numbers 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-041, 2826-014-057, and 2826-014-067 are located within the Santa Susana Mountains/Simi Hills SEA, approximately one mile south-southwest of the Project site. The analysis of the natural resources found on the six parcels can be found in Appendix I, Trails at Lyons Canyon Project — Offsite Mitigation Option — Natural Resources Analysis for Assessor Parcel Numbers 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-0412826-014-057, and 2826-014-067.

Nine vegetation communities were mapped in the six parcels, as listed in the table below. Two SEA Resource Category 3 communities, *Pseudotsuga macrocarpa–Quercus agrifolia* association (bigcone Douglas fir–coast live oak forest) and *Quercus agrifolia* association (coast live oak woodland and forest) occur, primarily on north-facing slopes and canyon bottoms. The seven SEA Resource Category 4 communities are shrub-dominated and consist of chaparral and coastal scrub species.

Table 28. Assessor's Parcels Numbers 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-041, 2826-014-057, and 2826-014-067

Vegetation Community	Acres
SEA Resource Category 1	
Quercus agrifolia Association Southern Coast Live Oak Riparian Forest (Water Resources)	27.47
SEA Resource Category 3	
Pseudotsuga macrocarpa–Quercus agrifolia Association	4.02
Quercus agrifolia Association	50.89
Subtotal	*54.91*
SEA Resource Category 4	
Adenostoma fasciculatum–Salvia leucophylla Association	11.35
Adenostoma fasciculatum–Salvia mellifera Mixed Shrub Association	1.16
Adenostoma fasciculatum Association	77.08
Artemisia californica–Eriogonum fasciculatum Association	2.08
Ceanothus crassifolius–Adenostoma fasciculatum–Rhus ovata Association	249.26
Ceanothus crassifolius–Adenostoma fasciculatum Association	14.37
Malacothamnus fasciculatus–Salvia leucophylla Association	2.54
Malosma laurina–Eriogonum fasciculatum Association	12.93
Wild oats and annual brome grasslands Semi-natural Alliance	12.24
Subtotal	*383.01*
Non-SEA Resource Category	
Urban/Developed	1.31
Total	**466.70**

Note: SEA = Significant Ecological Area.

The drainages in the six parcels are part of the Wiley Canyon and Towsley Canyon watersheds that *contribute* to the South Fork of the Santa Clara River. The desktop analysis resulted in 13.30 acres of potential streams in the six parcels. The method for determining potential adjacent riparian oak forest resulted in 27.47 acres of SEA Category 1 Water Resources. The remaining 54.91 acres of *Pseudotsuga macrocarpa–Quercus agrifolia* association and *Quercus agrifolia* association would be considered upland and SEA Resource Category 3.

As shown in the following table, the Conservation Area provides sufficient acreage to fully offset impacts to SEA Resource Category 4 vegetation communities (for SEA Resource Category 4, preservation can be out-of-kind if the resource is of the same category.) and to partially offset impacts to SEA Resource Category 3 (for this discussion, the creation of vegetation communities within the *Brassica nigra–Centaurea melitensis* herbaceous semi-natural stands is not included; however, if oak trees are planted as replacement for SEA protected trees, then an argument shall be made that planted oaks also constitute the creation of oak woodland). The 27.47 acres of SEA Category 1 Water Resources and the 54.91 acres of SEA Resource Category 3 provides the necessary acres of preservation for these two categories. The parcels provide an additional 26.72 acres of SEA Resource Category 3 vegetation communities and 503.17 acres of SEA Resource Category 4 vegetation communities.

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Table 29. Impacts to SEA Resource Category Communities and Proposed Preservation for the Trails at Lyons Canyon Project Using APNs 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-041, 2826-014-057, and 2826-014-067

SEA Resource Category	Total Impacts (acres)	Mitigation Requirement (acres)[a]	On-Site Preservation (acres)[b]	In-Kind Off-Site Preserved Acres Needed[c]	In-Kind Acres Provided by the Six Parcels[d]	Out-of-Kind Off-Site Preserved Acres Needed[e]	Out-of-Kind Acres Provided by the Six Parcels[f]	Total Preservation (acres)	Excess Acreage	Preservation to Impact Ratio: Required	Preservation to Impact Ratio: Provided
1	3.68	18.39	0.52	17.87	0	26.74	27.47	27.99	9.60	7.5:1	7.6:1
3	14.77	44.31	10.79	33.52	30.14[g]	5.70	24.77[h]	65.70	21.39	4.5:1	4.45:1
4[i]	32.40	64.80	115.78	0	383.01	NA	NA	498.79	433.99	3:1	15.4:1
5[j]	35.61	NA	16.24[k]	NA	NA	NA	NA	NA	NA	NA	NA

Notes: SEA = Significant Ecological Area; APN = Assessor's Parcel Number; NA = not applicable.

[a] This is determined by the impacts multiplied by the ratio of preservation required per the County of Los Angeles' SEA Implementation Guide (5:1 for Category 1, 3:1 for Category 3, and 2:1 for Category 4).

[b] Preserved in the Conservation Area established by the proposed MM-BIO-1.

[c] In-kind preservation within the Santa Susana Mountains/Simi Hills SEA, per proposed MM-BIO-3.

[d] APNs 2826-018-034, 2826-017-044, 2826-017-043, and 2826-017-041.

[e] Out-of-kind preservation within the Santa Susana Mountains/Simi Hills SEA is at 1.5:1 for same category (used for SEA Resources Category 1) and 1.25:1 for a higher category (used for SEA Resources Category 3), per proposed MM-BIO-3.

[f] Out-of-kind preservation of SEA Resource Category 1 (oak riparian forest).

[g] In the form of *Quercus agrifolia* Association.

[h] *Quercus agrifolia* Association preservation used for Project impacts to *Ericameria palmeri* Provisional Shrubland Alliance, *Eriodictyon crassifolium* Provisional Shrubland Alliance, *Nassella* [*Stipa*] spp. - *Melica* spp. Herbaceous Alliance, and *Rhus trilobata* - *Crataegus rivularis* - *Forestiera pubescens* Shrubland Alliance.

[i] For SEA Resource Category 4, preservation can be out-of-kind if the resource is of the same category.

[j] No preservation ratio is needed for SEA Resource Category 5, per se, only that the values that it supports (such as movement opportunities) are preserved.

[k] This would be transformed to a higher value SEA Resource Category if MM-BIO-3 is implemented.

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Mitigation Bank Credits

Off-site purchase of mitigation credit from a County Planning-approved mitigation bank shall be completed prior to the issuance of grading permits. The mitigation bank would have to be located within the Santa Susana Mountains and Simi Hills SEA or be contiguous with the SEA. The credits purchased must meet the acres calculated by using a multiplier of 3 applied to the preservation ratios stated in the SEA Ordinance Implementation Guide for SEA Resource Categories 1 and 3, as shown in the following table.

Table 30. Mitigation Credits Required to be Purchased from a County-Approved Mitigation Bank

SEA Resource Category	Mitigations Credits Required
1	53.61[a]
3	100.83[b, c]

Notes: [a] Riparian scrub
[b] 91.50 woodland, 8.72 shrubland, and 0.61 grassland
[c] 15.90 woodland, 6.01 shrubland, and 0.61 grassland (totaling 52.52) would be needed if MM-BIO-3 is implemented.

Mitigation lands shall be comprised of similar or higher quality habitat than found on the Project site. Should credits not be available, then compensation may be in the form a County-approved turnkey project with a mitigation bank and/or other County Planning-approved option. Selected mitigation banks shall be accredited through CDFW and/or the County to have established conservation easements that shall ensure the preservation of the resources in perpetuity.

6.3 MM-BIO-3: Habitat Mitigation and Monitoring Plan

After implementation of MM-BIO-2, if the Los Angeles County Department of Regional Planning (County Planning) determines that sufficient habitat is not preserved off-site, per MM-BIO-2, then on-site establishment and restoration will be conducted in the Conservation Area (MM-BIO-1). Prior to the issuance of a grading permit, a qualified biologist shall be retained to prepare a Habitat Mitigation and Monitoring Plan (HMMP) detailing the specific approach for each type of habitat restoration and establishment area, special-status species transplant location, and SEA protected tree transplant/planting and will outline detailed performance standards and monitoring requirements for each; following the monitoring and reporting methods and performance standards listed below. Planning approval of the HMMP will be required prior to the onset of Project-related ground-disturbing activities. When specified for each habitat type below, the acreages allotted for on-site establishment apply to a total of 16.24 acres of *Brassica nigra–Centaurea melitensis* Herbaceous Semi-natural Stands.

- On-site establishment of 0.84 acre of *Eriodictyon crassifolium* Shrubland Alliance
- On-site restoration/establishment of 0.07 acre of *Rhus trilobata* Provisional Shrubland Alliance
- On-site establishment of 15.20 acres oak woodland

Habitat Restoration/Enhancement Implementation

The following best management practices will be implemented during the implementation of the Habitat Restoration/Enhancement activities.

Schedule

Establishment of restoration/revegetation sites will be conducted during the appropriate time of year (between October 15 and January 30), with planting and/or seeding occurring immediately after the restoration sites are prepared.

Stressors

Any stressors causing habitat degradation should be addressed prior to starting restoration. This includes the removal of invasive plants and trash. Removal of invasive species will include the following:

- Removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native vegetation.
- Any proposals for use of herbicide treatments should be accompanied by a plan that demonstrates:
  - that other methods of invasive species control have been tested, and that a single application of herbicide has been determined to be the best solution;
  - that there is a post application plan for revegetation and/or mulching; and
  - that the treatment is a one-time application.
- Preemergent herbicide will not be used

Plant Material

The following will be implemented:

- Details regarding the planned source of their plant material will be provided
- All stock from nurseries will be derived from plants originally collected within cis-montane Los Angeles County.
- Plant material used for habitat restoration purposes will consist of native species that are local to the immediate area of the mitigation site.
- All plant material proposed for use in a habitat restoration program will be inspected by a County-approved Restoration Biologist to ensure that all container plants are in good health and do not contain pests or pathogens that may be harmful to existing native plants or wildlife species.
- Container plants and other landscaping materials (including organic mulches) should be inspected by the County Planning-approved Restoration Biologist to ensure they do not contain Argentine ants.
- Native seed mixes will be inspected by the County-approved Restoration Biologist prior to their application to ensure that they contain the proper species and that seed packages are in good condition and do not contain any pests or pathogens.
- Diseased or infested plant, seed, or landscape materials should be removed from the site and transported to an appropriate off-site green waste facility.
- One application of mulch will be done, except for areas that will provide nesting opportunities for native bees.

Maintenance Plan/Guidelines

A Maintenance Plan will be included that outlines the following: (1) weed control, including cleaning of equipment to prevent further spread or introduction of new weeds; (2) herbivory control; (3) trash removal; (4) irrigation system maintenance; (5) maintenance training; and (6) replacement planting.

Signage and Fencing

Signage specifications will be developed to indicate the site is a restoration/preserve area and to either indicate that trespassing is not allowed or to instruct visitors to stay on trails. Specifications on fencing to protect biological resources and restrict human access will be provided.

Monitoring Methods

Proposed plantings, enhancement/restoration, and receptor sites will be monitored for ten years following the completion of seeding or planting. The monitoring program will consist of the observation and evidence of vegetative growth, observation of emergent and flowering special-status plant species where required, along with seed production for flowering plants, photo-documentation, and measurements of annual rainfall.

A County Planning-approved Restoration Biologist restoration specialists, biologists, or horticulturists with appropriate credentials and experience in native habitat restoration shall perform monitoring. Continuity within the personnel and methodology of monitoring shall be maintained insofar as possible to ensure comparable assessments.

The Biologist will conduct monitoring surveys quarterly during the non-growing season for each enhanced or restored habitat type or particular plant species where required. During the growing period, or as soon as vegetative growth is observed, the enhancement/restoration and receptor sites will be monitored on a bi-weekly basis through seed production for ten years to document the growth of the enhanced or restored habitat type or replacement population.

Qualitative surveys, consisting of a general site walkover and habitat characterization, will be completed during each monitoring visit. General observations, such as growth, flowering, and seed production, as well as pest problems, weed establishment, mortality, and site security, will be noted in each site walkover. The Project Biologist will also note observations on native plant recruitment for the purpose of later discussion in the annual reports. Records will be kept of mortality and other problems such as insect damage, weed infestation, and soil loss.

Surveying Flowering and Seed Production

In the case of replacement populations for specific species, flowering individuals observed within receptor sites will be counted. As noted above, quantitative surveys may require multiple visits per month as the blooming period may be staggered along several months (i.e., vegetative growth or non-blooming individuals may not be detected until that individual has bloomed). Peak blooming periods may fluctuate year to year due to seasonal conditions, therefore multiple visits will aid in a more accurate count of flowering individuals. Each flowering individual in the restoration plots will be tallied and recorded on data sheets. The total yearly population will be calculated each year for the annual monitoring results.

Photo-Documentation

Permanent stations for photo-documentation will be established prior to or during the first annual monitoring event. Photos shall be taken each monitoring period from the same vantage point and in the same direction each year and shall reflect material discussed in the annual monitoring report.

Monitoring Schedule

During the growing period, or as soon as vegetative growth is observed, each enhancement/restoration, and receptor site will be monitored monthly through seed production for ten years.

Annual Monitoring Reports

At the end of each monitoring period an annual report will be prepared for submittal to County Planning. The report will summarize the information collected during the qualitative and quantitative monitoring. Each report will document the monitoring methods and description of the enhancement/restoration and receptor sites, provide copies of field data, photo-documentation, monitoring results, an analysis of success, and recommendations for the project and or remedial measures if necessary.

Since seeding of particular species may not occur when planned, monitoring shall be tied to the actual implementation date (e.g., the first annual report shall be delivered on January 1st of the year following the first growing season after enhancement/restoration and/or seeding). These reports will describe the success of the relocation and will discuss the efficacy of the various methods employed to propagate this species. These reports will also include the following:

- a list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities for that year
- a vicinity map indicating location of the mitigation site
- a mitigation site plan, identifying plot locations, photo station locations, etc. as appropriate.
- copies of all monitoring photographs
- and an analysis of all qualitative and quantitative monitoring data

Performance Standards

The performance standards set forth below are to be achieved for the mitigation and monitoring program to be considered successful. Because of the variability of growing conditions and the number of flowering individuals from year-to-year, the performance standards will be considered to have been achieved if during any of three years of the ten-year monitoring period, the target acreage or population number is achieved. Thus, the annual standards provide a guide showing that the program is on a positive trajectory.

- The growing conditions and number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe translocated populations over a period of years to accurately determine survival. To this end, this plan proposes a ten-year monitoring term to track flowering individuals which provides the best and easiest indicators to track that the translocation is succeeding.

- Various threats to plants must be minimized to ensure survival, and ultimate flowering of seeded individuals leading to future germination/successful reproduction.
- Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific enhancement/restoration areas and translocation/receptor sites are exhibiting a positive trajectory.

Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period.

Performance Standards for Ten Year Monitoring Period

- Flowering of the total number of flowering plants originating from seed shall equal or exceed the number of container individuals counted during the two-year monitoring period (at least three years of the ten-year monitoring period).
- Emergence of leaves for of a minimum of 80-percent of the translocated bulbs
- Flowering of a minimum of 60-percent of the translocated bulbs
- Survival of 80-percent of established individuals
- Habitat subject to translocation must exhibit same or less cover by non-native grasses; and forbs than during the initial planting (30-percent).

Adaptive Management

The HMMP shall include adaptive management strategies in the event the mitigation and monitoring program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If the enhancement/restoration areas or receptor sites are observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s)in the Conservation Area in which to broadcast seed from a contingency seed supply held at a seed facility (and maintained for at least ten years). Should the performance standards be achieved, contingency seed would be broadcast in the enhancement/restoration areas or receptor sites.
- If receptor sites appear on track to meet the performance standards, any remaining plant material may be planted after five years at the receptor sites (if space allows) or additional acceptable receptor sites will be identified. This would allow for five years of monitoring of the container stock.
- Seeds and/or bulbs will continue to be harvested from plants maintained in the nursery and installed in the receptor sites on an as-needed basis to ensure translocation/receptor sites are progressing toward final performance.
- The alternate site will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with the County Planning. Once an approach has been determined in coordination with the County, the seed would be broadcast at the contingency seed and seeded at the alternate site and a ten-year program, that includes monitoring and maintenance would be initiated as set forth above.

6.4 MM-BIO-4: Biological Monitoring

Prior to the issuance of a grading permit, the Applicant shall submit the qualifications of potential Biological Monitor(s) to County Planning for review and approval. The Applicant shall then fund the County Planning-approved Biological Monitor(s) during Project construction to monitor construction activities and to ensure compliance with all mitigation measures. The Biological Monitor shall be present on site during all vegetation removal and each day prior to the commencement of grading activities. The Biological Monitor shall be responsible for conducting a pre-construction clearance survey and any wildlife (common or special-status) shall be relocated to the Conservation Area. Pre-construction clearance surveys shall be conducted prior to construction of each new phase of the development. The Biological Monitor shall monitor to ensure that wildlife do not become entrapped in excavation or trenching areas. Safeguards shall be implemented during daytime periods of non-activity and overnight, such as a placing a platform over trenches, flush with the ground surface; installing escape ramps in trenches; or installing exclusionary fencing. Should relocation of any trapped wildlife be required, construction shall be halted until the Biological Monitor arrives on site and clears the work area (in compliance with all applicable permits and authorizations).

Burrowing owl has the potential to occur as a transient during dispersal and migration. Focused pre-construction surveys for burrowing owl shall be conducted weekly by the Biological Monitor beginning 30 days prior to the commencement of vegetation removal, with the last/fourth survey being conducted three days prior to the commencement of vegetation removal. If burrowing owl are located during any focused pre-construction surveys, or during the monitoring of construction activities, a 500-foot no-work buffer shall be established around the location of the burrow(s), and County Planning and California Department of Fish and Wildlife (CDFW) shall be notified. CDFW shall be consulted regarding the potential need for an Incidental Take Permit per California Fish and Game Code 2081. The no-work buffer shall remain in place until the until the Project Applicant obtains confirmation from CDFW that it can be removed. The results of the surveys and any associated monitoring shall be documented in a Burrowing Owl Survey/Monitoring Report that shall be submitted to County Planning.

The Biological Monitor shall also monitor any colonial roosts located within 500 feet from the Project limits to determine if Project activities are having a detrimental effect on the roost. If bats are exhibiting distress due to noise generated by Project activities, the Biological Monitor shall work with the construction contractor on ways to reduce activities in the proximity of the roost (e.g., limiting the number of tractors in the area). The results of the protective actions will be documented in the daily monitoring report.

The Biological Monitor shall regularly inspect the Project site as needed after the completion of all grading activities. Monthly spot-check monitoring is anticipated to be required throughout the construction of the Project for those areas that are graded but not yet developed/landscaped. During monthly visits, the biological monitor shall address the following: (1) the potential establishment of invasive species and require weed abatement (if necessary) in accordance with MM-BIO-6; (2) address the potential establishment of native vegetation/habitat to reduce the potential for impacts between phases of construction; (3) identify deficiencies, if applicable, with any erosion control measures that have the potential to negatively impact biological resources.

Daily monitoring reports shall be prepared by the Biological Monitor that at a minimum document the results of any surveys conducted, wildlife relocations, construction activities performed, compliance issues observed, corrective actions taken during the reporting period. The monitoring reports shall include photos as appropriate and be made available to County Planning and CDFW at their request.

6.5 MM-BIO-5: Demarcation of Disturbance Limits

Prior to commencement of earthwork for each phase of Project construction, the construction limits shall be clearly demarcated (e.g., installation of flagging or temporary high visibility construction fence), as recommended by the County-approved Biological Monitor. All construction activities including equipment staging and maintenance shall be conducted within the marked disturbance limits to prevent inadvertent disturbance to sensitive vegetation communities outside the limits of work. The flagging shall be maintained throughout construction.

6.6 MM-BIO-6: Invasive Species Prevention

The Project shall not include invasive plant species listed on Appendix C of the SEA Ordinance Implementation Guide (Appendix J) and in the California Invasive Plant Council (Cal-IPC) inventory (Appendix K) in Project landscaping palettes. Project landscape palettes shall be reviewed and approved by the County to ensure that invasive plant species are excluded. In addition, to prevent the spread of invasive plant species during construction and until the establishment of common landscaped areas associated with the Project, the following measures shall be implemented:

- A Workers Environmental Awareness Training (WEAT) program will be prepared that will include invasive species prevention measure implemented by the project. The WEAT will include descriptions of the common invasive plants known in the region. The WEAT will also include descriptions of sensitive resources known to occur in the Project site and the procedures to follow should a sensitive resource be encountered.

- All mobile vehicles and construction equipment shall be washed prior to entering the Project site in an upland location where any seed material from invasive species will be contained and not carried onto the Project site. Logs of the washing will be submitted monthly to Regional Planning.

- Following the completion of grading activities, for those areas of the Project site that are graded but not yet developed/landscaped, the County-approved Biological Monitor shall conduct monthly spot checks to prevent the introduction or establishment of invasive plant species onto the graded areas (see MM BIO-4). If invasive species are identified, the Biological Monitor shall remove the plants with hand tools or weeding equipment to prevent propagation.

- All vegetative material removed from the Project Footprint shall be transported in a covered vehicle and will be disposed of at a certified disposal site.

6.7 MM-BIO-7: Landscaping Plan

Prior to the issuance of the first grading permit, the Applicant shall prepare a landscaping plan for the Homeowners' Association (HOA) maintained areas and submit the Landscaping Plan to County Planning for review and approval. The Landscaping Plan for the HOA-maintained areas shall include, but not be limited to, the following:

- Plant species list shall include scientific name, common name, plant container size, and quantities.
- Invasive plant species (designated by California Invasive Plant Council) shall not be included in the landscaping plan as they could establish off-site and have negative impacts to the adjacent habitats.

- Non-native milkweeds shall not be included in the landscaping plan as they could establish off site and have negative impacts to the adjacent habitats.
- Plant layout shall indicate the location of the plant species.
- Planting notes shall include irrigation and plant installation requirements such as mulch requirements.
- Ornamental varietals and selections of native species shall be avoided if they have the potential to hybridize with local native populations.
- Where native species are required, the species shall be indigenous native species of the region (locally indigenous native species).

6.8 MM-BIO-8: Homeowners' Association Covenants, Conditions, and Restrictions

The Homeowner's Association (HOA) Covenants, Conditions, and Restrictions (CC&Rs), which are reviewed and approved prior to final map recordation, then recorded immediately after the final map records, shall include the following requirements to reduce potential human impacts on adjacent habitats and wildlife species:

- Invasive plant species (designated by California Invasive Plant Council) shall be prohibited on all residential lots, as they could establish off site and have negative impacts to the adjacent habitats.
- All trash/garbage waste and recycling receptacles have locking devices that discourage wildlife foraging in common areas/parks and shall encourage the use of such locking devices on residential receptacles, as feasible.
- Intentional feeding of wildlife, including mule deer, is prohibited.
- The use of rodenticides is prohibited.
- Speed limits of 15 miles per hour shall be posted, and the CCRs shall require residents to comply with the posted speed limits.
- Smoking shall be prohibited in open space areas.
- The HOA shall not use balloons for any community events, and the use of balloons by individual homeowners shall be discouraged.
- Homeowner reprisals against native wildlife species (i.e., killing or harming native wildlife species in any way) if homeowner pets are killed or harmed by wildlife shall be prohibited.
- Public information signage shall be installed at the trailhead and in the recreation facility and printed information shall be provided to the Homeowners' Association (HOA) in order to: 1) educate and inform the public about wildlife, especially mountain lions present in the area; 2) advise on proper avoidance measures to reduce human-wildlife conflicts; 3) advise on proper use of open space trails in a manner respectful to wildlife (e.g., dogs on leash, proper waste disposal); and 4) provide local contact information to report injured or dead wildlife. Signage should be written in the language(s) understandable to all those likely to recreate and use the trails. Signage should not be made of materials harmful to wildlife.

6.9 MM-BIO-9: Special-Status Plants Seed and Bulb Survey, Salvage, and Translocation

The required, County Planning-approved CMP shall include a Special-Status Plant Mitigation and Monitoring Plan (SSPMMP) that shall provide guidance and methods to preserve the special-status plants known to occur within the Conservation Area (slender mariposa lily, Plummer's mariposa lily, Peirson's morning glory, and scarlet keckiella), along with a program of special-status plants seed collection and dispersal within the Conservation Area. The SSPMMP will also include methods and approach to translocating mariposa lily individuals proposed for impact into the Conservation Area. The SSPMMP will be developed and implemented with a program that does not conflict with other conservation easement resource management objectives.

The SSPMMP will provide details on site preparation measures, as well as specific methods for the pre-construction collection of seeds or propagules from all four species and the harvest of mariposa lily bulbs from impacted populations. The SSPMMP will also provide detailed methods for the dispersal of that seed, and the translocation of the harvested bulbs, into the conservation easement areas within locations with appropriate soils and growing conditions for each species, as determined by a qualified biologist in coordination with the County and California Department of Fish and Wildlife. Finally, the SSPMMP will provide a schedule and action plan for the maintenance and monitoring programs, including success criteria, and remedial contingency measures to be implemented if efforts are not successful.

Pre-construction surveys will be conducted in the Project footprint to map slender mariposa lily, Plummer's mariposa lily, Peirson's morning glory, and scarlet keckiella individual locations with a high-accuracy GPS unit and a permanent marker established in the field to locate the individual mariposa lilies for bulb collection. Seeds will be collected from each species at the appropriate time of year. Mariposa lily bulbs shall remain in the ground until Project development. Prior to Project development, the bulbs shall be translocated within appropriate habitat in the Conservation Area.

Performance Standard

Monitoring shall take place annually for five years from the time of establishment of the mariposa lily bulbs. The following success criteria is the minimum required by the end of the five-year monitoring period:

- 25 slender mariposa lily
- 44 scarlet keckiella
- 600 Peirson's morning glory
- 128 Plummer's mariposa lily

If it appears that the population of these special-status plant species (slender mariposa lily, scarlet keckiella, club-haired mariposa lily, Peirson's morning glory, and Plummer's mariposa lily) or the vegetation community composition and status are on the decline or have been degraded, remedial activities shall be implemented according to the CMP and the SSPMMP, and monitoring will continue until the success criteria are met. These activities may include weed control, additional seeding, native plant establishment, or other activities where appropriate.

Annual monitoring reports shall be submitted by August 31 of each year and shall include an evaluation of current monitoring data in relation to previous population observations (during previous monitoring years) and native enhancement efforts for slender mariposa lily, scarlet keckiella, club-haired mariposa lily, Peirson's morning glory, and Plummer's mariposa lily. These reports shall also include any recommendations for remedial management measures and shall discuss other issues that need to be addressed, such as trespassing or vandalism.

6.10 MM-BIO-10: Crotch Bumble Bee Habitat Preservation and Minimization Measures

Incidental Take Permit

The Applicant shall consult with the California Department of Fish and Wildlife on obtaining an Incidental Take Permit (ITP), per California Fish and Game Code 2081, for the take of Crotch's bumble bee. Mitigation for direct impacts to Crotch's bumble bee will be fulfilled through compensatory mitigation at a minimum 1:1 nesting habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through the Incidental Take Permit process. Mitigation shall be accomplished through the preservation of on-site suitable habitat (MM-BIO-1) and off-site suitable habitat (MM-BIO-2). The Applicant shall be obligated to implement all minimization and avoidance measures conditions that are included in the ITP.

Pre-Construction Survey

A pre-construction survey for Crotch bumble bee shall be conducted within the construction footprint prior to the start of ground-disturbing construction activities occurring during the Crotch bumble bee nesting period (February 1 through October 31). The survey shall ensure that no nests for Crotch bumble bee are located within the construction area. The pre-construction survey shall include 1) a habitat assessment and 2) focused surveys, both of which will be based on recommendations described in the "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species," released by the California Department of Fish and Wildlife (CDFW) on June 6, 2023 or the most current at the time of construction.

The habitat assessment shall, at a minimum, include historical and current species occurrences; document potential habitat on site including foraging, nesting, and/or overwintering resources; and identify which plant species are present. For the purposes of this mitigation measure, nest resources are defined as abandoned small mammal burrows, bunch grasses with a duff layer, thatch, hollow trees, brush piles, and man-made structures that may support bumble bee colonies such as rock walls, rubble, and furniture. The habitat assessment will be repeated prior to February 1 in each year ground-disturbing activities will occur to determine if nesting resources are present within the impact area. If nesting resources are present in the impact area, focused surveys will be conducted.

The focused survey will be performed by a biologist with expertise in surveying for bumble bees and include at least three (3) survey passes that are not on sequential days or in the same week, preferably spaced two to four weeks apart. The timing of these surveys shall coincide with the Colony Active Period (April 1 through August 31 for Crotch bumble bee). Surveys may occur between 1 hour after sunrise and 2 hours before sunset. Surveys will not be conducted during wet conditions (e.g., foggy, raining, or drizzling) and surveyors will wait at least 1 hour following rain. Optimal surveys are conducted when there are sunny to partly sunny skies and ambient temperatures are greater than 60° Fahrenheit. Surveys may be conducted earlier than April 1 if other bees or butterflies are flying. Surveys shall not be conducted when it is windy (i.e., sustained winds greater than 8 mph). Within non-developed habitats, the biologist shall look for nest resources suitable for bumble bee use. Ensuring that all nest resources

receive 100% visual coverage, the biologist shall watch the nest resources for up to five minutes, looking for exiting or entering worker bumble bees. Worker bees should arrive and exit an active nest site with frequency, such that their presence would be apparent after five minutes of observation. If a bumble bee worker is detected, then a representative shall be identified to species. Biologists should be able to view several burrows at one time to sufficiently determine if bees are entering/exiting them depending on their proximity to one another. It is up to the discretion of the biologist regarding the actual survey viewshed limits from the chosen vantage point which would provide 100% visual coverage; this could include a 30- to 50-foot-wide area. If a nest is suspected, the surveyor can block the entrance of the possible nest with a sterile vial or jar until nest activity is confirmed (no longer than 30 minutes).

Identification will include trained biologists netting/capturing the representative bumble bee in appropriate insect nets, per the protocol in U.S. National Protocol Framework for the Inventory and Monitoring of Bees. The bee shall be placed in a clear container for observation and photographic documentation if able. The bee will be photographed using a macro lens from various angles to ensure recordation of key identifying characteristics. If bumble bee identifying characteristics cannot be adequately captured in the container due to movement, the container will be placed in a cooler with ice until the bumble bee becomes inactive (generally within 15 minutes). Once inert, the bumble bee shall be removed from the container and placed on a white sheet of paper or card for examination and photographic documentation. The bumble bee shall be released into the same area from which it was captured upon completion of identification. Based on implementation of this method on a variety of other bumble bee species, they become active shortly after removal from the cold environment, so photography must be performed quickly.

If Crotch bumble bee nests are not detected, no further mitigation would be required. The mere presence of foraging Crotch bumble bees would not require implementation of additional minimization measures because they can forage up to 10 kilometers from their nests. If nest resources occupied by Crotch bumble bee are detected within the construction area, no construction activities shall occur within 100 feet of the nest, or as determined by a qualified biologist through evaluation of topographic features or distribution of floral resources. The nest resources will be avoided for the duration of the Crotch bumble bee nesting period (February 1 through October 31). Outside of the nesting season, it is assumed that no live individuals would be present within the nest as the daughter queens (gynes) usually leave by September, and all other individuals (original queen, workers, males) die. The gyne is highly mobile and can independently disperse to outside of the construction footprint to surrounding open space areas that support suitable hibernacula resources.

A written survey report will be submitted to County Planning and CDFW within 30 days of the pre-construction survey. The report will include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch bumble bee nest sites or individuals observed. The survey report will include the qualifications/resumes of the surveyor(s) and approved biologist(s) for identification of photo vouchers, detailed habitat assessment, and photo vouchers. If Crotch bumble bee nests are observed, the survey report will also include recommendations for avoidance, and the location information will be submitted to the California Natural Diversity Database (CNDDB) at the time of, or prior to, submittal of the survey report.

If the nest resources cannot be avoided, as outlined in this measure, the project applicant will consult with CDFW regarding the need to obtain an Incidental Take Permit. Any measures determined to be necessary through the Incidental Take Permit process to offset impacts to Crotch bumble bee may supersede measures provided in this CEQA document and shall be incorporated into the habitat mitigation and monitoring plan.

6.11 MM-BIO-11: Special-Status Wildlife Relocation Plan

Prior to commencement of any earthmoving activities or the pre-construction staging of equipment on the Project site, the Project Applicant shall contract with a County Planning-approved biologist to develop a Preconstruction Wildlife Survey and Relocation Plan for terrestrial reptiles, including the California newt, two-striped gartersnake, Southern California legless lizard, and coastal whiptail. The Preconstruction Wildlife Survey and Relocation Plan shall be submitted to County Planning for review prior to any ground-disturbing activities within potentially occupied habitat.

The Plan shall include at a minimum, the following:

(1) Protocols for pre-construction surveys to flush out and/or move identified special status wildlife within the Study Area, as feasible.

- Relocation to the Conservation Area shall be the primary location, unless otherwise approved by County Planning.

(2) The timing, frequency, and locations where surveys should be conducted.

- Surveys will be conducted 24 hours prior to construction activities and repeated the morning of the proposed activity.
- Surveys shall be conducted in all areas anticipated to be subject to vegetation clearing.

(3) The habitat and conditions in the proposed relocation site(s).

(4) The methods that would be used for trapping and relocating identified species.

- All equipment used in the effort will be cleaned and decontaminated to minimize the spread of herpetofaunal pathogens.[9]
- Any wildlife handling and relocation methodology from the CDFW-issued Streambed Alteration Agreement will be incorporated in the Preconstruction Survey and Relocation Plan.

(5) Protocols for documentation/recordation of the species and number of animals relocated.

- Relocations shall be logged and made available to County Planning, if requested.

(6) Protocols for notifying CDFW if identified species cannot be relocated.

- Attempts at relocation shall be logged and notification shall occur within 24 hours.

(7) The timing and frequency of reports documenting the results of the surveys.

6.12 MM-BIO-12: Nesting Bird Avoidance

Project construction shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act and California Fish and Game Code with methods approved by the California Department of Fish and Wildlife to protect active bird/raptor nests. Vegetation removal shall occur during the non-breeding season for nesting birds

[9] Julian et al. 2020. Minimizing the Spread of Herpetofaunal Pathogens in Aquatic Habitats by Decontaminating Construction Equipment. Herpetological Review, 2020, 51(3), 472–483. https://parcplace.org/wp-content/uploads/2020/11/Julian-2020-Decontamination-for-Herps-for-large-equipment.pdf.

(generally late September to early March) and nesting raptors (generally early July to late January) to avoid impacts to nesting birds and raptors.

For the remaining Project activities initiated during the breeding season for nesting birds (March 1–September 30) and nesting raptors (February 1–June 30), a pre-construction survey shall be conducted by the Biological Monitor (MM-BIO-4) for nesting birds and/or raptors within 3 days prior to any work within 300 feet for suitable nesting habitat for non-raptors and within 500 feet for suitable nesting habitat for raptors). If the Biological Monitor does not find any active nests immediately adjacent to the impact areas, the Project activity shall be allowed to proceed.

If the Biological Monitor finds an active nest adjacent to the construction area and determines that the nest may be indirectly impacted or breeding activities substantially disrupted, the Biological Monitor shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans, which will be included in the report(s) documenting the survey(s) that will be submitted to the County within three days of the completion of the survey. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by the Biological Monitor: (1) work limits shall be established within a buffer around any occupied nest (the buffer shall be 100–300 feet for nesting non-raptors and 300–500 feet for nesting raptors), unless otherwise determined by the Biological Monitor and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by the Biological Monitor. Encroachment into the buffer area around a known nest shall only be allowed if the Biological Monitor determines that the proposed activity would not disturb the nest occupants. Construction can proceed when the Biological Monitor has determined that fledglings have left the nest, or the nest has failed.

6.13 MM-BIO-13: Lighting Plan

Prior to issuance of the building permit, the Applicant shall prepare lighting plans for submission and approval by County Planning, that identify the type, layout, and luminaire wattage of all exterior fixtures to be employed in association with the project. The plan shall demonstrate compliance with Chapter 22.80 (Rural Outdoor Lighting District) of the County Code. The lighting plan shall at a minimum address and conform to the Rural Outdoor Lighting District as well as the following requirements, and County Planning must approve all aspects of the final submitted lighting plans.

- Wherever feasible and compatible with requirements for nighttime safety and security, outdoor lighting shall be not be operated adjacent to native habitats.
- Outdoor lighting shall be fully shielded so that bulbs and lenses are not visible and shall cause no light trespass into native habitats or skyward. No lighting shall be directed toward native habitats.
- Light fixtures shall be mounted as low as possible to minimize light trespass.
- The lowest amount of light shall be employed that is needed for the task. The lighting shall only illuminate the area needed and shall be no brighter than necessary. This includes lighting for stage events.
- Motion sensors shall be employed, or automatic controls to ensure that lights are not left on longer than necessary.
- Only warm light sources shall be used for outdoor lighting. The amount of blue light emitted shall be minimized, as blue light has been shown to harm human health and to endanger wildlife. Warm (or subdued) light sources recommended for use outdoors include low-pressure sodium (LPS), high-pressure

sodium (HPS), and low-color-temperature light emitting diodes (LEDs). Wherever feasible, lighting color temperature shall not exceed 2,200 Kelvins.

- The following types of lighting are prohibited, and shall not be used: drop-down lenses, mercury vapor lights, ultraviolet lights, and searchlights, laser lights, or other outdoor lighting that flashes, blinks, alternatives, or moves.
- Project structures shall utilize non-reflective materials to avoid glare intruding into native habitats.
- Landscape screens shall be employed where feasible to reduce glare from vehicle headlights into native habitats.

6.14 MM-BIO-14: Jurisdictional Waters Compensation

Mitigation for up to 4.94 acres of direct impacts to jurisdictional waters shall be implemented through off-site acquisition, such as mitigation bank credits, and/or turnkey projects with mitigation banks (as approved by the County) following the issuance of permits from the USACE, Los Angeles RWQCB, and CDFW, and prior to the issuance of the grading permit.

6.15 MM-BIO-15: Roosting Bat Survey

If Project construction initiates between June 1 and August 30, County Planning-approved Biological Monitor shall conduct a pre-construction roosting bat survey within one week prior to the start of constructed-related activities for the Project. The biologist shall inspect cliff features that could have crevices used for roosting by a colony of canyon bat (*Parastrellus hesperus*) within 500 feet of proposed construction activities and then conduct a roost emergence survey at dusk for any potential roosting features found. Results of the surveys shall be documented in a report and submitted to County Planning. As stated in MM-BIO-4, the Biological Monitor shall monitor any colonial roosts located within 500 feet from the Project limits.

6.16 MM-BIO-16: SEA Protected Trees Replacement / Compensation

The required, County Planning -approved CMP shall include a Protected Tree Replacement Plan that will dictate the establishment of replacement trees in the Conservation Area at the numbers specified in Table 31. At a minimum, the removal of any SEA Protected Tree shall result in a minimum of two replacement plantings with a 10:1 for Heritage Trees. Replacement trees shall be seedlings of the same species being removed and shall be planted within an area where suitable growing conditions are present and where the trees will be able to remain in perpetuity, which may include the on-site Conservation Area. Undersized, naturally sprouted trees of the same species growing on-site may be protected or transplanted as replacement trees. The replacement trees shall be nurtured and maintained in a condition of good health and will be monitored for a period of seven years. If any of the replacement plantings fail during the monitoring period of seven years, the applicant will be responsible for replanting and nurturing those new trees. The following table details the quantity of each species required for planting.

Table 31. Summary of Individual Species Replacement Quantities

Scientific Name	Common Name	Total Impacted	Replacement Ratio	Total Replacement Required
Heteromeles arbutifolia	Toyon	0	2:1	0
Juglans californica	Southern California black walnut*	3	2:1	6
Populus fremontii	Fremont cottonwood	15	2:1	30
Quercus agrifolia	coast live oak	191	2:1	382
Quercus agrifolia (Heritage Tree)	coast live oak (Heritage Tree)	15	10:1	150
Quercus berberidifolia	scrub oak	1	2:1	2
Quercus lobata	valley oak	10	2:1	20
Quercus lobata (Heritage Tree)	valley oak (Heritage Tree)	2	10:1	20
Salix laevigata	red willow	24	2:1	48
Salix lasiolepis	arroyo willow	7	2:1	14
Sambucus nigra ssp. *caerulea*	blue elderberry	50	2:1	100
	Totals	318	N/A	772

It should be noted that mitigation can include the protection of undersized, naturally sprouted trees of the same species growing on site. In addition, per the County Code, the County may require additional mitigation and monitoring requirements following review of the SEA CUPs. At a minimum, County Planning requires that the replacement trees need to be nurtured and maintained in a healthy condition and be monitored for a period of seven years. If any of the replacement plantings fail during the monitoring period of seven years, the applicant will be responsible for replanting and nurturing those new trees.

The Project Applicant must pay into the County Protected Tree Fund should there not be enough locations within the Conservation Area (on-site or off-site) or Project landscaped areas for replacement trees. As a last resort, the Protected Tree Fund payments shall be used by the County in accordance with Section 22.102.070(F)(5) of the Los Angeles County Code.

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7 Summary of Findings

7.1 Significant Ecological Areas Statement of Findings

A Be highly compatible with the SEA Resources, including the preservation of natural open space areas and providing for the long-term maintenance of ecosystem functions.

The Santa Susana Mountains/Simi Hills SEA (the "SSM/SH SEA") covers approximately 30,236 acres and most of the land is natural open space with very sparse disturbances for ranches, oil wells, and unimproved access roads. On a regional basis, the SSM/SH SEA contains biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution. This includes coastal sage scrub, alluvial scrub, valley oak woodland, valley oak savannah, mainland cherry woodland, native grassland, southern willow scrub, and cottonwood-willow riparian forest (PCR 2000).

The Project's On-site Conservation Area preserves 144.43 acres of natural open space, representing approximately 62% of the Project site. In addition, the Project's off-site land/habitat preservation program within the Santa Susana Mountains SEA (the "off-site conservation area") results in the permanent preservation of an additional 465.39 acres of category 1-4 vegetation communities protected by the SEA ordinance, including 27.47 acres of oak woodland riparian habitat and 54.91 acres of non-riparian oak woodland habitat. As a result, the Project preserves SEA resources at a significantly higher impact-to-preservation ratio than is required by the SEA ordinance and implementing guidelines. Specifically, the Project preserves category 1 resources at a 7.5:1 ratio, category 3 resources at a 4.45:1 ratio, and category 4 resources at a 15.4:1 ratio whereas the SEA Ordinance and implementing guidelines require respective preservation ratios of 5:1, 3:1, and 2:1 for these resource categories. Across all SEA vegetation resource categories (excludes developed areas), the Project preserves 560.20 acres in excess of the requirements of the SEA ordinance and implementing guidelines. In total, considering both the On-site Conservation Area and off-site Conservation Area, the Project results in the preservation of 611.13 acres of natural open space (excludes developed areas) containing sensitive SEA resources. Further, 16 preservation, avoidance, and minimization measures have been provided as a part of the Project (MM-BIO-1 through MM-BIO-16), including: conserving in perpetuity 611.13 acres of on-site and off-site natural open space; requiring pre-construction surveys, planning, and biological monitoring during construction; measures protecting against invasive species establishment and spread; preparation of conservation management plans; the provision of an endowment for the permanent maintenance of all conservation areas; nesting bird avoidance; conducting a special status plant seed and bulb survey; and strategically locating development as close as possible to existing urban uses/infrastructure.

The Project site is located at the easternmost perimeter of the SSM/SH SEA, abutting existing residential and commercial development to the north and The Old Road and I-5 to the east. As noted, the vegetation communities on the Project site have been impacted by historic human alterations of the landscape; historical aerials show structures and large areas lacking noticeable vegetation between 1947 and 1985 (NETR 2023). Most portions of the Project site north of Lyons Ranch Road overlap these historical disturbed areas, which retain the signs of past disturbances in the form of a high amount of non-native vegetation (primarily mustards, tocalote, and non-native grasses) as monotypic stands or in the gaps coastal scrub and chaparral communities, and in the understory of the oak woodland.

B Avoid or minimize impacts to the SEA Resources and wildlife movement through one or more of the following:

1 Avoiding habitat fragmentation;

The open space of the SSM/SH SEA allows for connectivity between the Santa Monica Mountains and the San Gabriel Mountains, an important corridor for gene flow and species movement; and relatively undisturbed native, natural communities within Los Angeles County (PCR 2000). The Project site is located at the easternmost perimeter of the SSM/SH SEA, abutting existing residential and commercial development to the north and The Old Road and I-5 to the east. The Project site design clusters residential development adjacent to existing infrastructure and other existing residential and commercial uses to the north. As a result of its clustered design, the Project is able to permanently preserve 144.43 acres of contiguous natural open space acreage within the On-site Conservation Area, approximately 62% of the Project site, which minimizes impacts to SEA resources and avoids disruptions to wildlife movement. The Project's off-site Conservation Area further preserves an additional approximately 467 acres of natural open space adjacent to existing publicly owned lands within the Santa Susana Mountains SEA, ensuring accessible wildlife movement in perpetuity. Additionally, habitat linkages along Lyons Canyon between Rivendale Park and Open Space, Towsley Canyon, and conserved areas to the northwest and west would remain intact and accessible to wildlife due to the preservation of canyons and ridgelines within the On-site Conservation Area. Moreover, the Calgrove Boulevard underpass will remain unchanged by the Project, which will continue to facilitate wildlife movement beneath I-5 and into Wildwood Canyon Open Space and Gates King Open Space. As such, the Project complies with this finding.

2 Minimizing edge effects; or

Edge effects are minimized as a result of the Project being sensitively and strategically sited adjacent to The Old Road/I-5 on the east and existing residential and commercial development to the north. In order to meet fire safety requirements, limited off-site brush thinning would be necessary to the north and to the south in the Rivendale Park and Open Space. Additionally, noise generated by Project construction and lighting and noise from the operation of the Project could result in additional edge effects in the surrounding open space. However, mitigation measures are provided to minimize these disruptions in the adjacent open space areas. As noted, 16 preservation, avoidance, and minimization measures have been provided as a part of the Project (MM BIO-1 through BIO-16), including: conserving in perpetuity 611.13acres of on-site and off-site natural open space (excludes developed areas); requiring pre-construction surveys, planning, and biological monitoring during construction; measures protecting against invasive species establishment and spread; preparation of conservation management plans; nesting bird avoidance; conducting a special status plant seed and bulb survey; and strategically locating development as close as possible to existing urban uses/infrastructure. The On-site Conservation Area would further minimize impacts to the west and southwest by establishing a Conservation Management Plan that would maintain the habitat integrity in perpetuity. The Rivendale Park and Open Space to the south is maintained by the City of Santa Clarita and would not be substantially impacted by the limited brush thinning proposed by the Project, which proposes a maximum thinning zone of 150 feet adjacent to the proposed residential development in the northeastern and southeastern corner of the project site. The Project applicant has consulted with the City regarding the modest brush thinning being proposed on its adjacent Rivendale Park and Open Space property and the City indicated no objections to the proposal, subject to proper applicant/City coordination regarding same. As such, the proposed mitigation lowers the Project's edge effects on adjacent SEA Resources and wildlife movement.

3 Siting development in the least sensitive location.

The Project site is located at the easternmost perimeter of the SSM/SH SEA, abutting existing residential and commercial development to the north and The Old Road and I-5 to the east. Portions of the Project site have been impacted by historic human alterations of the landscape; historical aerials show structures and large areas lacking noticeable vegetation between 1947 and 1985 (NETR 2023). All proposed residential development has been strategically located on the portion of the site that is largely adjacent to existing urbanized uses and infrastructure, including I-5, The Old Road, and existing residential and commercial development. The Project's design consciously allows for the permanent conservation of 144.43 acres of natural open space on site, encompassing approximately 62% of the Project site; avoids alterations to sensitive ridgelines; reduces impacts to habitat; and creates contiguous corridors for wildlife movement within the On-site Conservation Area. Accordingly, the development is sited in the least sensitive location. As such, the Project complies with this finding.

C Buffer important habitat areas from development by retaining sufficient natural vegetation cover and/or natural open spaces and integrating sensitive design features;

The 144.43-acre On-site Conservation Area, which comprises approximately 62% of the Project site and supports the preservation of natural vegetation cover, is located in the southern and western portions of the property, maintaining a substantial buffer to existing protected open space areas to the south and west. The On-site Conservation Area is contiguous with large tracts of existing dedicated natural open space associated with the City of Santa Clarita's Woodlands Park and Rivendale Park and Open Space. Additionally, the On-site Conservation Area consists of Lyons Canyon and associated valleys, which also provide moderate to high levels of suitable live-in, breeding, foraging, cover, and dispersal habitat. The On-site Conservation Area also provides line-of-sight connections to valley and canyon complexes located within the adjacent Santa Clarita Woodlands Park, Rivendale Park and Open Space, and beyond to the Santa Susana Mountains complex, Simi Hills, and the additional conserved lands within them (including the Project's approximately 467-acre off-site Conservation Area).

The Project includes numerous mitigation measures and project design features that would ensure the On-site Conservation Area will continue to function as a significant buffer from development in perpetuity. Firstly, biological monitoring during vegetation removal and grading and the demarcation of the limits of construction would avoid and minimize inadvertent impacts to the On-site Conservation Area and would ensure continued function as a substantial buffer. Secondly, the Project will be required to implement a County-approved invasive species prevention plan and landscaping plan that would further avoid and minimize indirect impacts to the On-site Conservation Area and adjacent open space areas from the introduction of non-native plants. Finally, future CCRs for the Project's HOA will prohibit detrimental activities to the On-site Conservation Area that will avoid and minimize edge effects during the operation of the completed Project.

Post-construction, the Project would include features to create a more naturalized transition between the development on the Project site and the off-site Rivendale Park and Open Space to the south, as shown in Appendix L (Screening Study). The Project's proposed street that will run adjacent to the northern boundary of Rivendale Park and Open Space would be lined on both the north and the south side of the street with a mix of small and medium street trees spaced 25-feet on center. In addition to the trees, the south side of the Project's "B Street" right-of-way would include a retaining wall with an average height of approximately 6 feet, ranging from 2 feet to 17 feet in height, which will include tubular fencing on top. Additional screening trees and shrubs will be planted along the Project's southern property line (e.g., coast live oak, laurel sumac, sweet bay, Indian laurel, and coffeeberry) to

further buffer the Project site from the adjacent off-site open space areas. The shrub screening in the street right-of-way would be followed by varying distances of slope plantings, native habitat plantings, and bioretention rim planting that would continue to buffer the southern edge of the Project site and prevent noise and light intrusion into the adjacent Rivendale Park and Open Space. These structural and vegetative features add a physical barrier discouraging terrestrial wildlife movement into the developed portion of the Project site and creating a naturalized barrier between the properties, while also providing additional screening and attenuation of Project-related street, vehicle lighting, and vehicle noise. As such, the proposed mitigation and Project design features buffers the Project's effect on important habitat areas.

D Maintain the ecological and hydrological functions of water bodies, watercourses, and their tributaries;

The Project site is located at the terminus of two main drainages that drain Lyons Canyon in the south and a small, unnamed canyon in the north, with several smaller tributaries draining minor canyons. The two watercourses merge in the northwestern portion of the Project's development footprint. Combined waters flow into an existing culvert located in the northeast portion of the Project site that directs water under The Old Road and I-5 and into the concrete channel of the South Fork of the Santa Clara River. The Project proposes to install detention basins within the western perimeter of the Project's development footprint to retain stormwater and direct Project flows into an underground stormwater system that would direct water to the same destination. Accordingly, the existing drainage patterns and hydrologic conditions remain the same and no changes to the functions of watercourses and their tributaries are caused by the Project. Ecologically, the Project would impact 2.56 acres of riparian-associated vegetation communities; however, the Project proposes to preserve a minimum of 27.47 acres off-site of similar or higher quality habitat within the Santa Susana Mountains SEA, providing a mitigation ratio of 7.6:1, which substantially exceeds the mitigation ratios for same in the SEA ordinance and implantation implementing guidelines (which require a 5:1 mitigation ratio). The preservation of 27.47 acres of off-site riparian vegetation would provide for a greater habitat quality for plants and wildlife and will contribute to the preservation of the overall ecological value of the region. As such, the proposed mitigation lowers the Project's effect on ecological and hydrological functions of water bodies, watercourses, and their tributaries to less than significant.

E Ensure that roads, access roads, driveways, and utilities do not conflict with Priority Biological Resources, habitat areas or migratory paths; and

Project development is strategically clustered adjacent to The Old Road/I-5 to the east and adjacent to existing residential and commercial development to the north. All proposed roads, access roads, driveways, and utilities are located within the Project's development footprint area, allowing approximately 62% of the Project site to be preserved as natural open space within a conservation easement. While the Project site does contain Priority Biological Resources (SEA Resource Categories 1 through 3), preservation, avoidance, and minimization measures, including on-site and off-site natural open space conservation, construction monitoring, surveys, preparation of habitat mitigation plans, and the recordation of conservation easements alongside financial support for ongoing maintenance and monitoring of open space resources serve to limit conflicts with priority biological resources. The Project's on-site and off-site preservation of 593.02 acres of Category 1-4 vegetation communities adjacent to existing public lands would allow for additional Priority Biological Resources to be preserved and migratory paths to be protected in perpetuity, all far in excess of SEA Ordinance and implementing guidelines requirements. As such, the Project complies with this finding.

F Promote the resiliency of the SEA to the greatest extent possible. For purposes of this finding, SEA resiliency cannot be preserved when the proposed development may cause any of the following:

1 Significant unmitigated loss of contiguity or connectivity of the SEA;

The Project does not cause habitat fragmentation or loss of contiguity or connectivity within the SEA because the Project design clusters proposed development adjacent to existing residential and commercial uses to the north and The Old Road/I-5 on the east, allowing approximately 62% of the Project site to be dedicated as a 144.43-acre On-site Conservation Area; the Project's "clustered development" regime is in keeping with applicable policies for same contained in the controlling Santa Clarita Valley Area Plan (aka, the "One Valley, One Vision" plan). The On-site Conservation Area will protect in perpetuity a valuable (and presently unprotected) connection between large tracts of adjacent conserved natural open space associated with the City of Santa Clarita's Woodlands Park and Rivendale Park and Open Space, contributing to a contiguous corridor of conserved natural open space that connects lands to the west to the Calgrove Boulevard undercrossing, a recognized undercrossing of Interstate 5 that supports east/west wildlife movement between the Santa Susana Mountains/Simi Hills SEA and the Gateway Ranch Open Space, Gates King Open Space, and the San Gabriel Mountains to the west; this preserves and avoids substantial loss of connectivity within the SEA. Furthermore, the Project preserves an additional 465.38 acres of category 1-4 resources within the off-site conservation area, facilitating wildlife movement and connectivity within the Santa Susana Mountains SEA in perpetuity. As such, the Project complies with this finding.

2 Significant unmitigated impact to a Priority Biological Resource;

The Project has impacts to Priority Biological Resources (SEA Resource Categories 1 through 3) in the form special-status plants and wildlife, water resources, vegetation communities, and oak woodland; however, as set forth below, all such impacts are fully mitigated in accordance with SEA ordinance and CEQA guidelines. Fifteen preservation, avoidance, and minimization measures have been provided as a part of the Project (MM BIO-1 through BIO-16), including: conserving in perpetuity 611.13 acres of on-site and off-site natural open space; requiring pre-construction surveys, planning, and biological monitoring during construction; measures protecting against invasive species establishment and spread; preparation of conservation management plans; nesting bird avoidance; conducting a special status plant seed and bulb survey; and strategically locating development as close as possible to existing urban uses/infrastructure. These measures serve to preserve and limit impacts to Priority Biological Resources. As such, impacts to Priority Biological Resources would be reduced to less than significant.

3 Removal of habitat that is the only known location of a new or rediscovered species; or

No new or rediscovered species are present on the Project site. As such, the Project complies with this finding.

4 Other factors as identified by SEATAC.

This report has been reviewed by SEATAC and SEATAC's recommendations have been incorporated into this document.

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8 References

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Appendix A

Significant Ecological Area Protected Tree Report

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Significant Ecological Area Protected Tree Report

Trails at Lyons Canyon

APRIL 2024

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APN	Assessor's Parcel Number
County	County of Los Angeles
CUP	Conditional Use Permit
DBH	diameter at breast height
GIS	geographic information system
Project	Trails at Lyons Canyon
SEA	Significant Ecological Area

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1 Introduction

This Significant Ecological Area (SEA) Protected Tree Report provides an inventory and evaluation of the Protected Trees located on Trails at Lyons Canyon Project (project). The purpose of this assessment was to evaluate the existing tree resources located on the project site and evaluate project-related impacts to those resources. This report provides an analysis of the project's impacts on the County of Los Angeles (County) SEA resources as identified within the Los Angeles County SEA Ordinance Implementation Guide (Implementation Guide; Los Angeles County Planning 2020).

The project site totals 233.49 acres and is located near the City of Santa Clarita, unincorporated Los Angeles County, California (Figure 1, Project Location). The field inventory and assessments of the project site's tree resources were conducted in June and July 2023. The focus of Dudek's field evaluations was to identify and inventory all on-site trees that are subject to regulation by the Los Angeles County Regional Planning Significant Ecological Areas Ordinance that could be affected by the proposed development. This report meets the requirements of Los Angeles County Regional Planning Significant Ecological Areas Ordinance, and includes a discussion of the tree inventory, evaluation, and analysis methods; a summary of findings; identification of anticipated impacts; and tree impact mitigation recommendations.

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2 Project Location and Description

The project site totals 233.49 gross acres and 227.34 net acres, which comprises the approximately 233-acre Lyons Canyon property and proposed off-site supporting infrastructural improvements. The project is located near the City of Santa Clarita, unincorporated Los Angeles County, California (Figure 1, Project Location) and is located within Sections 4 and 9 of Township 3 North, Range 16 West, of the U.S. Geological Survey Oat Mountain, California 7.5" topographic quadrangle map. The project site consists of Assessor's Parcel Numbers (APNs) 2826-041-039, 2826-023-014, 2826-022-026, 2826-022-027, and 2826-022-035.

Stevenson Ranch, a master-planned community in the unincorporated County, is located north of the project site, and the City of Santa Clarita is located just east of the project site. The Santa Susana Mountains are located west of the site, with Ventura County located farther west of the Santa Susana Mountains. South of the project site is unincorporated County land and City of Santa Clarita land (specifically, Rivendale Park and Open Space). Locally, the project site is south of Sagecrest Circle, adjacent to The Old Road on its eastern side, and north of Calgrove Boulevard near Ed Davis Park in Towsley Canyon. The project site is bordered by open space on its western, southern, and southeastern boundaries. Regional access to the project site is provided by the northbound/southbound Interstate-5 Freeway to the east, with freeway access ramps via Lyons Avenue or Calgrove Boulevard, each located approximately 1.0 mile from the project site. Direct access to the project site is currently provided by The Old Road, from the eastern side of the project site.

2.1 Project Description

2.1.1 On-site Project Components

NUWI Lyons Canyon LLC (the Project Applicant) is proposing a subdivision for the development of 510 dwelling units with a mix of attached and detached dwelling units and affordable senior housing, a recreational center, fuel modification zones (on-site), brush thinning (off-site), and natural and improved open space within a 233.49-gross-acre (227.34-net-acre) project site (Figure 2, Conceptual Site Plan). Project infrastructure would include internal roadways, trails and a new trailhead, a new water tank, and debris and desilting basins. The total Project Development Footprint, which includes the project's grading limits and a surrounding construction buffer, is 72.55 acres. The project includes 6.73 acres of on-site fuel modification and 3.90 acres of on-site drainage inundation areas for debris basins (debris extents). The total on-site project impact area, which includes the Project Development Footprint, fuel modification zones, and debris extents, would be 83.18 acres.

Additionally, the project proposes to dedicate approximately 150.31 acres (approximately 64% of the project site) of natural open space to the public at the project site; this area is defined as the "Conservation Area" in this document and would be implemented through mitigation measure (MM)-BIO-1 of the Biota Report prepared for this project.[1] In totality, the on-site project impact area (83.18 acres) and Conservation Area (150.13 acres) total to 233.49 gross acres of the project site.

[1] It should be noted that according to the Vesting Tentative Tract Map prepared for the project, Lots 24 through 27 are labeled as "natural open space", for a total of 152.84 acres. However, as discussed later in this report, this acreage differs from the "Conservation Area", which would include 150.31 acres and includes all acreage on-site that would not be disturbed (i.e., would not include graded areas, fuel modification zones, debris basins, etc.) within the project site.

The project would include features to create a more naturalized transition between the development on the project site and the off-site Rivendale Park and Open Space to the south. The southern on-site "B Street" that runs adjacent to the northern boundary of Rivendale Park and Open Space would have a mix of small and medium ornamental street trees spaced 25-feet on center. In addition to the trees, the south side of the on-site "B Street" right-of-way would include either a retaining wall or a six-foot tall treated chain-link fencing and associated screening shrubs (e.g. laurel sumac, sweet bay, Indian laurel, coffeeberry) to further buffer the project site from the off-site open space areas. The shrub screening in the street right-of-way would be followed by varying distances of slope plantings, native habitat plantings, and bioretention rim planting that would continue to the southern edge of the project site. The intent of these structural and vegetative features is to add a physical barrier that would discourage terrestrial wildlife movement into the developed portion of the project site and to create a visibility barrier between the properties, while also providing additional screening for project-related street, vehicle lighting, and vehicle noise.

2.1.2 Off-site Project Components

The project includes 6.17 acres of off-site areas, including the Project Development Footprint, brush thinning zones, and debris extents. These are detailed further below.

APN 2826-022-901 at The Old Road

As shown on Figure 2, the project boundary is not located directly adjacent to The Old Road, but rather it is offset from the road by varying distances. Property included within APN 2826-022-901 would contribute to the development of Lots 7 and 8, thereby allowing the project to develop the required manufactured slopes, retaining wall, stormwater infrastructure (V-ditches along slopes), roadway ingress/egress and curb/gutter where the private access road meets The Old Road, and roadway ingress/egress for the gated private access road. The off-site Project Development Footprint along The Old Road would occur on 2.49 acres.

The Old Road

The Old Road would be improved as required by the conditions of approval imposed by Los Angeles County Public Works (Public Works). The existing portion of The Old Road aligned next to the project's northeastern boundary within APN 2826-022-901 is approximately 21 feet wide, with a curb and gutter on the east side of the road and an asphalt edge on the western side of the road. Off-site improvements of the project would include widening The Old Road by 47 feet (including 45 feet of asphalt and 2 feet of concrete curb and gutter) within APN 2826-022-901 to create a total 68-foot-wide curb to curb road within an 80-foot right of way. A new 8-foot-wide concrete sidewalk would be installed along the western frontage of the project site and an approximately 4-foot-tall retaining wall would be constructed adjacent to the sidewalk.

Water Infrastructure

In coordination with the Santa Clarita Valley Water Agency, the project will require various off-site water infrastructure improvements to service the project site. Required improvements include the following:

- New Zone Valve between Newhall and Valencia in The Old Road
- 4,000 feet of 12-inch main in the Old Road
- Pump Station 4 Upgrades (within footprint of Pump Station 4):
  - 1,975 gallons per minute firm capacity (820 gallons per minute increase)
  - Upsize/replace 50 feet of on-site 6-inch pump station pipelines to 8-inch

  - Upsize/replace 190 feet of on-site 8-inch pump station pipelines to 10-inch
- Pump Station 5 Upgrades:
  - 1,225 gallons per minute firm capacity (366 gallons per minute increase).

At Pump Station 4, the project would include a connection to Peachland Avenue from Pump Station 4. This would include an approximately 40-foot-long pipeline connection from the point of connection to the pump station. Through implementation of the project, a water line would run directly from Pump Station 4 into the existing water main within Peachland Avenue. This would require trenching within Peachland Avenue.

Sewer Infrastructure

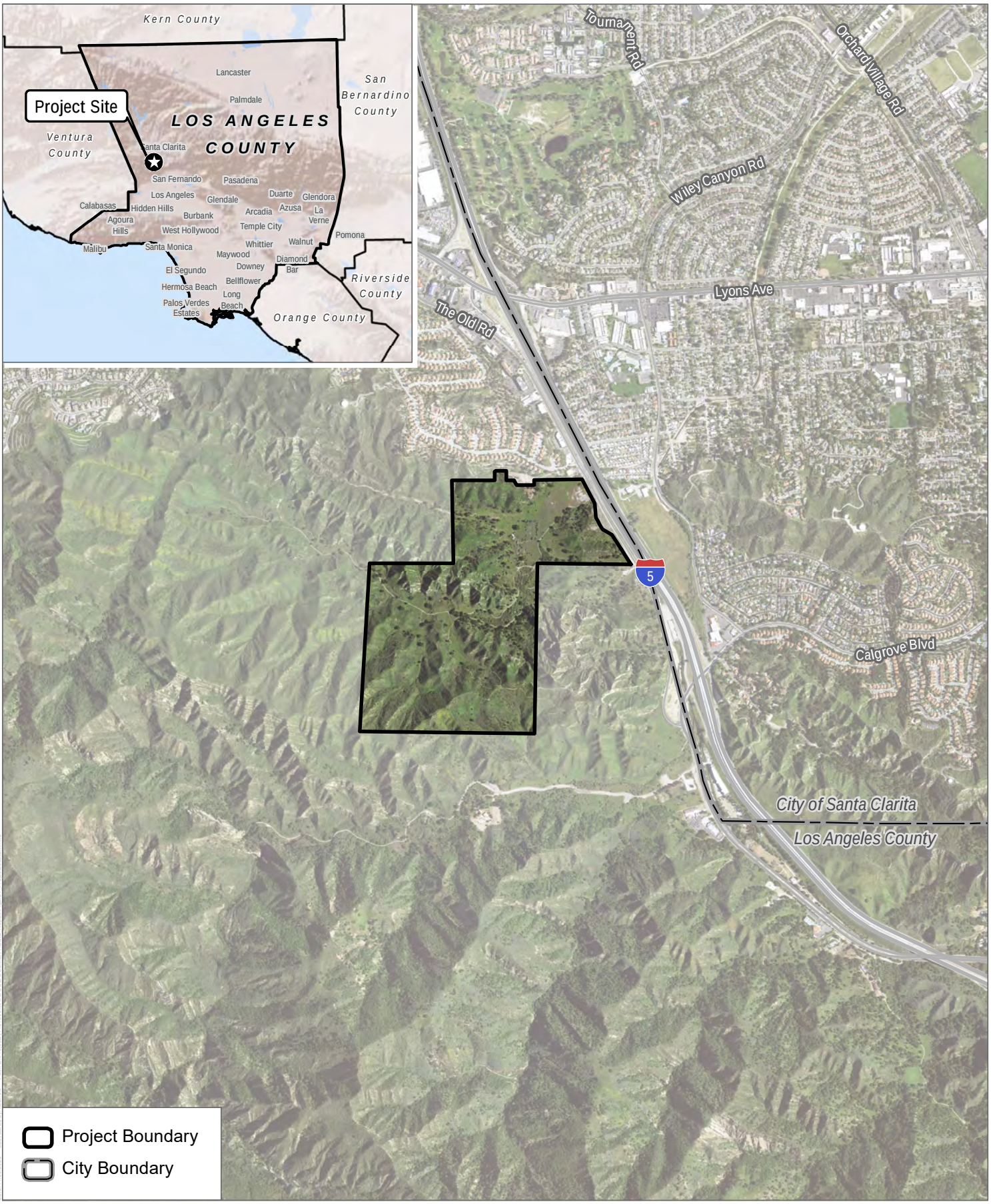
The existing downstream sewer system consists of approximately 11,500 linear feet of gravity sewer pipe ranging in size from 8 inches to 18 inches before connecting to the 24-inch Santa Clarita Valley Sanitation District Trunk Sewer. The project would upsize an 8-inch pipeline to 10-inches and construct three manholes within The Old Road, near the northeastern boundary of the project site. It is anticipated that the project would generate a total flow rate of 0.525 cubic feet per second entering existing 8-inch sewer lines from one of the proposed manholes. The sewage would flow through 10 to 18-inch lines before terminating at the existing 24-inch SCVSD Trunk Sewer (diversion structure).

Debris Basins

The project would result in 0.51-acre of off-site debris extents. The drainage inundation areas for the debris basins do not involve earthwork or grading activities.

2.1.3 Fuel Modification

The project site is located within Fire Zone 4, which is within a Very High Fire Hazard Severity Zone that falls within the State Responsibility Area (CAL FIRE 2023). Thus, a fuel modification plan for the Project Footprint would be designed in compliance with the Los Angeles County Fire Department's Fuel Modification Guidelines and best practices. The fuel modification plan would categorize the project site into fuel modification zones for planting, which would include the Ember Resistant Zone, Zone A, Setback Zone; Zone B, Irrigated Zone; Zone C, Native Brush Thinning Zone; and a fire access road zone. The Ember Resistant Zone, extends 5 feet from any combustible structure and prohibits combustible material in that distance. Zone A extends 20 feet beyond the edge of any combustible structure, accessory structure, appendage, or projection and would primarily consist of green lawns, ground cover, and adequately spaced shrubs. Plants within Zone A would be highly fire-resistant. Zone B, Irrigated Zone, would extend from the outermost edge of Zone A to 100 feet from proposed structures. Landscaping within Zone B would consist of primarily green lawns, ground cover, shrubs, and trees. Zone C, Native Brush Thinning Zone, would extend from the outermost edge of Zone B up to 200 feet from structures or the project site boundary. Plants in Zone C would likely consist of existing native vegetation and adequately spaced ornamental shrubs and trees. Existing native vegetation would be modified by thinning and removing portions of the vegetation if the species constitute a fire risk. The limits of the fuel modification and off-site brush thinning are shown in Figure 2.



SOURCE: NAIP 2020, Open Streets Map 2019

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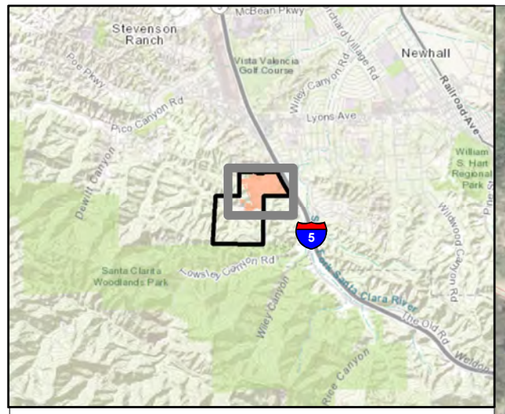
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FIGURE 1

Project Location

Trails at Lyons Canyon Project

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- Project Boundary
- Lot Line
- Structure
- Water Tank Access Retaining Wall
- 6-Ft High Fire Wall
- Enhanced Ignition Resistant Construction

Fuel Modification Zone

- FMZ Equivalent
- Zone A - Setback Zone
- Zone B - Irrigated Zone
- Zone C - Native Brush Thinning Zone
- Fire Access Roadway Zone
- Water Quality Basin (Annual Maintenance Required)
- Drainage Channel (Annual Maintenance Required)
- Offsite FMZ

Land Use

- Debris Extent
- Driveway/Roadway Access
- Fire Lane Access
- Graded Area
- Manufactured Slope
- Park
- Trail/Access Road

SOURCE: AERIAL-BING MAPPING SERVICE; DEVELOPMENT-ALLIANCE ENGINEERING 2023

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0 150 300 Feet

FIGURE 2

Conceptual Site Plan

Trails at Lyons Canyon Project

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3 Methods

3.1 Tree Inventory

Dudek's International Society of Arboriculture Certified Arborists Christopher Kallstrand, Katrina Burritt, Aida Castro, Sarah Tian, Jannette Ly, and Anna Pfleeger performed a comprehensive tree inventory update in June and July 2023. The survey area, for the purposes of the tree inventory, encompassed the approximately 233.49-acre project site. The location of the survey area is depicted in Appendix A, Tree Location Exhibit. During the survey, Dudek mapped and evaluated all trees that met the minimum requirements for protection under the Los Angeles County SEA Ordinance within the survey area. Specifically, under the SEA, the minimum size at which native tree species become protected within the project area SEA is as follows:

- Riparian species and trees listed as rare by California Native Plant Society ("CNPS") are protected at 3-inch DBH for single trunk and 4-inch DBH for multi-trunk,
- coniferous species are protected at 5-inch DBH for single trunk and 7-inch DBH for multi-trunk,
- upland hardwood species are protected at 6-inch DBH for single trunk and 8-inch for multi-trunk

Per the Los Angeles County SEA Ordinance, trunk diameter measurements were taken at 54 inches above the natural grade. In cases where the trunk of a tree split into multiple stems at approximately 54 inches above natural grade, the measurement was made at the location that best represented the trunk's diameter.

Tree attribute data collected during the field survey included species, number of stems, trunk diameter, and general health conditions. Trunk diameters were measured using a diameter tape, which provides adjusted numbers for diameter measurements when wrapping the tape around the circumference of a tree trunk. Diameter measurements were collected using standard protocol described by the Council of Tree and Landscape Appraisers in its Guide for Plant Appraisal (CTLA 2000), published by the International Society of Arboriculture, and in accordance with guidance given in the County's SEA Ordinance.

Pursuant to the Guide for Plant Appraisal (CTLA 2000), tree health was evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Health and structure were graded as good, good/fair, fair, fair/poor, or poor. Good condition trees exhibit acceptable vigor, healthy foliage, minor if any structural issues, and no apparent maladies. Fair condition trees are typical, with few maladies and moderate structural issues, and may exhibit less vigor in foliage and new growth. Trees assigned a poor condition rating exhibit significant health or structural problems or damage.

The location of each individual regulated tree was mapped using Apple iPhones and/or iPads paired with an external Bluetooth antenna (EOS Arrow 100 and Trimble R1) for increased mapping accuracy. Digital tree location information was then stored and managed in the field using ArcGIS Field Maps. All inventoried and assessed Protected Trees were tagged with an aluminum tag bearing a unique identification number, which was placed on the trunk of each tree. These numbers correspond to the tree locations presented in Appendix A and attributes presented in Appendix B, Tree Information Matrix.

Upon completion of field data collection and mapping, raw data was post-processed and individual tree location data was compiled and updated utilizing geographic information system (GIS) technology. The digital tree locations

were linked to individual tree identification numbers and associated tree attribute data. These data were then analyzed to evaluate the protection status of each tree (protected or heritage) and each tree's impact status, as presented in this report. For SEA Protected Trees with multiple trunks, the combined DBH of the two largest trunks was calculated to determine the aggregate DBH for such trees. DBH was used to characterize individual trees as being a Protected or Heritage Tree under the SEA guidelines. Those specific measurements are: Riparian tree species and trees listed as rare by California Native Plant Society are protected at 3-inch DBH for single trunk and 4-inch DBH for multi-trunk trees; coniferous species are protected at 5-inch DBH for single trunk and 7-inch DBH for multi-trunk trees; and upland hardwood species are protected at 6-inch DBH for single trunk and 8-inch DBH for multi-trunk trees. The County further defines the minimum criteria for Heritage Tree designation based on an individual tree's classification as riparian, coniferous, or upland hardwood. Additional details regarding protection status (protected or heritage) are discussed in detail in Section 4, Regulatory Setting.

3.2 Heritage Tree Relocation-Potential Evaluation

In addition to a tree inventory, Dudek arborists performed a Heritage Tree relocation-potential evaluation of 26 trees that that were identified as removal or encroachment trees. The relocation potential evaluations consisted of external observations of the general health and structure of the tree (new growth, vigor, and trunk/branching structure), overall tree size, location (proximity to other trees), absence or presence of trunk wounds or decay, potential for root rot, and potential for the absence or presence of pests/diseases or other species-specific pathogens. Furthermore, trees considered as relocation candidates must meet at least minimal requirements that will increase their survival following the boxing, storage, and replanting process. Minimal requirements include suitable size—smaller trees are more successfully transplanted because larger trees have more difficulty compensating and adapting to the loss of significant root volume. Trees with a trunk diameter less than approximately 15 inches perform better following transplant, and the smaller the tree, typically the higher the relocation success. An additional important consideration for relocation candidate trees is their health and structural condition; trees must be in good health and structural condition (unless the species is unique or especially valuable, whereas a fair condition tree may be considered a candidate). The site must be in an accessible location and have no observable soil impediments (rockbound roots, utilities), and the tree must have no observable chronic pest infestations or disease infections. Furthermore, a full green canopy may give the appearance that a tree is healthy, but with the potential presence of internal decay and the stress resulting from the relocation process, the tree may decline, resulting in tree loss and increased hazards, especially in an urbanized setting.

Some trees that are structurally sound and healthy, meeting all the criteria set for these attributes, may be rejected as relocation candidates based on soil issues. For instance, trees that are growing in soil that is highly sandy likely would be rejected due to the difficulty in boxing trees without "losing" the root ball, as commonly happens in sandy soil. Similarly, trees in rocky soils may be rejected if "rockbound" roots are suspected because these trees cannot be boxed cost effectively. In these cases, the trees would be recommended for preservation in place, if possible.

3.3 Impact Evaluation

There is wide variation in tolerance to construction impacts among tree species, and the response of an individual tree to impacts also varies with age and condition. Impacts assessed for this project include trees with protected zones within the proposed improvement and disturbance areas, as defined in the project's site plan (dated August 2023). Per the County Code, which establishes minimum setbacks for SEA Protected Trees, the tree protection zone is defined as the area that extends 5 feet out from the dripline of the Protected Tree or 15 feet from the trunk, whichever distance

is greater. For the tree impact analysis conducted in August 2023, Dudek anticipates that tree removal will be required when the trunk is inside of or within 2 feet of the proposed limits of grading. Furthermore, encroachment is expected when soil and roots are disturbed within the tree-protected zone and/or the tree will require pruning to meet fuel modification zone requirements. Lastly, for the purposes of impact designation, Dudek arborists used the County's definition of a direct impact to include tree removal, root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds. As such, project-related impacts are defined as direct impact (removal or encroachments) or no impact (preserved trees that will not be removed or encroached upon).

3.4 Scope of Work Limitations

No root crown excavations or investigations or internal probing were performed during the tree assessment. Therefore, the presence or absence of internal decay or other hidden inferiorities in individual trees could not be confirmed. It is recommended that any large tree proposed for preservation or relocation in an urban setting be thoroughly inspected for internal and subterranean decay by a qualified arborist before finalizing a preservation or relocation plan.

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4 Regulatory Setting

The following section summarizes the relevant policies regulating tree impacts and removals associated with the project.

4.1 Los Angeles County SEA Ordinance

The project is in the Santa Susana Mountains and Simi Hills SEA, as designated by Los Angeles County Regional Planning. The following section summarizes portions of the ordinance that are specifically pertinent to this tree report (Los Angeles County Regional Planning 2020).

4.1.1 Significant Ecological Area Protected Trees

Chapter 3 (SEA Protected Trees) of the Los Angeles County SEA Ordinance Implementation Guide (County of Los Angeles 2020) describes tree protection regulations. Protected Trees are designated by species and trunk diameter of a minimum listed size specific to each SEA. The minimum size at which native tree species become protected within the project area SEA is as follows:

- Riparian species and trees listed as rare by California Native Plant Society ("CNPS") are protected at 3-inch DBH for single trunk and 4-inch DBH for multi-trunk,
- Coniferous species are protected at 5-inch DBH for single trunk and 7-inch DBH for multi-trunk,
- Upland hardwood species are protected at 6-inch DBH for single trunk and 8-inch for multi-trunk, and
- Any SEA Protected Tree with a DBH of 36 inches or more for a single trunk or with two trunks that measure a total of 54 inches or more in diameter, as measured 54 inches above natural grade, is considered a Heritage Tree.

For all listed native trees with multiple trunks, the tree is protected if the combined diameter of the two largest trunks equals 8 inches or more. It should be noted that the County further defines the minimum criteria for Heritage Tree designation based on an individual tree's classification as riparian, coniferous, or upland hardwood. A summary of the SEA tree classifications (i.e., riparian, coniferous, upland hardwood) and minimum trunk diameter for Protected and Heritage Trees are represented below in Table 1. For specific details regarding individual Protected Trees and trunk diameters, the Santa Susana Mountains and Simi Hills SEA Protected Tree list is included in this report as Appendix C.[2]

Table 1. SEA Protected and Heritage Tree Definitions

Tree Classification	Protected DBH	Two-Trunk Protected DBH	Heritage DBH	Two-Trunk Heritage DBH
Riparian*	3"	4"	18"	28"
Coniferous	5"	7"	30"	47"

[2] Significant Ecological Area (SEA) Implementation Guidance definitions: Heritage Tree – Any SEA Protected Tree with a trunk diameter that measures 36 inches or more in a single trunk or with two trunks that measure a total of 54 inches or more in diameter, as measured 54 inches above natural grade. Appendix C (attached) incorrectly states 56 inches or more for multi-trunk Heritage Trees.

Table 1. SEA Protected and Heritage Tree Definitions

Tree Classification	Protected DBH	Two-Trunk Protected DBH	Heritage DBH	Two-Trunk Heritage DBH
Upland hardwood	6”	8”	36”	54”

Note: DBH = diameter at breast height.
* Inclusive of CNPS “rare” species.

As discussed in the following sections, because the number of project-related impacts is greater than two trees, the project requires a discretionary SEA Conditional Use Permit (CUP) review, which is currently ongoing. Furthermore, mitigation and monitoring requirements for SEA CUPs should meet or exceed the mitigation and monitoring requirements of a Protected Tree permit.

4.1.2 Tree Protection Zone

Chapter 3 of the Implementation Guide establishes minimum setbacks for SEA Protected Trees, known as a Tree Protection Zone. Since tree roots extend well beyond the visible crown of the tree and can be greatly impacted by disturbances to the ground around them, the Tree Protection Zone extends 5 feet out from the dripline of the Protected Tree or 15 feet from the trunk, whichever distance is greater.

5 Results

5.1 Tree Inventory Summary

There are 849 trees in the survey area, of which 664 are SEA Protected Trees, including 9 individual tree species and 51 Heritage Trees. The remaining 613 trees are all SEA Protected Trees, including 46 riparian classified trees and 567 upland hardwood classified trees. Table 2 provides a summary of the 9 tree species mapped and evaluated within the survey area. Appendix A presents the location of the individual trees mapped and assessed for the proposed project.

Table 2. Summary of Trees at the Trails at Lyons Canyon

Scientific Name	Common Name	Total Number of Protected Trees	Number of Heritage Trees	Total Number of Non-protected Trees	Total Number of Trees
Heteromeles arbutifolia	toyon	0	0	3	3
Juglans californica[1]	Southern California black walnut*	17	0	0	17
Populus fremontii	Fremont cottonwood	15	0	0	15
Quercus agrifolia	coast live oak	478	46	61	585
Quercus berberidifolia	scrub oak	3	0	5	8
Quercus lobata	valley oak	13	5	1	19
Salix laevigata	red willow	24	0	1	25
Salix lasiolepis	arroyo willow	7	0	3	10
Sambucus nigra ssp. *caerulea*	blue elderberry	56	0	111	167
	Total	**613**	**51**	**185**	**849**

Notes:

* Southern California black walnut is a special-status species due to its California Rare Plant Rank of 4.2. This species is also ranked as a G4 S4 species by the California Natural Diversity Database, indicating it is uncommon but not rare.

Trees in the survey area vary in size and stature and exhibit conditions that are typical of their locations as native trees in a natural setting. As presented in Appendix B, of the 849 total trees, 492 (57.95%) trees display good health, 260 (30.62%) trees display fair health, 55 (6.47%) trees display poor health, 4 (0.47%) trees display critical health, and 37 (4.35%) trees are dead. Good condition trees exhibited acceptable vigor, healthy foliage, adequate structure, and lack of major defects. Fair condition trees exhibit multiple defects and/or potentially declining vigor. Poor condition trees exhibit declining vigor, unhealthy foliage, poor structure, and multiple defects. Of the 849 total trees, single and aggregate trunk diameters range from 2 inches to 82 inches. Tree heights vary from 2 feet to 55 feet.

The protected oak trees on site are primarily single-stemmed and represent species with the largest trunk diameters throughout the survey area. Based on the SEA minimum size requirements for Heritage Tree classifications, 53 Heritage Trees were found on the project site. The 51 Heritage Trees are composed of 46 coast live oaks (*Quercus agrifolia*) and 5 valley oaks (*Quercus lobata*). Apart from 8 coast live oak Heritage Trees that have a cumulative two-trunk diameter of 54+ inches, all the Heritage Trees are single-trunk trees. The health of the 51 Heritage Trees ranges from good to poor. As presented in Appendix B, 33 (64.70%) of the trees exhibits good health, 15 (29.44%)

of the trees exhibit fair health, and 3 (5.88%) of the trees exhibit poor health Heritage trees in the survey area vary in size and stature according to species. The location of the Heritage Trees is presented in Appendix A, and representative photographs are presented in Appendix D, Photograph Log.

5.2 Mapping

The location of each tree identified on the project site is depicted in Appendix A.

5.3 Tree Removal/Encroachment

As previously stated, for the purposes of this arborist report, direct impacts are those associated with tree removal or encroachment within the tree-protected zone (i.e., canopy dripline plus 5 feet or 15 feet from trunk, whichever is greater). Specifically, tree impacts were determined using GIS technology, spatial locations of tree crowns, and a minimum distance of each tree relative to the project impact areas, including grading areas, fuel modification zones, and debris basins. Impact totals presented herein are based on proposed disturbance limits, fuel modification zones, and development plans as of the date of this report. The following tree impact findings are organized into two categories: non-Heritage Tree impacts and Heritage Tree impacts. Heritage tree status is based on the SEA tree classifications (i.e., riparian, coniferous, upland hardwood) and minimum trunk diameter for protected and Heritage Trees.

5.3.1 Non-heritage Tree Impacts (Protected Trees)

Of the 613 Protected Trees that occur within the survey area (non-inclusive of Heritage Trees), 312 protected non-Heritage Trees will be directly impacted by the proposed project. The 312 protected non-Heritage Tree impacts consist of 251 removals (trees that have a trunk on or within 2 feet of the grading limits), 11 encroachments (trees that are not removed, but root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds are anticipated), and 50 trees that are located within a debris basin. It should be noted that the 50 trees located within the debris basin will not be removed but are considered impacted due to the potential of future damage as a result of the creation of the debris basins and associated flooding. The remaining 301 protected non-Heritage Trees will not be directly impacted by the project. Table 3 provides a summary of the proposed impacts to non-heritage SEA Protected Trees within and adjacent to the project.

Table 3. Summary of Impacts to SEA Protected Trees (Non-heritage)

Scientific Name	Common Name	Removals	Encroachments	Debris Basin	Total Impacts
Heteromeles arbutifolia	toyon	0	0	0	0
Juglans californica	Southern California black walnut	2	0	1	3
Populus fremontii	Fremont cottonwood	9	0	6	15
Quercus agrifolia	coast live oak	167	8	24	199
Quercus berberidifolia	scrub oak	1	0	0	1
Quercus lobata	valley oak	10	0	0	10
Salix laevigata	red willow	10	0	14	24

Table 3. Summary of Impacts to SEA Protected Trees (Non-heritage)

Scientific Name	Common Name	Removals	Encroachments	Debris Basin	Total Impacts
Salix lasiolepis	arroyo willow	7	0	0	7
Sambucus nigra ssp. *caerulea*	blue elderberry	45	3	5	53
	Total	**251**	**11**	**50**	**312**

Notes: SEA = Significant Ecological Area.

Appendix E, Tree Impact Mapbook, presents the locations of the individual trees that will be subject to impacts by the proposed project. Table 4 provides a summary of the overall health ratings for the proposed impacted non-Heritage Trees within the project site.

Table 4. Summary of Overall Health Ratings for Impacted SEA Protected Trees (Non-heritage)

Scientific Name	Common Name	Overall Health Rating				
		Dead**	Critical	Poor	Fair	Good
Heteromeles arbutifolia	toyon	0	0	0	0	0
Juglans californica	Southern California black walnut*	0	0	1	2	0
Populus fremontii	Fremont cottonwood	0	0	0	5	10
Quercus agrifolia	coast live oak	0	1	23	59	115
Quercus berberidifolia	scrub oak	0	0	0	1	0
Quercus lobata	valley oak	0	0	1	0	9
Salix laevigata	red willow	0	0	0	5	19
Salix lasiolepis	arroyo willow	0	0	0	5	2
Sambucus nigra ssp. *caerulea*	blue elderberry	0	1	8	15	38
	Totals	0	2	25	92	193

Note: SEA = Significant Ecological Area.
** Dead trees are not protected by the County of Los Angeles and do not require mitigation.

5.3.2 Heritage Tree Impacts

In total, 51 Heritage Trees are found on site. All 51 Heritage Trees are entirely within an upland woodland classification, and none of the trees are within a riparian woodland classification or found within a coniferous woodland classification. In total, 22 Heritage Trees will be directly impacted by the project. The 22 Heritage Tree impacts comprise 14 removals, 5 encroachments, and 3 trees that are located within debris basins. It should be noted that the 3 trees located within debris basins will not be removed but are considered impacted due to the potential of future damage as a result of the creation of the debris basins and any associated flooding.

The remaining 29 Heritage Trees will not be directly impacted by the project. Table 5 provides a summary of the proposed impacts to SEA protected Heritage Trees within and adjacent to the project.

Table 5. Summary of Impacts to SEA Protected Heritage Trees

Scientific Name	Common Name	Removals	Encroachments	Debris Basin	Total Impacts
Heteromeles arbutifolia	toyon	0	0	0	0
Juglans californica	Southern California black walnut	0	0	0	0
Populus fremontii	Fremont cottonwood	0	0	0	0
Quercus agrifolia	coast live oak	12	3	3	18
Quercus berberidifolia	scrub oak	0	0	0	0
Quercus lobata	valley oak	2	2	0	4
Salix laevigata	red willow	0	0	0	0
Salix lasiolepis	arroyo willow	0	0	0	0
Sambucus nigra ssp. *caerulea*	blue elderberry	0	0	0	0
	Total	**14**	**5**	**3**	**22**

Appendix E presents the locations of the individual trees that will be subject to impacts by the proposed project. Table 6 provides a summary of overall health ratings for the 22 Heritage Trees that would be impacted by the project.

Table 6. Summary of Overall Health Ratings for Impacted SEA Heritage Trees

Scientific Name	Common Name	Overall Health Rating (Number)				
		Dead*	Critical	Poor	Fair	Good
Quercus agrifolia	coast live oak	0	0	0	5	13
Quercus lobata	valley oak	0	0	0	4	0
	Totals	**0**	**0**	**0**	**9**	**13**

Note: SEA = Significant Ecological Area.
* Dead trees are not protected by the County of Los Angeles and do not require mitigation.

5.3.3 Non-protected Tree Impacts

Of the 185 non-protected trees that occur within the survey area, 126 non-protected trees will be directly impacted by the proposed project. The 126 non-protected tree impacts consist of 112 removals (trees that have a trunk on or within 2 feet of the grading limits), 1 encroachment (trees that are not removed, but root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds are anticipated), and 13 trees that are located within a debris basin. It should be noted that the 13 trees located within debris basins will not be removed but are considered impacted due to the potential of future damage because of the creation of the debris basins and associated flooding. The remaining 59 non-protected trees will not be directly impacted by the project. Table 7 provides a summary of the proposed impacts to non-protected trees within and adjacent to the project.

Table 7. Summary of Impacts Non-protected Trees

Scientific Name	Common Name	Removals	Encroachments	Debris Basin	Total Impacts
Heteromeles arbutifolia	toyon	0	0	0	0
Juglans californica	Southern California black walnut	0	0	0	0
Populus fremontii	Fremont cottonwood	0	0	0	0
Quercus agrifolia	coast live oak	25	0	4	29
Quercus berberidifolia	scrub oak	2	0	1	3
Quercus lobata	valley oak	1	0	0	1
Salix laevigata	red willow	1	0	0	1
Salix lasiolepis	arroyo willow	3	0	0	3
Sambucus nigra ssp. *caerulea*	blue elderberry	80	1	8	89
	Total	**112**	**1**	**13**	**126**

Note: SEA = Significant Ecological Area.

Appendix E presents the locations of the individual trees that will be subject to impacts by the proposed project. Table 8 provides a summary of overall health ratings for the 126 non-protected trees that would be impacted by the project.

Table 8. Summary of Overall Health Ratings for Impacted Non-protected Trees

Scientific Name	Common Name	Overall Health Rating				
		Dead	Critical	Poor	Fair	Good
Heteromeles arbutifolia	toyon	0	0	0	0	0
Juglans californica	Southern California black walnut*	0	0	0	0	0
Populus fremontii	Fremont cottonwood	0	0	0	0	0
Quercus agrifolia	coast live oak	14	0	0	6	9
Quercus berberidifolia	scrub oak	0	0	0	2	1
Quercus lobata	valley oak	0	0	0	0	1
Salix laevigata	red willow	1	0	0	0	0
Salix lasiolepis	arroyo willow	2	0	0	1	0
Sambucus nigra ssp. *caerulea*	blue elderberry	3	0	3	25	58
	Totals	20	0	3	34	69

Note:

* Southern California black walnut is a special-status species due to its California Rare Plant Rank of 4.2. This species is also ranked as a G4 S4 species by the California Natural Diversity Database, indicating it is uncommon but not rare.

5.4 Candidates Suitable for Relocation (Heritage Trees)

Dudek arborists performed a Heritage Tree relocation-potential evaluation of 14 trees that were identified as impacted removal trees. The 14 trees were composed of 12 coast live oak trees and 2 valley oak trees.

The relocation potential evaluations consisted of external observations of the general health and structure of the tree (new growth, vigor, and trunk/branching structure), overall tree size, location (proximity to other trees), absence or presence of trunk wounds or decay, potential for root rot, and potential for the absence or presence of pests/diseases or other species-specific pathogens. Furthermore, trees considered as relocation candidates must meet at least minimal requirements that will increase their survival following the boxing, storage, and replanting process. Minimal requirements include suitable size; smaller trees are more successfully transplanted because larger trees have more difficulty compensating and adapting to the loss of significant root volume. Trees with a trunk diameter less than approximately 15 inches perform better following transplant, and the smaller the tree, typically the higher the relocation success. An additional important consideration for relocation candidate trees is their health and structural condition; trees must be in good health and structural condition (unless the species is unique or especially valuable, where a fair condition tree may be considered a candidate). The site must be in an accessible location and have no observable soil impediments (rockbound roots, utilities), and the tree must have no observable chronic pest infestations or disease infections. Furthermore, a full green canopy may give the appearance that a tree is healthy, but with the potential presence of internal decay and the stress resulting from the relocation process, the trees may decline, resulting in tree loss and increased hazards, especially in an urbanized setting.

Some trees that are structurally sound and healthy, meeting all the criteria set for these attributes, may be rejected as relocation candidates based on soil issues. For instance, trees that are growing in soil that is highly sandy likely would be rejected due to the difficulty in boxing trees without “losing” the root ball, as commonly happens in sandy soil. Similarly, trees in rocky soils may be rejected if rockbound roots are suspected because these trees cannot be boxed cost-effectively. In these cases, the trees would be recommended for preservation in place, if possible.

Based on the above factors, the overall health and structure of the trees, and the size of the Heritage Trees, none of the Heritage Trees on site are considered viable candidates for relocation. Individual photographs of the 14 impacted removal Heritage Trees evaluated for their relocation potential can be found in Appendix D.

6 Mitigation

The proposed project's mitigation effort will include tree planting mitigation for incurred tree impacts, which will be consistent with the goals and intent of the County.

6.1 Mitigation Requirements

Per the County SEA Ordinance, any development that will remove a Heritage Tree or will remove more than two non-heritage-size SEA Protected Trees requires a CUP. Mitigation and monitoring for such removals are determined as part of the discretionary SEA CUP review and included as conditions of approval in the CUP. Mitigation and monitoring requirements for SEA CUPs must meet or exceed the mitigation and monitoring requirements of a Protected Tree permit.

Furthermore, at a minimum and per the County requirements, the removal of any SEA Protected Tree requires mitigation in the form of two replacement plantings, and the removal of an oak heritage tree requires mitigation in the form of 10 replacement plantings. Additionally, the County has requested that all protected trees, located within the project's debris basins, be treated as direct impacts. As such, protected trees located within the debris basins require mitigation in the form of two replacement plantings and heritage trees require mitigation in the form of 10 replacement plantings. Replacement trees should be seedlings of the same species as those being removed and should be planted in an area of the project site where there is suitable habitat and where the trees will be able to remain in perpetuity. As such, based on the January 2024 impact analysis that identified 265 direct tree removals (14 Heritage Trees and 251 non-heritage protected Trees) and 53 debris basin impacts (3 Heritage Trees and 50 non-heritage protected trees), the County may require a minimum of 772 mitigation trees to be planted in an area of the project site where there is suitable habitat and where the trees will be able to remain in perpetuity. Per the County, Table 9, Summary of Individual Species Replacement Quantities, details the quantity of each species required for planting.

Table 9. Summary of Individual Species Replacement Quantities

Scientific Name	Common Name	Total Impacted	Replacement Ratio	Total Replacement Required
Heteromeles arbutifolia	toyon	0	2:1	0
Juglans californica	Southern California black walnut*	3	2:1	6
Populus fremontii	Fremont cottonwood	15	2:1	30
Quercus agrifolia	coast live oak	191	2:1	382
Quercus agrifolia (Heritage Tree)	coast live oak (Heritage Tree)	15	10:1	150
Quercus berberidifolia	scrub oak	1	2:1	2
Quercus lobata	valley oak	10	2:1	20
Quercus lobata (Heritage Tree)	valley oak (Heritage Tree)	2	10:1	20
Salix laevigata	red willow	24	2:1	48
Salix lasiolepis	arroyo willow	7	2:1	14

Table 9. Summary of Individual Species Replacement Quantities

Scientific Name	Common Name	Total Impacted	Replacement Ratio	Total Replacement Required
Sambucus nigra ssp. *caerulea*	blue elderberry	50	2:1	100
	Totals	318	N/A	772

Note:

* Southern California black walnut is a special-status species due to its California Rare Plant Rank of 4.2. This species is also ranked as a G4 S4 species by the California Natural Diversity Database, indicating it is uncommon but not rare.

It should be noted that mitigation can include the protection of undersized, naturally sprouted trees of the same species growing on site. In addition, per the County Code, the County may require additional mitigation and monitoring requirements following review of the SEA CUPs. At a minimum, the County requires that the replacement trees need to be nurtured and maintained in a healthy condition and be monitored for a period of 7 years. If any of the replacement plantings fail during the monitoring period of 7 years, the applicant will be responsible for replanting and nurturing those new trees.

7 Tree Protection

Of the 849 trees on site, 377 will require removal to accommodate the proposed project. As such, it is recommended that the remaining 389 preserved trees, 66 debris basin trees, and 17 encroached-upon trees be protected in place. Furthermore, it is recommended that the 16 encroached-upon protected trees located immediately adjacent to the project site be protected in accordance with the tree protection standards found in Appendix F, Tree Protection Measures.

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8 Conclusion

The proposed project site includes a total of 849 trees. In total, the project site will directly impact 459 trees, with 377 direct removals (14 Heritage Trees, 251 Protected Trees, and 112 non-protected trees), 17 encroachments (5 Heritage Trees, 11 Protected Trees, and 1 non-protected tree), and 66 debris basin trees (3 heritage, 53 Protected Trees, and 13 non-protected trees), of which 318 require mitigation (265 protected tree removal and 53 protected trees located within the debris basin) as per conditions set forth in the approved permit, pending completion of the SEA CUP review. Mitigation for direct impacts to 318 trees (removals and debris basin; 17 Heritage Trees and 301 protected non-Heritage Trees) is required at a minimum replacement ratio of 2 to 1 with seedlings of the same species for protected trees and 10 to 1 with seedlings of the same species for heritage oak trees. As such, the County may require a minimum of 772 mitigation trees to be planted in an area of the project site where there is suitable habitat and where the trees will be able to remain in perpetuity. Furthermore, of the 26 impacted Heritage Trees, none were found to be suitable for relocation. The remaining 389 trees located throughout the proposed project site are recommended to be preserved in place. It is recommended that the 16 encroached-upon protected trees located immediately adjacent to the project site, and 66 debris basin trees be protected in accordance with the tree protection standards found in Appendix F. Actual tree impact or encroachment numbers may be lower than anticipated, as presented in this report, once grading plans are staked in the field and are being implemented. Any adjustments to the number of impacted trees shall be documented by the project's arborist, all of which will be mitigated as per conditions set forth the approved permit, pending completion of the SEA CUP review.

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9 Arborist's Disclosure

This report provides conclusions and recommendations based only on a visual examination of the trees and surrounding site by an International Society of Arboriculture Certified Arborist and reasonable reliance upon the completeness and accuracy of the information provided to the arborist. The examination did not include subterranean or internal examination of the trees.

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near them. Although trees provide many benefits to those who live near them, they also include inherent risks from breakage or failure that can be minimized but not eliminated.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi, weather, and other forces of nature, and conditions that lead to failure are often hidden within trees and below ground. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Arborists cannot predict acts of nature that can cause even an apparently healthy tree to fail, including storms of sufficient strength. Additionally, arborists cannot guarantee that a tree will be healthy or safe under all circumstances or for any specific period of time. A tree's condition could change over a short or long period of time due to climatic, cultural, or environmental conditions. Further, there is no guarantee or certainty that recommendations or efforts to correct unsafe conditions will prevent future breakage or failure of a tree.

To live or work near trees is to accept some degree of risk. Neither the author of this report nor Dudek have assumed any responsibility for, nor will either of them be liable for, any claims, losses, or damages for damage to any tree, death or injury to any person, or any loss of or damage to any personal or real property.

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10 References Cited

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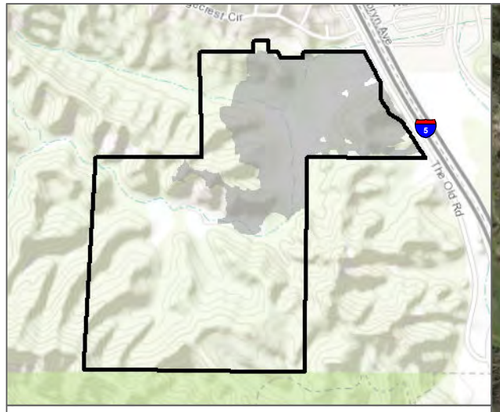
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Appendix A

Tree Location Exhibit

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Map Sheet
Project Boundary
Fuel Modification
200-Ft Buffer of Project Development Footprint
Project Development Footprint

Heritage Tree
- Coast Live Oak
- Valley Oak

Protected Tree
- Arroyo Willow
- Blue Elderberry
- Coast Live Oak
- Fremont Cottonwood
- Red Willow
- Scrub Oak
- Southern California Black Walnut
- Valley Oak

Non-Protected
- Arroyo Willow
- Blue Elderberry
- Coast Live Oak
- Red Willow
- Scrub Oak
- Toyon
- Valley Oak

Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Sheet 8
Sheet 9
Sheet 10
Sheet 11
Sheet 12
Sheet 13
Sheet 14
Sheet 15
Sheet 16
Sheet 17
Sheet 18
Sheet 19
The Old Road

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

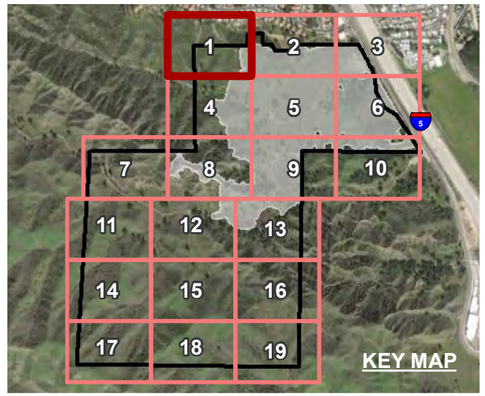
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0 250 500 Feet

KEY MAP

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

Heritage Tree
- Coast Live Oak
- Valley Oak

Protected Tree
- Arroyo Willow
- Blue Elderberry
- Coast Live Oak
- Fremont Cottonwood
- Red Willow
- Scrub Oak
- Southern California Black Walnut
- Valley Oak

Non-Protected Tree
- Arroyo Willow
- Blue Elderberry
- Coast Live Oak
- Red Willow
- Scrub Oak
- Toyon
- Valley Oak



SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

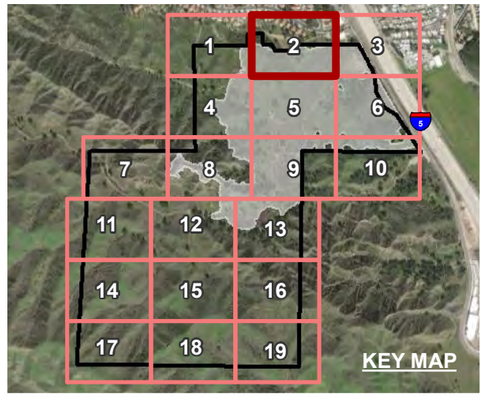
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0 40 80 Feet

Sheet 1

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



Project Boundary
200-Ft Buffer of Project Development Footprint
Project Development Footprint
Fuel Modification

Heritage Tree
- Coast Live Oak
- Valley Oak

Protected Tree
- Arroyo Willow
- Blue Elderberry
- Coast Live Oak
- Fremont Cottonwood
- Red Willow
- Scrub Oak
- Southern California Black Walnut
- Valley Oak

Non-Protected Tree
- Arroyo Willow
- Blue Elderberry
- Coast Live Oak
- Red Willow
- Scrub Oak
- Toyon
- Valley Oak

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

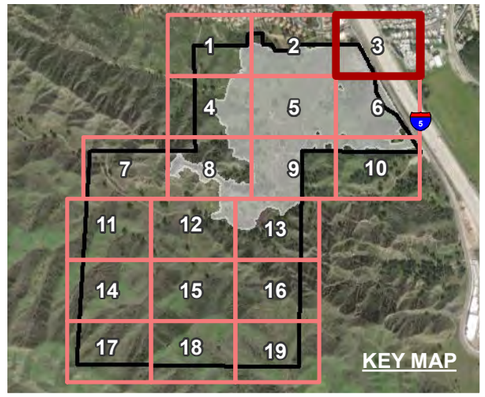
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Sheet 2

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

Heritage Tree
- Coast Live Oak
- Valley Oak

Protected Tree
- Arroyo Willow
- Blue Elderberry
- Coast Live Oak
- Fremont Cottonwood
- Red Willow
- Scrub Oak
- Southern California Black Walnut
- Valley Oak

Non-Protected Tree
- Arroyo Willow
- Blue Elderberry
- Coast Live Oak
- Red Willow
- Scrub Oak
- Toyon
- Valley Oak



SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

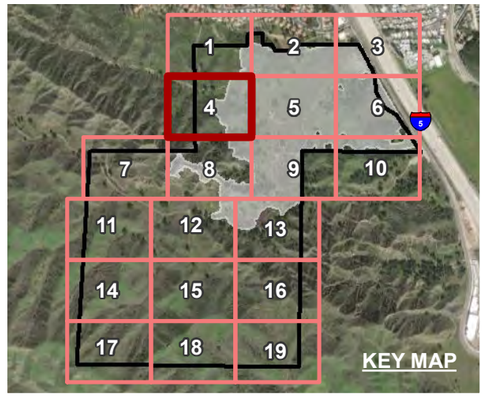
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Sheet 3

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



Project Boundary
200-Ft Buffer of Project Development Footprint
Project Development Footprint
Fuel Modification

Heritage Tree
- Coast Live Oak
- Valley Oak

Protected Tree
- Arroyo Willow
- Blue Elderberry
- Coast Live Oak
- Fremont Cottonwood
- Red Willow
- Scrub Oak
- Southern California Black Walnut
- Valley Oak

Non-Protected Tree
- Arroyo Willow
- Blue Elderberry
- Coast Live Oak
- Red Willow
- Scrub Oak
- Toyon
- Valley Oak

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

DUDEK

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Sheet 4

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

Heritage Tree
- Coast Live Oak
- Valley Oak

Protected Tree
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- Valley Oak

Non-Protected Tree
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- Blue Elderberry
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- Red Willow
- Scrub Oak
- Toyon
- Valley Oak

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

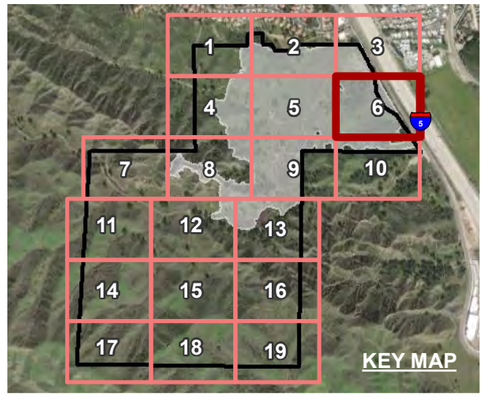
DUDEK

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Sheet 5

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

Heritage Tree
- Coast Live Oak
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Protected Tree
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Non-Protected Tree
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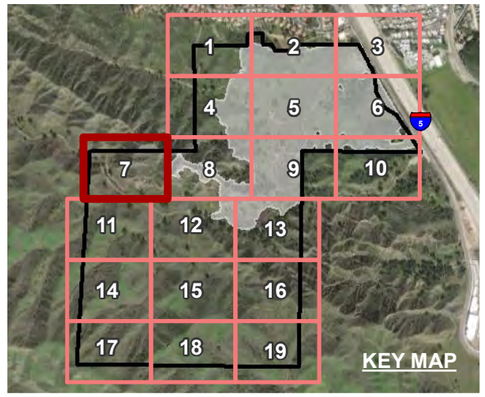
SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

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Sheet 6

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



Project Boundary
200-Ft Buffer of Project Development Footprint
Project Development Footprint
Fuel Modification

Heritage Tree
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Non-Protected Tree
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- Scrub Oak
- Toyon
- Valley Oak

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

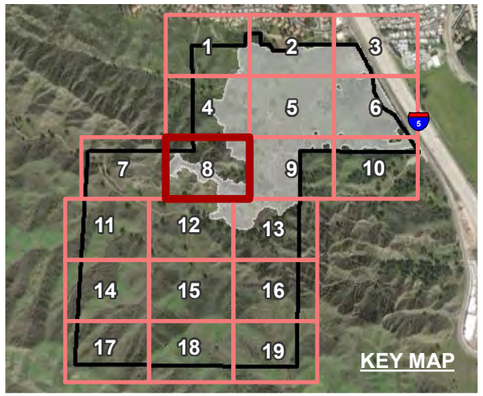
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Sheet 7

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



Project Boundary
200-Ft Buffer of Project Development Footprint
Project Development Footprint
Fuel Modification

Heritage Tree
- Coast Live Oak
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Protected Tree
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- Blue Elderberry
- Coast Live Oak
- Red Willow
- Scrub Oak
- Toyon
- Valley Oak

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

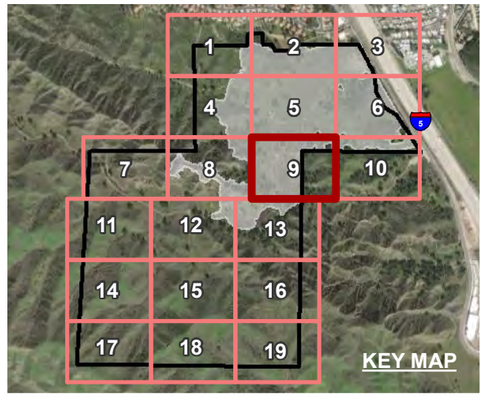
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Sheet 8

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

Heritage Tree
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Non-Protected Tree
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- Scrub Oak
- Toyon
- Valley Oak

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

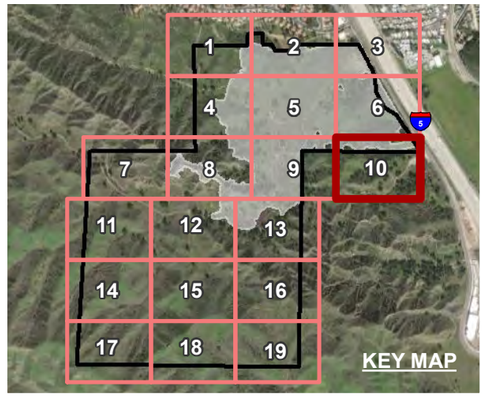
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Sheet 9

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

Heritage Tree
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Non-Protected Tree
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- Scrub Oak
- Toyon
- Valley Oak

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

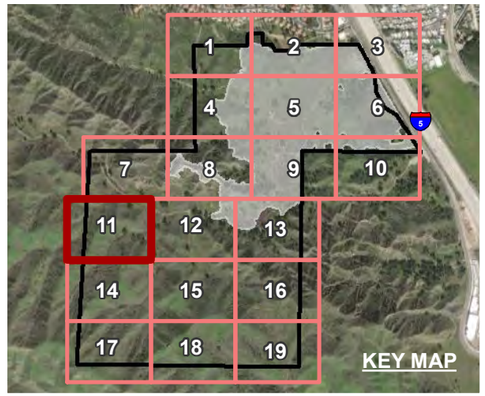
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Sheet 10

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
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- Fuel Modification

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Non-Protected Tree
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- Toyon
- Valley Oak



SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

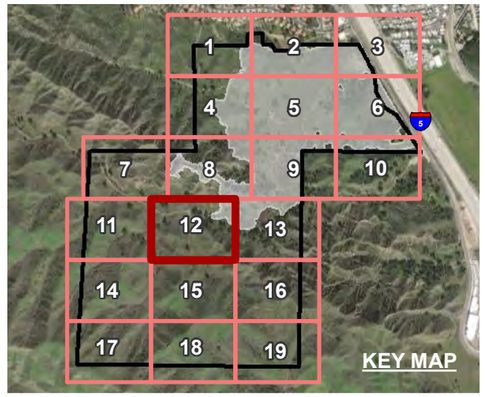
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Sheet 11

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

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Non-Protected Tree
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- Scrub Oak
- Toyon
- Valley Oak

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

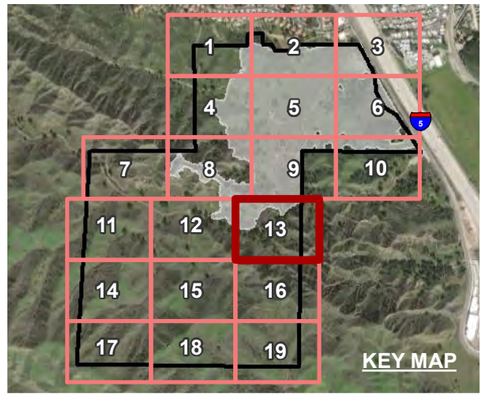
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Sheet 12

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



Project Boundary
200-Ft Buffer of Project Development Footprint
Project Development Footprint
Fuel Modification

Heritage Tree
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- Toyon
- Valley Oak

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

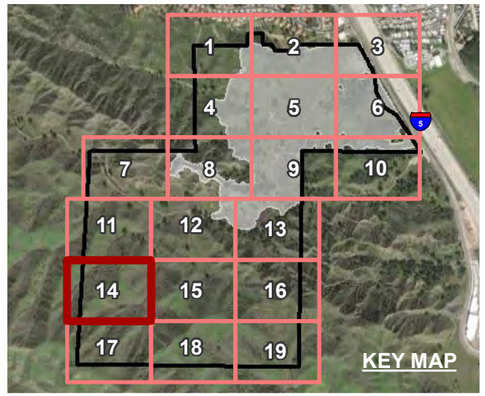
DUDEK

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Sheet 13

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
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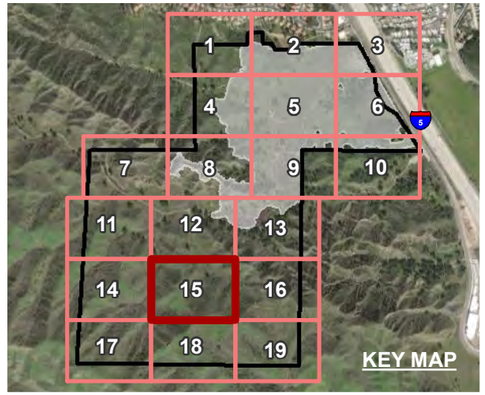
382
794
384
793
386

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

DUDEK

0 40 80 Feet

Tree Location Map



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

Heritage Tree
- Coast Live Oak
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Non-Protected Tree
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SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

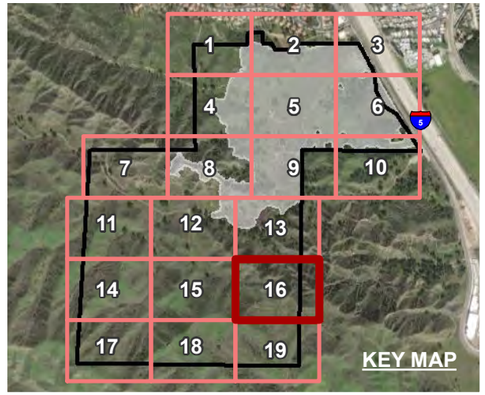
DUDEK

0 40 80 Feet

Sheet 15

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

Heritage Tree
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SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

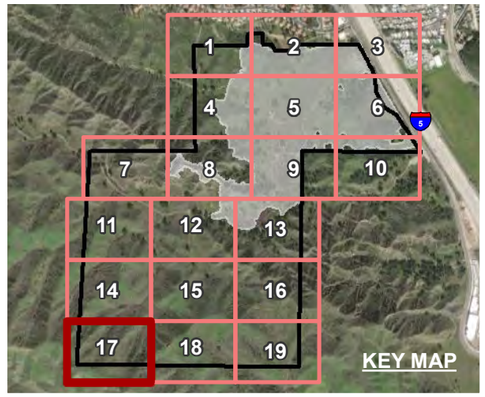
DUDEK

0 40 80 Feet

Sheet 16

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

Heritage Tree
- Coast Live Oak
- Valley Oak

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- Arroyo Willow
- Blue Elderberry
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Non-Protected Tree
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- Toyon
- Valley Oak



SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

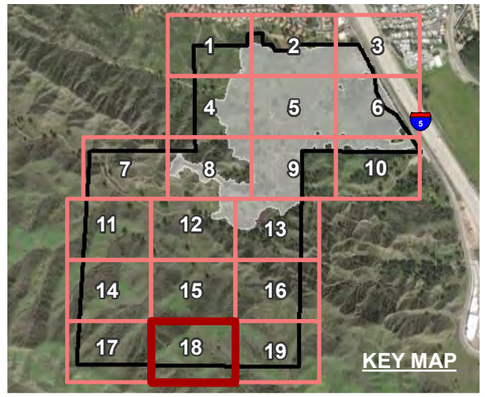
DUDEK

0 40 80 Feet

Sheet 17

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification

Heritage Tree
- Coast Live Oak
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Non-Protected Tree
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- Blue Elderberry
- Coast Live Oak
- Red Willow
- Scrub Oak
- Toyon
- Valley Oak



SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

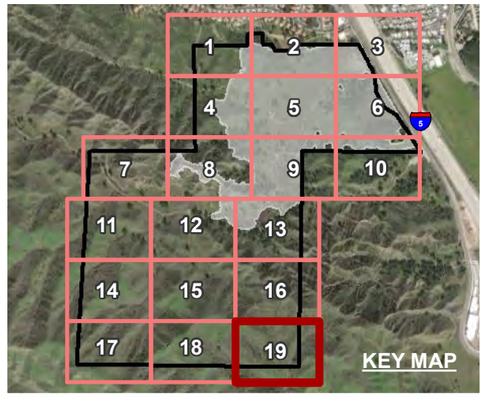
DUDEK

0 40 80 Feet

Sheet 18

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



Project Boundary
200-Ft Buffer of Project Development Footprint
Project Development Footprint
Fuel Modification

Heritage Tree
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SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2023

DUDEK

0 40 80 Feet

Sheet 19

Tree Location Map

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project

Appendix B
Tree Information Matrix

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Tree Information Matrix																					
Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
1	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	50	28	22	16	15	7	2	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.37023415	-118.5637153
2	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	24	22	2	2	2	2	2	2	1	1	1		Protected	Fair		Preserve	Outside of Development/FMZ	34.36495736	-118.5649886
3	Upland Hardwood	*Quercus berberidifolia*	Scrub Oak	6	16	12	4	4	3	3	2	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36898497	-118.5625603
4	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	34	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Fair		Direct-Debris Flow	Debris Basin	34.36494184	-118.5650057
5	Upland Hardwood	*Quercus berberidifolia*	Scrub Oak	4	17	12	5	2	2	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36904169	-118.5625468
6	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	6	3	3	1	1	1	1	1	1	1	1		Non-protected	Good		Direct-Debris Flow	Debris Basin	34.36491866	-118.5649835
7	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	1	34	34	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.36487662	-118.5649778
8	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	10	38	24	14	13	9	4	4	2	2	2	2		Protected	Good		Preserve	Outside of Development/FMZ	34.37043065	-118.5636495
9	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	1	26	26	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.3648231	-118.5650646
10	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	31	16	15	14	2	0	0	0	0	0	0		Protected	Fair	Fire scar, relatively healthy	Preserve	Outside of Development/FMZ	34.37040637	-118.563584
11	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	10	5	5	5	3	2	2	1	1	1	1		Protected	Good		Direct-Debris Flow	Debris Basin	34.36477858	-118.5650539
12	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	10	16	12	4	4	4	4	3	3	2	1	1		Protected	Poor	Half of crown is dead	Preserve	Outside of Development/FMZ	34.37066197	-118.5633028
13	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.3651501	-118.5664272
14	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.37074555	-118.5633433
16	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	33	17	16	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.37083521	-118.5632648
17	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	4	2	2	2	2	2	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.3662024	-118.564539
18	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Fair	Height - 30 ft., Crown - 25 ft. Significant Dieback in the branches. Not suitable for relocation	Preserve	Zone C thinning	34.37081635	-118.5627383
19	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	4	2	2	2	2	1	1	1	1	1	1		Non-protected	Good	2023: no tag, heavy brush obscuring trunk. Cannot see trunk, estimated data	Direct-Removal	Graded Development	34.36616148	-118.5642851
20	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	26	15	11	2	1	1	1	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.3709625	-118.562554
21	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	15	11	4	3	1	1	1	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36602779	-118.5641815
22	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	14	13	1	1	1	1	1	0	0	0	0		Protected	Fair	Height - 30 ft., crown width - 25 ft. Health and structure fair. On eroded slope, some exposed roots. Not suitable for relocation	Preserve	Zone C thinning	34.37096707	-118.562431
23	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	2	9	6	3	0	0	0	0	0	0	0	0		Protected	Good	Tag west side	Direct-Removal	Graded Development	34.3657005	-118.5642138
24	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	37	37	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Outside of Development/FMZ	34.37093892	-118.56168

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
25	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	9	5	4	3	3	3	2	1	1	2	1		Protected	Good	Tag west side	Direct-Removal	Graded Development	34.36556341	-118.5642337
26	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	14	12	2	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.37093972	-118.5614629
27	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	6	3	3	3	3	3	2	2	2	1	1	1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36553702	-118.5642118
28	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Poor	Fire damage. Main stem fallen, but regrowth apparent.	Direct-Removal	Graded Development	34.3699562	-118.5640863
29	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	6	3	3	3	3	2	2	2	2	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.36550799	-118.5642465
30	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Poor		Direct-Removal	Graded Development	34.36996295	-118.5640276
31	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	5	3	2	2	2	2	2	1	1	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.36547249	-118.5642298
32	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	24	24	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.37003465	-118.5677
33	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	8	4	4	3	3	1	1	1	1	1	1	1,3,2,1,3,1,2,2,3,1	Protected	Good		Direct-Removal	Graded Development	34.36545542	-118.5647456
34	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36980121	-118.567533
35	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	6	3	3	3	3	2	2	2	2	2	2	1,2,1,2,1,2,1,2,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36504039	-118.565445
36	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	42	42	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Debris Flow	Debris Basin	34.36971818	-118.5676245
37	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36931242	-118.5683787
38	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	7	4	3	3	2	2	2	2	2	2	2	1,1,1,2,1,2,2,1,2,1	Non-protected	Fair		Direct-Removal	Graded Development	34.36905004	-118.5680939
39	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	6	3	3	3	3	3	3	2	2	2	2	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36898955	-118.5678149
40	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	46	24	22	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36939725	-118.5679076
41	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	4	2	2	2	2	2	2	2	1	1	1	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.36896589	-118.5676042
42	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	50	26	24	24	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36918668	-118.5679107
43	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	28	28	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36915011	-118.5679423
44	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	16	12	6	6	6	4	4	2	2	2	1	1		Protected	Fair		Direct-Removal	Graded Development	34.36931871	-118.5674509
45	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	25	25	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36911239	-118.5678988
46	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	4	2	2	1	1	1	1	0	0	0	0		Non-protected	Dead		Direct-Removal	Graded Development	34.36936029	-118.5670751
47	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	17	5	3	2	1	1	1	1	1	1	1	1	1,1,1,1,2,2,2,2,1,2	Non-protected	Good		Direct-Removal	Graded Development	34.36927578	-118.5668147
48	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	30	16	14	13	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36911432	-118.567854
49	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	19	4	2	2	2	2	1	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36953859	-118.5662379
50	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	52	41	11	0	0	0	0	0	0	0	0		Heritage Tree	Poor		Preserve	Zone C thinning	34.36916244	-118.5678654
51	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	6	3	3	3	3	3	2	1	1	1	1	1,1,1,1,1,1,1,1,1,1,2,2,2,1,2,1,2,1,2,1	Non-protected	Good		Direct-Removal	Graded Development	34.36888207	-118.5660748
52	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	6	3	3	0	0	0	0	0	0	0	0		Non-protected	Fair		Preserve	Offsite FMZ (thinning)	34.36929327	-118.5676949
53	Upland Hardwood	*Quercus lobata*	Valley Oak	1	38	38	0	0	0	0	0	0	0	0	0		Heritage Tree	Poor	45 x 45. Poor health and structure: broken and dying branches, dead neighboring trees. Not suitable for relocation	Preserve	Zone C thinning	34.36775614	-118.5619753

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
54	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	19	11	8	5	3	3	2	2	2	2	2	2,2,2,2,1,1,1,1,1	Protected	Fair		Direct-Removal	Graded Development	34.36887793	-118.5659767
55	Upland Hardwood	*Quercus lobata*	Valley Oak	0	0	0	0	0	0	0	0	0	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36592255	-118.5641134
56	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	3	4	2	2	2	0	0	0	0	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36863358	-118.5660202
57	Upland Hardwood	*Quercus lobata*	Valley Oak	1	49	49	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Removal	Graded Development	34.36565964	-118.5642429
58	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.36859167	-118.5657905
59	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	39	39	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Offsite FMZ (thinning)	34.36911596	-118.5676238
60	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	4	2	2	2	2	2	2	2	2	2	2	2,2,2,2,2,2,1,1,1,1, 2,2,1,2,1	Non-protected	Fair		Direct-Removal	Graded Development	34.36855859	-118.5654702
61	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	4	2	2	1	1	1	1	1	1	1	1	2,2,2,2,1,2,1,2,1,2	Non-protected	Fair		Direct-Removal	Graded Development	34.36857653	-118.5653766
62	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	35	22	13	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Offsite FMZ (thinning)	34.36899828	-118.5675244
63	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	4	8	4	4	3	3	0	0	0	0	0	0	2,2,2,2,1,2,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36903589	-118.5645684
64	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	27	27	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Offsite FMZ (thinning)	34.36909104	-118.5673842
65	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	12	2	1	1	1	1	1	1	1	1	1	1	2,1,2,1,2,1,2,1,1,2	Non-protected	Good		Direct-Removal	Graded Development	34.36904589	-118.5643908
66	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	15	8	7	5	5	0	0	0	0	0	0		Protected	Fair		Preserve	Offsite FMZ (thinning)	34.36909358	-118.5672647
67	Upland Hardwood	*Quercus lobata*	Valley Oak	2	26	13	13	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Offsite FMZ (thinning)	34.36562481	-118.5641888
68	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	17	7	4	3	3	2	2	2	2	1	1	1	1,1,1,1,1	Non-protected	Good		Direct-Encroached	Zone C thinning	34.36905584	-118.5643725
69	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	10	5	5	3	2	2	2	0	0	0	0	3,3,3,3,2,2,2,3,2,3	Protected	Fair		Direct-Encroached	Zone C thinning	34.36910082	-118.5642376
70	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	63	38	25	16	0	0	0	0	0	0	0		Heritage Tree	Fair	Height - 40 ft., Crown width - 35 ft. Branch dieback. Two large codominant stems growing straight up. Not suitable for relocation.	Preserve	Offsite FMZ (thinning)	34.36927725	-118.5675427
71	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	14	14	9	5	4	3	3	1	1	1	1	1	2,2,3,3,3,2,3,2,3,2	Protected	Fair		Direct-Encroached	Zone C thinning	34.36900842	-118.564128
72	Upland Hardwood	*Quercus lobata*	Valley Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Offsite FMZ (thinning)	34.36540765	-118.5642327
73	Upland Hardwood	*Quercus lobata*	Valley Oak	4	46	25	21	21	12	0	0	0	0	0	0		Protected	Good		Preserve	Offsite FMZ (thinning)	34.36539153	-118.5642544
74	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	17	11	6	5	5	4	4	3	2	2	2	1	3,3,3,3,3,2,2,3,2,3, 2,3,2,3,2	Protected	Fair		Direct-Encroached	Zone C thinning	34.36878388	-118.5642166
75	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	4	2	2	2	1	1	1	0	0	0	0		Non-protected	Fair	Height - 35 ft., Crown width 30 ft. Branch dieback and decline, somewhat congested branching structure. Not suitable for relocation	Direct-Removal	Graded Development	34.36929812	-118.5672323
76	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	16	8	5	3	3	3	2	2	2	1	1	1	2,2,2,2,2,2,2,2,2,2, 1,1,1,2,1,2,1,2,1,2	Protected	Fair		Direct-Removal	Graded Development	34.36866836	-118.564188
77	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	12	6	3	3	3	3	2	2	1	1	1	1		Protected	Poor		Direct-Removal	Graded Development	34.36933918	-118.5611241
78	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	15	14	1	1	1	1	1	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36952687	-118.5672993
79	Upland Hardwood	*Quercus lobata*	Valley Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36531276	-118.5642228
80	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	16	5	3	2	2	1	1	1	1	1	1	1	1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.36945775	-118.5640693
81	Upland Hardwood	*Quercus lobata*	Valley Oak	1	36	36	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Removal	Graded Development	34.36575605	-118.5645156

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
82	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.36941667	-118.5640431
83	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	26	12	9	3	3	3	3	3	1	1	1	1	1,1,1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36932336	-118.5638942
84	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	32	18	14	12	12	5	0	0	0	0	0		Protected	Fair	Basal resprout	Preserve	Outside of Development/FMZ	34.36950448	-118.5672557
85	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	22	11	11	6	5	5	3	3	1	1	1	1,1,1,1,1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36916656	-118.5633011
86	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	23	12	11	9	4	1	1	0	0	0	0	2	Protected	Poor	Estimated dbh - can not access trunk (safety)	Preserve	Outside of Development/FMZ	34.36957443	-118.5669673
87	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	6	3	3	2	2	2	2	2	1	1	1	1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36855427	-118.5632996
88	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36967127	-118.567029
89	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	8	4	4	3	3	3	3	3	3	1	1	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36832767	-118.5633368
90	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Protected	Poor		Direct-Debris Flow	Debris Basin	34.36902483	-118.5668103
91	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	8	5	3	3	3	3	3	3	1	1	1		Protected	Fair		Direct-Removal	Graded Development	34.36810398	-118.5635414
92	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	33	17	16	15	15	0	0	0	0	0	0		Protected	Poor		Direct-Debris Flow	Debris Basin	34.36915515	-118.5666268
93	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	10	6	4	3	3	2	2	2	2	2	2	1,1,1,1,1,1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36835199	-118.5637087
95	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	13	7	6	3	3	1	1	1	1	1	1	2,2,2,2,2	Protected	Good		Direct-Removal	Graded Development	34.36828438	-118.5638761
96	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	26	26	0	0	0	0	0	0	0	0	0		Protected	Poor		Direct-Debris Flow	Debris Basin	34.36913471	-118.5665722
97	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	12	7	5	5	5	4	4	3	3	1	1	1,1,1,1,1,1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.3691023	-118.5616873
98	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.36918535	-118.5665372
99	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	6	3	3	3	3	3	3	2	2	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.36907426	-118.5614511
100	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.36900211	-118.5665311
101	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	7	4	3	3	3	2	2	1	1	1	1	1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36930547	-118.5612401
102	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	31	16	15	0	0	0	0	0	0	0	0		Protected	Fair	40x55. Codominant, slight branch dieback. Not suitable for relocation	Direct-Debris Flow	Debris Basin	34.36919113	-118.5663701
103	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	6	3	3	3	3	2	2	2	1	1	1	2,1,1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.36975542	-118.5609982
104	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Poor	35x45. Codominance at base, uneven canopy, branch dieback, possible burn damage. Not suitable for relocation	Direct-Debris Flow	Debris Basin	34.36912687	-118.5663493
105	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	10	5	5	5	5	4	4	2	2	1	1		Protected	Fair		Direct-Removal	Graded Development	34.36983878	-118.5608333
106	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	35	35	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36902495	-118.5662319
107	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	6	3	3	3	3	2	2	2	1	1	1	1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.3699475	-118.5607759
108	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	38	18	20	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.3686966	-118.5664914
109	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	19	10	9	6	4	4	3	3	2	1	1	1,1,1,1,1,1,1	Protected	Fair		Direct-Removal	Graded Development	34.36980091	-118.5607581
110	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	15	9	6	4	4	3	2	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36871345	-118.5664157

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
111	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	4	2	2	2	2	2	1	1	1	1	1	1,1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.36967571	-118.5607036
112	Upland Hardwood	*Quercus berberidifolia*	Scrub Oak	10	4	2	2	2	2	2	2	2	2	2	2		Non-protected	Good		Direct-Debris Flow	Debris Basin	34.36914254	-118.562498
113	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	8	5	3	3	3	3	3	2	1	1	1	1,1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36769515	-118.5663111
114	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	8	8	4	4	2	2	2	2	2	2	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36875021	-118.5663513
115	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	10	5	5	4	4	3	3	3	3	2	1	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,1,1	Protected	Fair	Tag south side	Direct-Removal	Graded Development	34.36731255	-118.5657035
116	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36869882	-118.5662364
117	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	4	2	2	2	2	1	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36857799	-118.5647575
118	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	40	40	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Debris Flow	Debris Basin	34.36876138	-118.5661121
119	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	5	3	2	2	2	2	1	1	1	1	1	1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36838296	-118.565025
120	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	31	31	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36865877	-118.5659376
121	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	30	17	13	6	5	1	0	0	0	0	0		Protected	Poor		Direct-Debris Flow	Debris Basin	34.36878801	-118.5658367
122	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	8	4	4	3	2	2	2	1	1	1	1	2,1,2,1,2,1,2,1,2,1	Protected	Good		Direct-Removal	Graded Development	34.36834117	-118.5649628
123	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	6	3	3	3	2	2	2	1	1	1	1	1,1,1,1,1,1,1,1,1,1, 1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36837221	-118.5648894
124	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	26	23	3	1	1	1	0	0	0	0	0		Non-protected	Dead	35x40. no tag, estimated data, bees. Tree is dead, basal resprout. not suitable for relocation.	Direct-Debris Flow	Debris Basin	34.36897182	-118.5658893
125	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	14	9	5	4	3	3	2	2	1	1	1	1	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36827542	-118.5647478
126	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	10	29	26	3	3	3	3	3	3	2	2	2		Protected	Poor	Codominance. Possible burn damage. Branch dieback. 35 x 30. Not suitable for relocation.	Direct-Debris Flow	Debris Basin	34.3690775	-118.5657988
127	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	4	2	2	2	2	2	2	1	1	1	1	1,1,1,2,1,2,1,2,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36815051	-118.5646631
128	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	5	3	2	1	1	1	1	0	0	0	0		Non-protected	Fair	Codominant, stag headed, waterspouts. Not suitable for relocation. 30x30	Direct-Debris Flow	Debris Basin	34.36906513	-118.565633
129	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	12	5	3	2	1	1	1	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36810157	-118.5646678
130	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	8	4	4	4	3	3	3	0	0	0	0		Protected	Poor	Yes. 20x25. Estimated dbh. Broken stem, dead branches. Not suitable for relocation	Direct-Debris Flow	Debris Basin	34.36969177	-118.5661321
131	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	5	3	2	2	2	2	1	1	1	1	1	2,2,1,2,1,2,1,2,1,2	Non-protected	Fair		Direct-Removal	Graded Development	34.36797703	-118.564765
132	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Fair	Yes. 25x25 . Too many stems. Large base wound. Not suitable for relocation	Direct-Removal	Graded Development	34.36967352	-118.5660704
133	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	6	3	3	1	1	1	1	1	1	1	1	1,2,1,2,1,2,2,2,2,1, 1,2,1,2,1	Non-protected	Good		Direct-Removal	Graded Development	34.36802334	-118.564593
134	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	31	27	4	2	1	1	0	0	0	0	0		Protected	Poor	Yes. 15x25. Estimated dbh, no access to trunk. Broken stem, basal resprout. Not suitable for relocation	Direct-Removal	Graded Development	34.3696125	-118.5657957

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
135	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	5	3	2	2	2	2	2	1	1	1	1	1,2,1,1,1,1,1,1,2,2, 2,2,1,2,1	Non-protected	Good		Direct-Removal	Graded Development	34.36802079	-118.564515
136	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	31	16	15	4	2	2	1	0	0	0	0		Non-protected	Dead	Height 25 ft., crown width 35 ft.. Dead tree. Estimated dbh data; bees. Not suitable for relocation	Direct-Removal	Graded Development	34.36948102	-118.5653296
137	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	10	6	4	3	3	3	3	2	2	1	1	2,2,1,2,1	Protected	Good		Direct-Removal	Graded Development	34.36797665	-118.5644821
139	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	11	6	5	4	4	4	3	2	2	1	1	1,1,2,1,1,2,2,2,1,2	Protected	Good		Direct-Removal	Graded Development	34.36791215	-118.5644001
140	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	15	13	2	1	1	1	0	0	0	0	0		Protected	Critical	Height 45 ft. Crown width 30 ft. Mostly dead, basal resprout. Not suitable for relocation	Direct-Removal	Graded Development	34.36943349	-118.5650376
141	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	20	11	9	8	4	4	4	3	3	3	2	1,1,2,1,1,1,1,2,1,1, 2,2,2,1,2,2,2,2,1,2	Protected	Good		Direct-Removal	Graded Development	34.3678349	-118.5645216
142	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	51	27	24	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36947285	-118.5649614
143	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	13	8	5	4	3	3	3	2	2	1	1	1,1,2,1,1,2,1,1,2,1, 2,2,1,1,2	Protected	Good		Direct-Removal	Graded Development	34.36776612	-118.5645343
144	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	32	16	16	15	14	8	0	0	0	0	0		Protected	Fair	Height 55 ft. Crown width 30 ft. Branch dieback, wounded bark, codominance. Not suited for relocation.	Direct-Removal	Graded Development	34.36947503	-118.5645183
145	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	9	6	3	1	1	1	1	1	1	1	1	2,1,1,2,1	Protected	Good		Direct-Removal	Graded Development	34.36766656	-118.5644962
146	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	28	14	14	13	12	6	3	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36845547	-118.565487
147	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	12	8	4	3	3	3	3	2	1	1	1	1,2,2,1,1	Protected	Good		Direct-Removal	Graded Development	34.36760496	-118.564491
148	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	34	18	16	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36846834	-118.5654405
149	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	9	7	2	2	2	2	1	1	1	1	1	1,2,1,2,2,1,1,2,1,1	Protected	Good		Direct-Removal	Graded Development	34.36765162	-118.5641095
150	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Fair	50x60. Small dieback, bark wounds, healed over wound with good reaction wood. Possible burn damage at base.	Direct-Removal	Graded Development	34.36875432	-118.5646762
152	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36904025	-118.5642942
153	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	25	15	10	3	1	1	1	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36877099	-118.5628202
154	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	12	6	6	5	5	5	3	3	3	3	1	1,2,1,2,2,1,1,2,2,1, 1,1,2,1,1	Protected	Good		Direct-Removal	Graded Development	34.36765817	-118.5640109
155	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	5	3	2	1	1	1	0	0	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36846119	-118.5625759
157	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	9	5	4	3	3	3	1	1	1	1	1	1,2,2,1,2,2,1,1,2,2, 1,2,1,2,1	Protected	Good		Direct-Removal	Graded Development	34.36766656	-118.5639394
158	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	27	16	11	11	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36870406	-118.5623995
159	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	6	3	3	3	2	1	1	1	1	1	1	1,1,2,2,1,1,2,2,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36758943	-118.5638934
160	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	42	22	20	20	0	0	0	0	0	0	0		Non-protected	Dead	Dead	Direct-Removal	Graded Development	34.36911512	-118.5623243
161	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	36	36	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair	Bark damage at base. Canopy 25% dead.	Direct-Removal	Graded Development	34.36904947	-118.5622665
162	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	4	2	2	1	1	1	1	1	1	1	1	2,1,2,1,1,2,21,2,2	Non-protected	Fair		Direct-Removal	Graded Development	34.36754788	-118.5642295
163	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	18	13	5	4	3	3	2	2	1	1	1	1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36751975	-118.564333
164	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	48	24	24	8	0	0	0	0	0	0	0		Protected	Poor		Direct-Removal	Graded Development	34.36918932	-118.562259

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
165	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	46	24	22	16	0	0	0	0	0	0	0		Protected	Good	Bees	Direct-Removal	Graded Development	34.36913679	-118.5620357
166	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	8	4	4	3	3	3	2	2	1	1	1	2,1,1,2,2,1,2,2,1,1	Protected	Good		Direct-Removal	Graded Development	34.36746467	-118.5642219
167	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	60	8	4	4	4	4	4	3	3	3	3	3	1,1	Protected	Good		Direct-Removal	Graded Development	34.36750486	-118.5642255
168	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	38	20	18	5	5	3	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36919272	-118.5619712
169	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	8	6	3	3	2	2	2	2	1	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36956262	-118.5619694
170	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	4	2	2	2	2	2	1	1	1	1	1	1,2,1,2,2,1,1,2,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.3673598	-118.564159
171	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	32	28	4	4	1	1	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36952212	-118.5617587
172	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	2	1	1	1	1	1	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.36724252	-118.5641634
173	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	50	25	25	23	20	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36890149	-118.5620205
174	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	4	2	2	2	2	2	1	1	1	1	1	1,2,2,1,2,2,1,2,1,2	Non-protected	Good		Direct-Removal	Graded Development	34.36734033	-118.5645644
175	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	32	30	2	2	2	2	2	0	0	0	0		Protected	Fair	Fire scar, otherwise healthy	Direct-Removal	Graded Development	34.36894557	-118.5619357
176	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	4	2	2	2	2	2	1	1	1	1	1	1,2,2,1,1,2,2,1,2,2	Non-protected	Good		Direct-Removal	Graded Development	34.36730532	-118.5646308
177	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	6	3	3	3	2	2	2	2	1	1	1	2,1,2,1,1,1,1,2,2,1, 2,2,2,1,2	Non-protected	Good		Direct-Removal	Graded Development	34.36724277	-118.5645086
178	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	34	25	9	1	1	1	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36875399	-118.5617542
179	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	57	27	30	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Removal	Graded Development	34.36889826	-118.5616938
180	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	9	6	3	3	3	2	2	2	1	1	1	0	2,1,2,1,1,1,2,2,1,2	Non-protected	Good		Direct-Removal	Graded Development	34.36722192	-118.5645432
181	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Fair	Crown regrowth	Direct-Removal	Graded Development	34.36892769	-118.5616002
182	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	9	13	7	6	5	3	2	1	1	1	1	0	1,2,2,1,2,2,1,2,1,1	Protected	Good		Direct-Removal	Graded Development	34.36721366	-118.56457
183	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	7	4	3	2	2	2	2	1	1	1	1	1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36723238	-118.564623
184	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	44	28	16	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36891271	-118.5615311
185	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	10	8	2	2	2	2	1	1	1	1	1	2,1,2,1,1,1,2,2,1,2, 1,2,1,1,1,2,1,2,1,2	Protected	Fair		Direct-Removal	Graded Development	34.36714603	-118.5646808
186	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	57	57	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Removal	Graded Development	34.36897978	-118.5614515
187	Riparian	*Populus fremontii*	Fremont Cottonwood	5	8	4	4	4	4	4	0	0	0	0	0	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36698664	-118.5613391
188	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	30	16	14	10	6	0	0	0	0	0	0		Protected	Fair	25% canopy dead	Direct-Removal	Graded Development	34.36873286	-118.5614712
189	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	42	24	18	12	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36882368	-118.5612975
190	Riparian	*Populus fremontii*	Fremont Cottonwood	2	15	8	7	0	0	0	0	0	0	0	0	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36681861	-118.5604233
191	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	48	25	23	20	8	0	0	0	0	0	0	1	Protected	Good		Direct-Removal	Graded Development	34.36903282	-118.5613186
192	Riparian	*Populus fremontii*	Fremont Cottonwood	5	10	5	5	4	4	2	0	0	0	0	0	1,1,1,1,1,1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36692252	-118.5598211
194	Riparian	*Populus fremontii*	Fremont Cottonwood	3	8	4	4	2	0	0	0	0	0	0	0	1,1	Protected	Good		Direct-Removal	Graded Development	34.36806057	-118.5661258
195	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	22	15	7	0	0	0	0	0	0	0	0		Protected	Good	Bees	Direct-Removal	Graded Development	34.3691113	-118.5615094
196	Riparian	*Populus fremontii*	Fremont Cottonwood	2	13	10	3	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36555306	-118.5641888
197	Riparian	*Populus fremontii*	Fremont Cottonwood	4	8	4	4	1	1	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36475578	-118.5653749
198	Upland Hardwood	*Quercus lobata*	Valley Oak	3	35	18	17	17	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36550037	-118.5646893

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
199	Riparian	*Populus fremontii*	Fremont Cottonwood	1	5	5	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36073292	-118.5676338
200	Upland Hardwood	*Quercus lobata*	Valley Oak	1	24	24	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36539952	-118.5647609
201	Riparian	*Salix lasiolepis*	Arroyo Willow	20	3	2	1	1	1	1	1	1	1	1	1		Non-protected	Fair		Direct-Removal	Graded Development	34.37082779	-118.5649625
202	Upland Hardwood	*Quercus lobata*	Valley Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Good	No tag - access issues	Direct-Removal	Graded Development	34.36516135	-118.5650496
203	Upland Hardwood	*Quercus lobata*	Valley Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36505388	-118.5649208
204	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	10	5	5	5	4	3	3	3	3	3	1	2,1,2,1,2,1,1,1,2,1	Protected	Good		Direct-Removal	Graded Development	34.3672655	-118.5648609
205	Upland Hardwood	*Quercus lobata*	Valley Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36511721	-118.5645788
206	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	14	6	4	2	2	2	2	2	1	1	1	1	1,1,1,2,1,1,1,2,1,2, 2,1,2,1,2,1,1,1,2,1	Non-protected	Good		Direct-Removal	Graded Development	34.36724758	-118.5649212
207	Upland Hardwood	*Quercus lobata*	Valley Oak	1	33	33	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36511914	-118.5644671
208	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	7	4	3	3	3	3	3	2	2	2	1	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.36685185	-118.5653488
209	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	34	34	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36907441	-118.5612487
210	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	10	5	3	2	2	1	1	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.36677404	-118.5653256
211	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	10	6	4	4	4	4	4	2	2	2	1	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,1,1	Protected	Fair		Direct-Removal	Graded Development	34.36671009	-118.5653595
212	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	8	4	4	4	4	3	3	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36916806	-118.5614796
213	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	21	11	10	7	5	4	3	2	2	1	1	1,1,2,1,1,1,1,2,1,1, 1,2,1,2,2,1,2,1,2,2	Protected	Good		Direct-Removal	Graded Development	34.36681841	-118.5651914
215	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36920769	-118.561445
216	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	11	6	5	5	4	4	3	2	2	1	1	1,1,2,1,2,1,2,2,1,1, 1,2,1,2,2	Protected	Good		Direct-Removal	Graded Development	34.36675742	-118.5651855
217	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	30	15	15	12	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36933735	-118.5615533
218	Riparian	*Salix lasiolepis*	Arroyo Willow	2	8	4	4	0	0	0	0	0	0	0	0		Non-protected	Dead	Fallen	Direct-Removal	Graded Development	34.37070535	-118.5649462
220	Riparian	*Salix lasiolepis*	Arroyo Willow	3	5	3	2	2	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.37073087	-118.5648805
221	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	2	1	1	1	1	1	0	0	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36940232	-118.5612376
222	Riparian	*Salix laevigata*	Red Willow	2	13	10	3	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.3603507	-118.569736
223	Upland Hardwood	*Quercus lobata*	Valley Oak	1	37	37	0	0	0	0	0	0	0	0	0	3,2,3,2,2	Heritage Tree	Good		Direct-Encroached	Zone C thinning	34.36510231	-118.5643876
224	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	2	1	1	1	1	1	1	1	1	1	1	3,3,3,3,3,1,2,1,1,1, 2,1,2,2,1,2,2,1,2,2, 2,1,1,2,1,1,1,2,1,2, 2,1,2,1,2,1,2,2,1,2, 2,1,1,1,2,1,2,2,1,2	Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36679039	-118.5651241
225	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	51	27	24	18	15	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36928478	-118.5612074
226	Upland Hardwood	*Heteromeles arbutifolia*	Toyon	15	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Poor	Height 60 ft., crown width 30 ft. Poor heath/structure	Preserve	Outside of Development/FMZ	34.37060899	-118.5639911
227	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	28	13	15	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36926016	-118.5610913
228	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	2	1	1	1	1	1	1	1	1	1	1	1,2,2,1,2,2,1,1,1,2, 1,2,2,1,2	Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36649658	-118.56542
229	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	17	14	3	2	1	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36949186	-118.561488
230	Upland Hardwood	*Heteromeles arbutifolia*	Toyon	50	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Fair	Fire scar, otherwise healthy.	Preserve	Outside of Development/FMZ	34.37053289	-118.5638552
231	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	16	14	2	2	2	1	1	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36954302	-118.5614246
232	Upland Hardwood	*Heteromeles arbutifolia*	Toyon	20	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Fair		Preserve	Outside of Development/FMZ	34.37047104	-118.5638516
233	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	39	21	18	5	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.3696338	-118.5614082
234	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	3	2	1	1	1	1	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1	Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36642391	-118.565402
235	Riparian	*Salix lasiolepis*	Arroyo Willow	3	13	8	5	1	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.37067391	-118.5648727

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
236	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	50	29	21	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.3696035	-118.5612624
237	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Non-protected	Dead	Tree is dead and fallen over. Not suitable for relocation. 10x35.	Direct-Removal	Graded Development	34.36970685	-118.5611567
238	Riparian	*Salix laevigata*	Red Willow	2	19	10	9	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.3599903	-118.5696544
240	Riparian	*Salix laevigata*	Red Willow	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.35993755	-118.5694898
241	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	14	9	5	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36959833	-118.5610483
242	Riparian	*Salix lasiolepis*	Arroyo Willow	1	4	4	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.37087998	-118.5646469
244	Riparian	*Salix lasiolepis*	Arroyo Willow	20	5	3	2	1	1	1	1	1	1	1	1		Protected	Good		Direct-Removal	Graded Development	34.37107003	-118.5642589
245	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	22	10	12	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.3695391	-118.5611073
246	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	1	8	8	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36956152	-118.5614762
247	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	35	35	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36953421	-118.5609666
248	Riparian	*Salix lasiolepis*	Arroyo Willow	2	11	9	2	0	0	0	0	0	0	0	0		Protected	Good	Fire scar	Direct-Removal	Graded Development	34.37034933	-118.564341
249	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	23	16	7	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36942193	-118.5610252
250	Riparian	*Salix lasiolepis*	Arroyo Willow	1	9	9	0	0	0	0	0	0	0	0	0		Non-protected	Dead	Fallen	Direct-Removal	Graded Development	34.3705007	-118.5643192
251	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	3	8	4	4	4	0	0	0	0	0	0	0	1,2,2,1,2	Protected	Fair		Direct-Removal	Graded Development	34.36643941	-118.5652805
252	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	11	8	4	4	3	3	2	2	2	2	1	1		Protected	Good		Direct-Removal	Graded Development	34.36942625	-118.5609672
254	Riparian	*Salix laevigata*	Red Willow	5	14	12	2	2	1	1	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36006663	-118.5693765
255	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	43	26	17	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.37000042	-118.5606299
256	Riparian	*Salix laevigata*	Red Willow	4	4	2	2	2	1	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36006917	-118.5693266
258	Riparian	*Salix laevigata*	Red Willow	1	4	4	0	0	0	0	0	0	0	0	0		Protected	Good	2023 no tag dense brush	Direct-Removal	Graded Development	34.3665833	-118.564516
259	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	17	13	4	1	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36683587	-118.5674773
260	Riparian	*Salix laevigata*	Red Willow	3	10	6	4	3	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36644801	-118.5645765
262	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	12	7	5	5	4	4	3	3	3	3	3	2,1,2,2,1	Protected	Fair		Direct-Removal	Graded Development	34.36646546	-118.5653114
263	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36703945	-118.5673488
264	Riparian	*Salix laevigata*	Red Willow	3	13	7	6	3	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36639221	-118.5645411
265	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36707732	-118.567308
266	Riparian	*Salix lasiolepis*	Arroyo Willow	20	6	3	3	3	2	2	2	2	1	1	1		Protected	Fair		Direct-Removal	Graded Development	34.37043898	-118.5640007
268	Riparian	*Populus fremontii*	Fremont Cottonwood	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36081333	-118.5677288
269	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	38	25	13	10	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36697909	-118.5671209
270	Riparian	*Salix laevigata*	Red Willow	5	8	5	3	2	1	1	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36631395	-118.5646115
271	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.3669211	-118.5670611
272	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	4	2	2	2	2	1	1	1	1	1	1	1,2,2,1,2,2,1,2,2,1,1,2,2,1,2	Non-protected	Fair		Direct-Removal	Graded Development	34.3662329	-118.564998
273	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	15	14	1	1	1	1	1	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36696018	-118.5670325
274	Riparian	*Populus fremontii*	Fremont Cottonwood	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36132148	-118.5699004
275	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36704082	-118.5669247
276	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	11	6	5	5	4	4	3	3	3	2	1		Protected	Good		Direct-Removal	Graded Development	34.36721863	-118.5637177
277	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	34	18	16	14	0	0	0	0	0	0	0		Protected	Good	Tag SE side	Direct-Removal	Graded Development	34.36712872	-118.5671782
278	Riparian	*Populus fremontii*	Fremont Cottonwood	1	8	8	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36083016	-118.5706315
279	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	27	22	5	3	1	1	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36715483	-118.5671418
280	Riparian	*Populus fremontii*	Fremont Cottonwood	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.36058289	-118.570764
281	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	42	24	18	17	17	17	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36723483	-118.5674334

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
282	Riparian	*Populus fremontii*	Fremont Cottonwood	1	5	5	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.36056693	-118.5703594
283	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	34	20	14	0	0	0	0	0	0	0	0		Protected	Fair	Burn scars on branches. 40 x40. Wounds with good reaction wood at base. dead branches. Not suitable for relocation.	Direct-Removal	Graded Development	34.36738155	-118.5672576
284	Riparian	*Populus fremontii*	Fremont Cottonwood	1	6	6	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.3607618	-118.5699653
285	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	36	36	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Encroached	Zone C thinning	34.36745417	-118.5672572
286	Riparian	*Salix laevigata*	Red Willow	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Good	No tag	Direct-Debris Flow	Debris Basin	34.36625921	-118.5646451
287	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	19	17	2	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.3674636	-118.5671912
288	Riparian	*Salix laevigata*	Red Willow	2	6	3	3	0	0	0	0	0	0	0	0		Protected	Good	No Tag	Direct-Debris Flow	Debris Basin	34.36621436	-118.5646886
290	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	10	8	4	4	4	4	4	3	3	3	3	3		Protected	Good		Direct-Debris Flow	Debris Basin	34.36718462	-118.5637784
291	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36738342	-118.5671827
292	Riparian	*Salix laevigata*	Red Willow	6	22	11	11	5	3	2	2	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36623767	-118.5645434
293	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	13	11	2	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36746392	-118.567105
294	Riparian	*Salix laevigata*	Red Willow	10	11	7	4	3	2	1	1	1	1	1	1		Protected	Good	No tag - access issues	Direct-Debris Flow	Debris Basin	34.365389	-118.5647271
295	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Fair	Fire snag regrowth	Direct-Removal	Graded Development	34.3673909	-118.5671111
296	Riparian	*Salix laevigata*	Red Willow	15	6	3	3	3	3	3	2	2	2	2	2		Protected	Good	No tag - access issues	Direct-Removal	Graded Development	34.36529142	-118.5647341
297	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	15	11	4	4	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36740792	-118.5670431
298	Riparian	*Salix laevigata*	Red Willow	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good	No tag - access issues	Direct-Debris Flow	Debris Basin	34.36529032	-118.5648967
299	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	19	10	9	9	6	3	1	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36733292	-118.5670103
300	Riparian	*Salix laevigata*	Red Willow	1	6	6	0	0	0	0	0	0	0	0	0		Protected	Good	No tag - access issues	Direct-Debris Flow	Debris Basin	34.36524501	-118.564919
301	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	2	5	2	3	0	0	0	0	0	0	0	0	1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Debris Flow	Debris Basin	34.36698289	-118.5639215
302	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Non-protected	Dead	Dead	Preserve	Outside of Development/FMZ	34.36727789	-118.5670065
303	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	1	3	3	0	0	0	0	0	0	0	0	0	1,2,2,1,2,2,1,2,1,2	Non-protected	Good		Direct-Debris Flow	Debris Basin	34.36694738	-118.5639228
304	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	32	19	13	13	12	2	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.3672987	-118.5668733
305	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	1	3	3	0	0	0	0	0	0	0	0	0	1,2,1,1,2,2,1,2,1,2	Non-protected	Good		Direct-Debris Flow	Debris Basin	34.36668423	-118.5641146
306	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.3673548	-118.5668418
307	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	1	4	4	0	0	0	0	0	0	0	0	0	1,1,1,1,1	Non-protected	Good		Direct-Debris Flow	Debris Basin	34.36657867	-118.5639262
308	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	45	25	20	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36736904	-118.5667747
309	Riparian	*Salix laevigata*	Red Willow	1	8	8	0	0	0	0	0	0	0	0	0		Protected	Good	No tag - access issues	Direct-Debris Flow	Debris Basin	34.36522821	-118.5648717
310	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	32	22	10	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36738608	-118.5666826
311	Riparian	*Salix laevigata*	Red Willow	1	5	5	0	0	0	0	0	0	0	0	0		Protected	Good	No tag - access issues	Direct-Debris Flow	Debris Basin	34.36518983	-118.5650921
312	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	14	12	2	2	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36758165	-118.5668766
313	Riparian	*Populus fremontii*	Fremont Cottonwood	1	7	7	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.36068628	-118.569957
314	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36771174	-118.5671819
315	Riparian	*Salix laevigata*	Red Willow	1	5	5	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36496504	-118.5650473
316	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	8	4	4	3	3	2	2	0	0	0	0		Protected	Poor	Fire damage	Preserve	Outside of Development/FMZ	34.36769958	-118.5668545

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
317	Riparian	*Salix laevigata*	Red Willow	1	4	4	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36487618	-118.5650631
318	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	14	12	2	2	2	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36772554	-118.5667367
319	Riparian	*Salix laevigata*	Red Willow	1	6	6	0	0	0	0	0	0	0	0	0		Protected	Fair	Fire Snag; re-sprout	Direct-Debris Flow	Debris Basin	34.37099085	-118.5657233
320	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	21	13	8	8	1	1	0	0	0	0	0		Protected	Fair	Fire damage	Preserve	Outside of Development/FMZ	34.36774954	-118.5666013
321	Riparian	*Salix laevigata*	Red Willow	1	6	6	0	0	0	0	0	0	0	0	0	2,2,1	Protected	Fair		Direct-Debris Flow	Debris Basin	34.37092782	-118.5651646
322	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	41	41	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair	Fire damage	Preserve	Outside of Development/FMZ	34.36776116	-118.566502
323	Riparian	*Populus fremontii*	Fremont Cottonwood	1	8	8	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.36060573	-118.5699783
324	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36782136	-118.5664832
325	Riparian	*Salix laevigata*	Red Willow	1	3	3	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.37093435	-118.5650059
327	Riparian	*Salix laevigata*	Red Willow	2	7	4	3	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.37086142	-118.5650731
328	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	7	6	1	1	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.3677933	-118.5662834
329	Riparian	*Salix lasiolepis*	Arroyo Willow	20	6	3	3	3	3	3	3	3	3	3	3		Protected	Fair		Direct-Removal	Graded Development	34.37048834	-118.5640001
330	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36784196	-118.5659996
331	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	6	3	3	3	3	2	2	2	1	1	1	1,2,2,1,2,1,2,1,1,2	Non-protected	Good		Direct-Debris Flow	Debris Basin	34.36652986	-118.5639099
332	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Poor	Branch dieback, burn damage, wound, congested branching structure. 30x30. Not suitable for relocation.	Preserve	Outside of Development/FMZ	34.36813067	-118.5657753
333	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36788888	-118.5657197
334	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	14	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Good		Direct-Debris Flow	Debris Basin	34.36654225	-118.5640508
335	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	11	6	5	4	4	4	3	3	2	2	1	1,2,1,1,2,2,2,1,2,1	Protected	Good		Direct-Debris Flow	Debris Basin	34.36647347	-118.5640625
336	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	2	1	1	1	1	0	0	0	0	0	0		Non-protected	Poor	Poor health and structure. 20x20. Burn scars on branches and base. Dead branches. Wounds from failed major branches. Not suitable for relocation.	Preserve	Outside of Development/FMZ	34.36792062	-118.5656276
337	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	1	6	6	0	0	0	0	0	0	0	0	0	1,1	Protected	Fair		Direct-Debris Flow	Debris Basin	34.36941112	-118.5612605
338	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	43	22	21	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36788672	-118.5655756
339	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	8	4	4	4	4	4	4	4	4	4	4	2,1,2,1,1,2,2,1,2,1,1,2,1,1,2,1,2,1,1,2	Protected	Good		Direct-Removal	Graded Development	34.36638161	-118.5640499
340	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	35	18	17	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36781448	-118.5654549
341	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	3	2	1	1	1	1	1	1	1	1	1	1,2,1,2,1,1,2,1,1,2,1,2,1,1,2,1,1,2,1,2	Non-protected	Good		Direct-Removal	Graded Development	34.36631194	-118.5641735
342	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	29	15	14	12	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36781569	-118.5653635
343	Riparian	*Salix laevigata*	Red Willow	6	10	5	5	4	4	1	1	0	0	0	0		Non-protected	Dead		Direct-Removal	Graded Development	34.37077371	-118.5651067
344	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	36	18	18	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36783046	-118.5654033

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
345	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	5	4	1	1	1	1	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36711749	-118.5613258
346	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	18	16	2	2	2	1	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36784613	-118.5654207
347	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36785483	-118.5653829
349	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	4	2	2	2	2	2	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Preserve	Outside of Development/FMZ	34.36680505	-118.5607645
351	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	8	30	25	5	4	4	3	3	3	3	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36787582	-118.5654136
352	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	10	5	5	5	5	5	4	4	4	4	4	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1	Protected	Good		Preserve	Outside of Development/FMZ	34.36682735	-118.5597394
353	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	15	4	2	2	2	1	1	1	1	1	1	1		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.3654478	-118.5642123
354	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	4	2	2	2	1	1	1	0	0	0	0		Non-protected	Poor		Preserve	Outside of Development/FMZ	34.36788317	-118.5653491
355	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	30	30	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36790754	-118.565383
356	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	4	2	2	1	1	1	1	1	1	1	1	3,3,3,3,3,1,2,1,2,1,2,2,2,1,2,2,1,2,2,1	Non-protected	Fair		Preserve	Outside of Development/FMZ	34.3656323	-118.5645976
357	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	12	11	1	1	1	1	1	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36795577	-118.5654839
358	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	8	5	3	3	2	2	2	1	1	1	1	1,1,1,1,1,1,1,1,1,1	Protected	Good		Preserve	Outside of Development/FMZ	34.3654289	-118.5648375
359	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	22	10	12	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36802676	-118.5655051
360	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	30	6	3	3	3	3	3	1	1	1	1	1	1,2,1,2,1,2,1,1,2,1	Non-protected	Good		Preserve	Outside of Development/FMZ	34.3653399	-118.5648988
361	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	12	10	2	2	1	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36796044	-118.5653579
362	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	25	4	2	2	2	2	2	1	1	1	1	1		Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36511666	-118.5648148
363	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	34	34	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36792851	-118.565404
364	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	50	6	3	3	3	2	2	2	2	1	1	1		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36495768	-118.5648757
365	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36803508	-118.5652311
366	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	3	6	4	2	2	0	0	0	0	0	0	0		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36492322	-118.5648912
367	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	23	11	12	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36811097	-118.5651871
368	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	5	6	3	3	2	2	2	0	0	0	0	0		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36497462	-118.5647717
369	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	27	27	0	0	0	0	0	0	0	0	0		Protected	Poor	2023: 45x40. Significant canopy dieback. Not suitable for relocation	Direct-Removal	Graded Development	34.36808724	-118.5650231
370	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	5	5	3	2	2	2	2	0	0	0	0	0		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36495449	-118.5647168
371	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	27	27	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36743197	-118.5655349
372	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	3	6	3	3	2	0	0	0	0	0	0	0	1,2,1,2,1	Non-protected	Fair	No tag access issues estimated data	Preserve	Outside of Development/FMZ	34.36489185	-118.5654223
373	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	42	42	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Removal	Graded Development	34.36753553	-118.5654637
374	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	5	7	4	3	3	2	2	0	0	0	0	0	1,1,1,1,1	Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36487021	-118.5654561
375	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	26	26	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.3674701	-118.5654413
376	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	5	6	3	3	3	3	2	0	0	0	0	0	1,2,1,2,1,2,1,1,2,1,1,2,1,2,1,2,1,1,2,1	Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36484024	-118.5654871
377	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36743594	-118.5654057

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
378	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	9	5	4	3	3	3	3	0	0	0	0	1,1,1,1,1,1	Protected	Fair		Preserve	Outside of Development/FMZ	34.36930784	-118.5612778
380	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	9	5	4	3	2	2	2	0	0	0	0	1,1,1,1,1,1	Protected	Fair		Preserve	Outside of Development/FMZ	34.3693056	-118.5612986
381	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	23	13	10	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36753034	-118.5654059
382	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	6	3	3	2	2	2	2	0	0	0	0	3,2,1,1,2,3,3,1,1,2, 1,1,2,3,3	Non-protected	Fair	No tag access issues estimated data	Preserve	Outside of Development/FMZ	34.36483432	-118.5659291
383	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36755205	-118.5653462
384	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	6	3	3	3	3	2	2	0	0	0	0	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1	Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36501942	-118.5660846
385	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36758774	-118.5653305
386	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	6	3	3	3	3	3	2	0	0	0	0	1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Preserve	Outside of Development/FMZ	34.36507232	-118.5664624
387	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36773705	-118.5652145
388	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	5	3	2	2	2	2	2	0	0	0	0	1,2,1,2,1,1,2,1,1,2, 1,2,1,1,2	Non-protected	Dead		Preserve	Outside of Development/FMZ	34.36546874	-118.5672891
389	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36768417	-118.5651413
390	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	6	3	3	3	2	2	2	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36922283	-118.5612053
391	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	23	23	0	0	0	0	0	0	0	0	0		Protected	Fair	Tagged limb on ground	Direct-Removal	Graded Development	34.36758343	-118.5650741
392	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	5	3	2	2	2	2	2	0	0	0	0	5,5,4,4,5,3,3,3,3,3, 1,2,1,2,1,1,2,1,1,2	Non-protected	Good	Tag south side	Preserve	Outside of Development/FMZ	34.36548022	-118.5673645
393	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	40	21	19	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36777148	-118.5650649
394	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	6	3	3	3	3	2	2	0	0	0	0	1,1,1	Protected	Fair		Preserve	Outside of Development/FMZ	34.3691669	-118.5612289
395	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Fair	2023: 35x40. Codominant stems, branch dieback. Not suitable for relocation	Direct-Removal	Graded Development	34.36767278	-118.564926
396	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	6	3	3	2	2	2	2	0	0	0	0	1,1	Protected	Poor		Preserve	Outside of Development/FMZ	34.36919114	-118.5613762
397	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Fair	Fire scar. Canopy 25% dead	Direct-Removal	Graded Development	34.3676703	-118.5648413
398	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	6	3	3	2	2	2	2	0	0	0	0		Protected	Poor		Preserve	Outside of Development/FMZ	34.36909474	-118.5613467
399	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36720618	-118.565918
400	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	7	4	3	3	2	2	2	0	0	0	0	1,1,1,1,1	Protected	Fair		Preserve	Outside of Development/FMZ	34.36912617	-118.5612837
401	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36708144	-118.5654679
402	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	6	3	3	2	2	2	2	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36904439	-118.5613475
403	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	11	10	1	1	1	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36721876	-118.5652989
404	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	7	4	3	2	2	2	2	0	0	0	0		Protected	Poor		Preserve	Outside of Development/FMZ	34.36896168	-118.5613535

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
405	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	25	25	0	0	0	0	0	0	0	0	0		Protected	Fair	2023: 30x35. Very large wound In trunk. Not suitable for relocation	Direct-Removal	Graded Development	34.36704959	-118.5650727
406	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	8	5	3	3	2	2	2	0	0	0	0	1	Protected	Critical		Preserve	Outside of Development/FMZ	34.36904173	-118.561433
407	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	48	48	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair	45 x55. Included bark. Slight branch dieback. Somewhat congested branching structure. Possible relocation.	Direct-Removal	Graded Development	34.36743773	-118.5643707
408	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	5	6	3	3	3	3	2	0	0	0	0	0	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1	Non-protected	Good		Preserve	Outside of Development/FMZ	34.36575072	-118.567112
409	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Fair	Fire scar, otherwise healthy. 2023 comment: 50x60, some branch dieback, codominance, burn damage. Not suitable for relocation	Direct-Removal	Graded Development	34.3670607	-118.5634077
410	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	8	5	3	2	2	2	2	0	0	0	0	1,1	Protected	Poor		Preserve	Outside of Development/FMZ	34.36913524	-118.561424
411	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36708372	-118.5631139
412	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	6	3	3	3	2	2	2	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36911393	-118.561436
413	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	30	15	15	14	0	0	0	0	0	0	0		Non-protected	Dead	Tree dead and fallen over	Direct-Removal	Graded Development	34.36726455	-118.5629164
414	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	10	5	5	4	3	3	3	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36908673	-118.5614549
415	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	22	12	10	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36739197	-118.5631662
416	Upland Hardwood (rare)	*Juglans californica*	Southern California Black Walnut	6	8	5	3	3	3	2	2	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36913365	-118.5614757
417	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Poor		Direct-Removal	Graded Development	34.36740391	-118.5633098
418	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	10	8	2	0	0	0	0	0	0	0	0		Protected	Fair	60x60. Good canopy vigor, very slight dieback. Good structure; large wound with good reaction wood, burn damage at base. Not suitable for relocation	Direct-Removal	Graded Development	34.36781173	-118.5629422
419	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Poor	Fire scar. 60% of canopy dead.	Direct-Removal	Graded Development	34.36745734	-118.5628116
420	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	13	7	6	0	0	0	0	0	0	0	0		Protected	Poor	Fire scar. Minimal regrowth. Leaning on hillside	Direct-Removal	Graded Development	34.36743852	-118.5625164
421	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36736558	-118.562528
422	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Fair	Fire scar, otherwise healthy. One limb down	Direct-Removal	Graded Development	34.36734411	-118.5624384
423	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Non-protected	Dead	Dead. Standing. Not a candidate for relocation. 50x35	Direct-Removal	Graded Development	34.36801357	-118.5621409
424	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	43	43	0	0	0	0	0	0	0	0	0		Non-protected	Dead	Dead	Direct-Removal	Graded Development	34.36769163	-118.5619245
425	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	24	24	0	0	0	0	0	0	0	0	0		Protected	Fair	Recently lost a secondary trunk. 2023: estimated data, no tag, bees	Direct-Removal	Graded Development	34.36749923	-118.5614369

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
426	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	15	12	3	2	1	1	1	0	0	0	0		Protected	Poor	45 x 50. Poor health, fair structure. Some dead branches and possible fire damage at base. Wound at base, good reaction wood. Not suitable for relocation	Direct-Removal	Graded Development	34.36751089	-118.5617378
427	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	32	16	16	2	2	2	2	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36739353	-118.5618194
428	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	56	28	28	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Removal	Graded Development	34.36734603	-118.5618468
429	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	55	55	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Removal	Graded Development	34.36735573	-118.5617535
430	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	39	39	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Removal	Graded Development	34.367309	-118.5617837
431	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	64	64	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair		Preserve	Offsite FMZ (thinning)	34.36732649	-118.5615975
432	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	41	35	6	2	2	2	2	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36718687	-118.5616706
433	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36720026	-118.5617343
434	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	36	23	13	0	0	0	0	0	0	0	0		Protected	Fair	Fire scar. Canopy 25% dead	Direct-Removal	Graded Development	34.36716795	-118.5618185
435	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	29	29	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36834035	-118.5612892
437	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	41	41	0	0	0	0	0	0	0	0	0		Heritage Tree	Good	estimated data no tag bees	Direct-Encroached	Zone C thinning	34.36826517	-118.5612269
438	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	31	31	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36841176	-118.5607561
439	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	45	25	20	0	0	0	0	0	0	0	0		Protected	Good	2023 Estimated data no tag	Preserve	Zone C thinning	34.36808236	-118.5607558
440	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	30	30	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36815285	-118.5600613
442	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	54	29	25	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36808541	-118.5600932
444	Upland Hardwood	*Quercus lobata*	Valley Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36499883	-118.5650166
445	Upland Hardwood	*Quercus lobata*	Valley Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Poor		Direct-Removal	Graded Development	34.36498578	-118.5649467
446	Upland Hardwood	*Quercus lobata*	Valley Oak	1	30	30	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36494217	-118.5651084
447	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	56	56	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Direct-Removal	Graded Development	34.3681314	-118.5599403
448	Upland Hardwood	*Quercus lobata*	Valley Oak	1	42	42	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Encroached	Zone C thinning	34.36492911	-118.5649898
449	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	33	33	0	0	0	0	0	0	0	0	0		Protected	Poor	Resprout. Tag on south side	Direct-Removal	Graded Development	34.36807561	-118.5597924
450	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	32	32	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36805248	-118.5595901
451	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	54	34	20	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36799216	-118.5595024
452	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	42	23	19	0	0	0	0	0	0	0	0		Protected	Fair	Codominant stems at 7 ft. up. Large dying branch with waterspouts. 20x30. Not suitable for relocation	Preserve	Zone C thinning	34.36795539	-118.559555
453	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Zone C thinning	34.36792217	-118.5595277
454	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	13	8	5	4	3	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36794998	-118.5594503
455	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	38	25	13	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36792492	-118.5593635
457	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	44	28	16	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36788375	-118.5593107
458	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	34	24	10	7	5	0	0	0	0	0	0		Protected	Good	Estimated data no tag bees	Preserve	Offsite FMZ (thinning)	34.36783758	-118.5592917
459	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	32	22	10	8	0	0	0	0	0	0	0		Protected	Good		Preserve	Offsite FMZ (thinning)	34.36773566	-118.5594657
460	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36764793	-118.5592333
461	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Fair	Estimated data no tag bees	Direct-Removal	Graded Development	34.36763659	-118.5591617
462	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	30	20	10	9	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36756446	-118.5593892
463	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36749317	-118.5594384
464	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	22	11	11	11	0	0	0	0	0	0	0		Protected	Fair	40x45. Large dead branch fallen off, burn damage, branch dieback. Not suitable for relocation	Direct-Removal	Graded Development	34.36757973	-118.5595549
465	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	21	18	3	0	0	0	0	0	0	0	0		Protected	Good	35x45. Slight branch dieback, slightly congested branching structure. Not suitable for relocation.	Direct-Removal	Graded Development	34.36752878	-118.5598622

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
466	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	20	17	3	3	3	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36746884	-118.5600583
467	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	28	28	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36752479	-118.5601618
468	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36748059	-118.560257
469	Upland Hardwood	*Quercus berberidifolia*	Scrub Oak	6	4	2	2	1	1	1	1	0	0	0	0		Non-protected	Fair		Direct-Removal	Graded Development	34.3691796	-118.5624494
470	Upland Hardwood	*Quercus berberidifolia*	Scrub Oak	8	7	5	2	1	1	1	1	1	1	0	0		Non-protected	Fair	60X40. Branch dieback, two similar size vertical stems. Not suitable for relocation	Direct-Removal	Graded Development	34.3694293	-118.5620756
471	Upland Hardwood	*Quercus berberidifolia*	Scrub Oak	10	16	8	8	3	3	3	3	2	2	2	2		Protected	Fair	Canopy 25% dead	Direct-Removal	Graded Development	34.36728899	-118.5621667
472	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36748323	-118.5603178
473	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	9	9	0	0	0	0	0	0	0	0	0	2,3,3,2,2	Protected	Good	Tag south side	Direct-Encroached	Zone C thinning	34.36753875	-118.5604241
474	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Encroached	Zone C thinning	34.36733492	-118.5602852
475	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Encroached	Zone C thinning	34.36727617	-118.560561
476	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	11	11	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Encroached	Zone C thinning	34.3672346	-118.5610835
477	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	16	9	7	0	0	0	0	0	0	0	0		Protected	Good		Direct-Encroached	Zone C thinning	34.36665059	-118.560556
478	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	7	5	2	2	2	1	1	0	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36673804	-118.5604078
479	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	32	32	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.366743	-118.5603259
480	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0	3	Protected	Good		Direct-Encroached	Zone C thinning	34.36668757	-118.5602004
481	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	12	7	5	5	4	4	3	0	0	0	0		Protected	Fair	40 x 30. Broken/dying branches. Critical health. No structure. Fallen over. Not suitable for relocation.	Direct-Removal	Graded Development	34.36675732	-118.5597631
482	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	42	42	0	0	0	0	0	0	0	0	0		Heritage Tree	Good	Bee hive in trunk	Direct-Removal	Graded Development	34.36712864	-118.5600052
483	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	26	26	0	0	0	0	0	0	0	0	0		Protected	Fair	Fire scar and fallen limbs.	Direct-Removal	Graded Development	34.36718823	-118.5598058
484	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	25	25	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36704075	-118.5597117
485	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	43	43	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Direct-Encroached	Zone C thinning	34.36703681	-118.5596183
486	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	55	35	20	0	0	0	0	0	0	0	0		Protected	Good		Direct-Encroached	Zone C thinning	34.36703638	-118.5595727
487	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	36	20	16	6	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36704923	-118.5595332
488	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	35	18	17	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36709323	-118.5595171
489	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	38	21	17	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36713306	-118.5595672
490	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36717352	-118.5595741
491	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	15	6	3	3	3	3	2	2	2	2	2	2		Non-protected	Good		Direct-Removal	Graded Development	34.36710527	-118.5594556
492	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	32	32	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.3670187	-118.5594264
493	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	34	17	17	16	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36697815	-118.5591711
494	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Good	Estimated data no tag	Preserve	Zone C thinning	34.36627043	-118.5666638
495	Upland Hardwood	*Quercus berberidifolia*	Scrub Oak	14	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36735604	-118.5621602
496	Upland Hardwood	*Quercus berberidifolia*	Scrub Oak	14	4	2	2	2	1	1	1	1	1	1	1		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36734305	-118.5621057
497	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	41	21	20	8	2	1	0	0	0	0	0		Protected	Fair	Fire snag regrowth.	Preserve	Outside of Development/FMZ	34.36633775	-118.5664649
498	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Fair	Fire damage. Adjacent tree laying on trunk.	Preserve	Outside of Development/FMZ	34.36651674	-118.5663269
499	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	28	26	2	1	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36646329	-118.5662567
500	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	10	17	9	8	8	7	7	6	5	4	4	4		Protected	Good		Preserve	Outside of Development/FMZ	34.36629757	-118.5661937
501	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	82	48	34	26	0	0	0	0	0	0	0		Heritage Tree	Fair		Preserve	Outside of Development/FMZ	34.3665119	-118.5660304
502	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Non-protected	Dead	Dead	Preserve	Outside of Development/FMZ	34.36643715	-118.5658647
503	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36666781	-118.5657749

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
504	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	15	14	1	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36667605	-118.5655625
505	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	8	5	3	0	0	0	0	0	0	0	0		Protected	Fair	Fire scar, otherwise healthy	Preserve	Outside of Development/FMZ	34.36655617	-118.5657235
506	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Fair	Poor health and structure. 30x45. Burn scars on branches and base. Dead branches. Wound on trunk with good reaction wood. Major limb failure. Not suitable for relocation.	Preserve	Outside of Development/FMZ	34.36651511	-118.5657973
507	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	37	23	14	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36639944	-118.5656643
508	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	8	8	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36641239	-118.565745
509	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36642058	-118.565796
510	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36639135	-118.5658024
511	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	33	23	10	8	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36638439	-118.5658382
512	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	32	32	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36639796	-118.5658757
514	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	34	20	14	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36636288	-118.5658911
515	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	28	16	12	9	9	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36634455	-118.5659267
516	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	25	16	9	9	4	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36631769	-118.5659103
517	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	41	25	16	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36619927	-118.5658815
519	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36625892	-118.5658046
520	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	28	14	14	10	0	0	0	0	0	0	0		Protected	Poor	Fire regrowth	Preserve	Outside of Development/FMZ	34.36627263	-118.5656472
521	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	24	15	9	0	0	0	0	0	0	0	0		Protected	Poor	Poor health and structure. 45 x 30. Burn scars on branches and base. Dead branches. Wound on trunk with good reaction wood. Major limb failure. Not suitable for relocation.	Preserve	Outside of Development/FMZ	34.36619212	-118.5656671
522	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	7	7	0	0	0	0	0	0	0	0	0		Protected	Poor		Preserve	Outside of Development/FMZ	34.36616633	-118.5655763
523	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	40	37	3	3	0	0	0	0	0	0	0		Heritage Tree	Fair		Preserve	Zone C thinning	34.36613493	-118.5655368
524	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Zone C thinning	34.36612764	-118.5654981
525	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36606565	-118.5655945
526	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	53	53	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Zone C thinning	34.36605083	-118.5654934
527	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	27	17	10	3	0	0	0	0	0	0	0		Protected	Fair	Fire scar, otherwise healthy	Preserve	Zone C thinning	34.366092	-118.5654202
528	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Fair	Poor health and structure. 50 x 45. Possible burn marks on branches and base. Dead branches. Wound on trunk with good reaction wood. Not suitable for relocation.	Preserve	Zone C thinning	34.36623045	-118.5651064
529	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.3660596	-118.5650539
530	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36603053	-118.5649797

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
531	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	2	1	1	1	1	0	0	0	0	0	0		Non-protected	Poor		Preserve	Outside of Development/FMZ	34.36603914	-118.5647067
532	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	35	35	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36592461	-118.5646749
533	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36594491	-118.5648137
534	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Fair	45x45. Trunk grown around rope. Slight branch dieback, branches growing somewhat vertical. Not suitable for relocation	Preserve	Outside of Development/FMZ	34.36594822	-118.5649473
535	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36589013	-118.5650165
536	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	35	35	0	0	0	0	0	0	0	0	0		Protected	Poor	Half of tree is dead	Preserve	Outside of Development/FMZ	34.36589642	-118.5651366
537	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	33	33	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36596125	-118.5651422
538	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	2	1	1	1	1	1	1	0	0	0	0		Non-protected	Good		Preserve	Zone C thinning	34.3659422	-118.5651888
539	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	49	25	24	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Zone C thinning	34.36693562	-118.5722505
541	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	32	32	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Encroached	Zone C thinning	34.3668809	-118.5723426
542	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36688548	-118.5722822
543	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	23	15	8	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36682589	-118.5722463
544	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	18	11	7	2	1	1	0	0	0	0	0		Protected	Poor		Direct-Removal	Graded Development	34.36684223	-118.5721764
545	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36690694	-118.5720337
546	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	17	14	3	2	1	0	0	0	0	0	0		Protected	Fair	Did not tag - Access	Direct-Removal	Graded Development	34.36668051	-118.5720586
547	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	39	39	0	0	0	0	0	0	0	0	0		Heritage Tree	Good	Did not tag - Access	Direct-Removal	Graded Development	34.36660403	-118.5720117
548	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	26	26	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36665936	-118.5719773
549	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	25	22	3	1	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36667846	-118.5718388
550	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	38	38	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Direct-Removal	Graded Development	34.36662576	-118.5718461
551	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	23	23	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36667249	-118.5716923
552	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36660286	-118.5716906
553	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	38	38	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair		Direct-Removal	Graded Development	34.36641579	-118.5715847
555	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	11	6	5	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.3663351	-118.5715493
556	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	32	17	15	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36637411	-118.5713791
558	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36597514	-118.5716031
559	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	28	28	0	0	0	0	0	0	0	0	0		Protected	Poor	Estimated data no tag - Safety access	Direct-Removal	Graded Development	34.3650301	-118.5716313
561	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36524065	-118.5706053
562	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36546446	-118.5703512
563	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Fair	Poor health and structure. 40 x 45. Burn scars on branches and base. Major dead branches. Wounds from failed major branches. Not suitable for relocation.	Preserve	Outside of Development/FMZ	34.36568694	-118.5701275
564	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good	Did not tag. Steep slope	Preserve	Outside of Development/FMZ	34.36605088	-118.5696638
565	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	24	24	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36567886	-118.5690809
566	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36538694	-118.5692814
568	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	13	7	6	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36533034	-118.5691076
569	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	19	13	6	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36507895	-118.5690317

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
570	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36590591	-118.5684062
571	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	19	16	3	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36567859	-118.568312
572	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36568162	-118.5682108
573	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	46	24	22	19	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.3656424	-118.5681615
574	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36562911	-118.5680821
575	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	22	14	8	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36519499	-118.5666909
576	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	33	17	16	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36514276	-118.5666566
577	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	35	35	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36515778	-118.5666084
578	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	34	34	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36519539	-118.5664679
579	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	28	14	14	0	0	0	0	0	0	0	0		Protected	Fair	Burn damage at base, two similar size branches, some dieback branches. 30x35	Preserve	Outside of Development/FMZ	34.36513329	-118.5662523
580	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	44	44	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair		Preserve	Outside of Development/FMZ	34.36516297	-118.5660181
581	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	36	21	15	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36508891	-118.5659507
582	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	43	43	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Outside of Development/FMZ	34.36531176	-118.5655794
583	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.3653525	-118.565524
584	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	36	36	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Outside of Development/FMZ	34.36532182	-118.5654178
585	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	48	48	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Outside of Development/FMZ	34.36536915	-118.5654108
586	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	44	44	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair		Preserve	Outside of Development/FMZ	34.36536377	-118.5652884
587	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	11	6	5	3	2	1	1	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36543079	-118.5651075
588	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	2	1	1	1	1	1	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Preserve	Outside of Development/FMZ	34.36537238	-118.5679077
590	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	22	20	2	1	1	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36526885	-118.5650175
591	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	23	23	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36562868	-118.5649219
592	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36570789	-118.5648125
593	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	28	16	12	0	0	0	0	0	0	0	0		Protected	Fair	Multi-stem codominance at base. One stem has large wound with good reaction wood. Healthy canopy. 30x30.	Preserve	Outside of Development/FMZ	34.36573064	-118.5645943
594	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36573093	-118.564396
595	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36553403	-118.5643826
596	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	34	34	0	0	0	0	0	0	0	0	0		Protected	Poor	30 x 45. Dead branches. Trunk failure/ major lean. Poor structure and health. Exposed roots. Not suitable for relocation.	Direct-Removal	Graded Development	34.36545726	-118.5644356
597	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.363625	-118.5708529
598	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.3637785	-118.5708006

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
599	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	27	27	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36387512	-118.5709898
600	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	41	22	19	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36394303	-118.5710138
601	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	34	34	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36392802	-118.5708279
602	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	30	30	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36441922	-118.5707869
603	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36425244	-118.5704293
606	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	28	19	9	2	0	0	0	0	0	0	0		Non-protected	Dead		Direct-Removal	Graded Development	34.3641556	-118.5703771
607	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	34	34	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36421743	-118.5703772
610	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36425111	-118.5702403
611	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	30	18	12	4	3	3	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36427288	-118.5701098
613	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	24	12	12	12	11	7	4	0	0	0	0		Protected	Critical		Direct-Debris Flow	Debris Basin	34.36413654	-118.5701788
614	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36398735	-118.5700981
615	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	13	7	6	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36408767	-118.5700162
616	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	28	16	12	12	10	4	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36406227	-118.5696873
617	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	23	12	11	10	8	3	3	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36388518	-118.5696449
618	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	16	9	7	7	4	0	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36368569	-118.5695883
619	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	51	38	13	11	8	7	6	0	0	0	0		Heritage Tree	Fair		Direct-Removal	Graded Development	34.36413247	-118.5692971
620	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36483722	-118.5696629
621	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36455396	-118.5694844
622	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36469759	-118.5690817
623	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36456536	-118.5693611
624	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.36469607	-118.5685232
625	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	38	38	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Outside of Development/FMZ	34.36453141	-118.5684484
626	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.364461	-118.5684047
627	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36453623	-118.5682891
628	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	5	5	0	0	0	0	0	0	0	0	0		Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36424756	-118.5680461
629	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36520867	-118.5678999
630	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	6	6	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36508698	-118.5679493
631	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	40	40	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Outside of Development/FMZ	34.36505866	-118.5677121
632	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36495784	-118.5677493
633	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	30	30	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36492995	-118.5676846
634	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	40	40	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Outside of Development/FMZ	34.36503727	-118.5674715
635	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	11	11	0	0	0	0	0	0	0	0	0		Protected	Good	Not sure if correct tree; limited visibility and access due to brush	Preserve	Outside of Development/FMZ	34.36505283	-118.5672658
636	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	48	48	0	0	0	0	0	0	0	0	0		Heritage Tree	Poor		Preserve	Outside of Development/FMZ	34.36493991	-118.5675081
637	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36492186	-118.5674341
638	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	11	11	0	0	0	0	0	0	0	0	0		Protected	Fair	Estimated data no tag and no access	Preserve	Outside of Development/FMZ	34.36467389	-118.5676434
639	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	36	36	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Outside of Development/FMZ	34.36476129	-118.5675485

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
640	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	36	36	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Outside of Development/FMZ	34.364614	-118.5674336
641	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	25	25	0	0	0	0	0	0	0	0	0		Protected	Good	No tag access issues	Preserve	Outside of Development/FMZ	34.36459607	-118.5673976
642	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36483014	-118.5673962
643	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	4	4	0	0	0	0	0	0	0	0	0		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36476917	-118.5674024
644	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	12	6	6	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36472698	-118.5672609
645	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36476597	-118.5672229
646	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	5	5	0	0	0	0	0	0	0	0	0		Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36486612	-118.5671538
647	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Non-protected	Dead	Dead	Preserve	Outside of Development/FMZ	34.36458156	-118.5671486
648	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	46	46	0	0	0	0	0	0	0	0	0		Heritage Tree	Good	Steep, cannot access. No tag.	Preserve	Outside of Development/FMZ	34.36440314	-118.5671362
649	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	37	19	18	7	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36441649	-118.5668522
650	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	37	37	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair		Preserve	Outside of Development/FMZ	34.36447813	-118.5668416
651	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Poor		Preserve	Outside of Development/FMZ	34.36449666	-118.5667822
652	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	30	30	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36453235	-118.5666942
654	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	23	23	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.36458797	-118.566605
655	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	8	8	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36458989	-118.5667431
656	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36461987	-118.5667344
657	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	28	12	16	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36465381	-118.5667006
658	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36462995	-118.5668602
659	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	27	14	13	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36468656	-118.5668456
660	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	10	5	5	0	0	0	0	0	0	0	0		Protected	Poor		Preserve	Outside of Development/FMZ	34.36475115	-118.5668463
661	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Fair	Multistem at base. Good crown health. 30x30. Unsuitable for relocation due to multi stem	Preserve	Outside of Development/FMZ	34.36487406	-118.5667276
662	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	25	25	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.3647657	-118.5665873
664	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	34	34	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36469699	-118.5665542
665	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36464887	-118.5664386
666	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	38	38	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair		Preserve	Outside of Development/FMZ	34.36437695	-118.5667371
667	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Good	Poor candidate - hard lean	Preserve	Outside of Development/FMZ	34.3644275	-118.5665075
668	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	23	12	11	10	0	0	0	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.36451437	-118.5664354
669	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36448327	-118.566399
670	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	38	21	17	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36449223	-118.5663303

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
671	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	2	1	1	1	1	1	0	0	0	0	0		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36442185	-118.5662726
672	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	31	16	15	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36453617	-118.5661243
673	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.36445887	-118.5658901
674	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	27	27	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36428531	-118.5662644
675	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.36427446	-118.5661544
676	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Poor		Preserve	Outside of Development/FMZ	34.3642776	-118.5661108
677	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	2	1	1	1	1	1	1	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.36436324	-118.5660587
678	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	34	34	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36411205	-118.5660876
679	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	25	25	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.36416973	-118.566017
680	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	21	11	10	10	8	6	5	0	0	0	0		Non-protected	Dead		Direct-Debris Flow	Debris Basin	34.36428102	-118.5659213
681	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	14	8	6	3	3	3	1	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.36430412	-118.5658314
682	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36424803	-118.5655287
683	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	14	8	6	5	5	4	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.364269	-118.5654864
684	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36432267	-118.565512
685	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	29	29	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36423836	-118.5656818
686	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	14	10	4	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36438002	-118.5655421
687	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	8	8	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36439521	-118.5654638
688	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	36	36	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair		Preserve	Outside of Development/FMZ	34.36447591	-118.5654789
689	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	33	33	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36446935	-118.5654386
690	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	30	30	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36450175	-118.5653955
691	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36448238	-118.5653295
692	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	25	25	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36443861	-118.5653583
693	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36440512	-118.5653943
694	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36441768	-118.5652872
695	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36435506	-118.5652483
696	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36421167	-118.5652444
697	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	16	10	6	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36426646	-118.5651587
698	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36430564	-118.5650668
699	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Gone		Preserve	Outside of Development/FMZ	34.36441247	-118.5651441
700	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36440514	-118.5650697
701	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36407194	-118.5651083
702	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Poor		Preserve	Outside of Development/FMZ	34.36411283	-118.5650689

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
703	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	28	28	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36410685	-118.565032
704	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	30	30	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36404946	-118.5650169
705	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36404946	-118.5650169
706	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	26	26	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36399489	-118.5649218
707	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	25	25	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36390469	-118.5650456
708	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36390206	-118.5646606
709	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.3636359	-118.5649126
710	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	23	23	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36361197	-118.5647315
711	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36372214	-118.5646188
712	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36369705	-118.5644912
713	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	8	4	4	3	3	3	3	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36361988	-118.5645334
714	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	23	23	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.36351536	-118.5643751
715	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.3631603	-118.5641969
716	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	30	30	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36303732	-118.5646804
717	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36255353	-118.5642384
718	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36462796	-118.5651931
719	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36467142	-118.5651431
720	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	31	31	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36470324	-118.5650439
721	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	28	28	0	0	0	0	0	0	0	0	0		Protected	Critical		Preserve	Outside of Development/FMZ	34.36458815	-118.5648347
723	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36450964	-118.5648773
723	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36450809	-118.5649551
724	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	27	27	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.3644353	-118.5649287
725	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.36437015	-118.5648824
726	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	28	28	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.3642497	-118.5648115
727	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	33	33	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36441441	-118.564714
728	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	13	7	6	3	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.3644604	-118.5645386
729	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	33	33	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36437194	-118.5644939
730	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36429496	-118.5644906
731	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36434422	-118.5646566
732	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	28	28	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36433761	-118.5643491
733	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36410798	-118.5642939

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
734	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36413817	-118.5639792
735	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	24	24	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36397715	-118.5637438
736	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Fair	Tag south side	Direct-Debris Flow	Debris Basin	34.36458228	-118.5645426
737	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Poor	Tag south side	Direct-Debris Flow	Debris Basin	34.36458953	-118.5645922
738	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	15	8	7	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36461774	-118.5644153
739	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36466149	-118.5644261
740	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good	estimated data no tag (Safety)	Preserve	Outside of Development/FMZ	34.36462495	-118.5640416
741	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36481854	-118.5644333
742	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	30	30	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36480336	-118.5645647
743	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36492412	-118.5646281
744	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	5	5	0	0	0	0	0	0	0	0	0		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36493155	-118.5644384
745	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	24	24	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36492159	-118.5643115
746	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36486836	-118.5641837
747	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	13	13	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36498797	-118.564192
748	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Good	no tag access issue	Preserve	Outside of Development/FMZ	34.36504528	-118.5642242
749	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	10	8	4	4	2	2	2	2	1	1	1	1		Protected	Good		Preserve	Outside of Development/FMZ	34.36520863	-118.564433
750	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36519067	-118.5641097
751	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	18	18	0	0	0	0	0	0	0	0	0		Protected	Good	Steep. Did not tag	Preserve	Outside of Development/FMZ	34.36516752	-118.5640301
752	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	11	6	5	5	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36525659	-118.564014
753	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	11	6	5	4	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36529714	-118.5640125
755	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	40	20	20	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36532394	-118.5639757
756	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	29	15	14	5	4	2	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.3654344	-118.5635399
757	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	19	17	2	2	1	0	0	0	0	0	0		Protected	Fair	Fire scars on branches and base. Major branch failure. Dead branches. 40 x 50. Not suitable for relocation.	Preserve	Outside of Development/FMZ	34.36563769	-118.5635753
758	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	43	23	20	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36565694	-118.563516
759	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	28	28	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36555072	-118.5632497
760	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	27	27	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36559322	-118.5632759
761	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	43	43	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Outside of Development/FMZ	34.36565251	-118.5632685
762	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	41	41	0	0	0	0	0	0	0	0	0		Heritage Tree	Fair		Direct-Debris Flow	Debris Basin	34.36572328	-118.5632874
764	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	27	15	12	0	0	0	0	0	0	0	0		Protected	Good		Direct-Debris Flow	Debris Basin	34.36582965	-118.5630953
765	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	51	30	21	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36588167	-118.5631029
766	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	28	16	12	7	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36587682	-118.5632986

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
767	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	11	11	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36585541	-118.5633671
768	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	29	15	14	12	0	0	0	0	0	0	0		Protected	Fair		Direct-Debris Flow	Debris Basin	34.36594566	-118.5636393
769	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	22	15	7	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36616487	-118.5634473
771	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.3661839	-118.5633673
772	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Fair	Fire scar30x30. several stem co-dominance, large wound at base, crown dieback. Not suitable for relocation.	Preserve	Zone C thinning	34.36640856	-118.5634601
773	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	27	27	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36190375	-118.5701065
774	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36277735	-118.5697457
775	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	19	19	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Zone C thinning	34.36292833	-118.5696314
777	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	22	20	2	1	0	0	0	0	0	0	0		Protected	Fair		Preserve	Offsite FMZ (thinning)	34.36255521	-118.5683361
778	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	45	45	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Offsite FMZ (thinning)	34.36384595	-118.5682264
779	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	22	19	3	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Offsite FMZ (thinning)	34.36341906	-118.568055
780	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Offsite FMZ (thinning)	34.36342245	-118.5678867
781	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Offsite FMZ (thinning)	34.36332163	-118.5679947
782	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Offsite FMZ (thinning)	34.36287917	-118.5674091
783	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	36	36	0	0	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Offsite FMZ (thinning)	34.36270876	-118.567221
784	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36273654	-118.5671499
785	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36275793	-118.5670202
786	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	23	23	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Offsite FMZ (thinning)	34.36269767	-118.5670939
787	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Offsite FMZ (thinning)	34.36265843	-118.5670401
788	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	20	20	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36261969	-118.5671852
789	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	34	34	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Offsite FMZ (thinning)	34.36265366	-118.5668277
790	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	25	25	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Offsite FMZ (thinning)	34.36260792	-118.5664338
792	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	58	30	28	28	0	0	0	0	0	0	0		Heritage Tree	Good		Preserve	Offsite FMZ (thinning)	34.36262738	-118.5663577
793	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	6	3	3	3	3	2	2	0	0	0	0		Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36250065	-118.5663448
794	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	6	3	3	2	2	2	2	0	0	0	0		Non-protected	Fair		Preserve	Outside of Development/FMZ	34.36220833	-118.5663741
795	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	6	3	3	2	2	2	2	0	0	0	0		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36226375	-118.5661047
796	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	15	15	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36221394	-118.566087
797	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	23	23	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36194801	-118.5660727
798	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36043791	-118.5669248
799	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	14	14	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36027591	-118.5654513
800	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	29	29	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36025217	-118.5653437
801	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	28	28	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36040186	-118.565168
802	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36037267	-118.5650611
803	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36132883	-118.5636839
804	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	5	5	0	0	0	0	0	0	0	0	0		Non-protected	Good		Preserve	Outside of Development/FMZ	34.36700354	-118.5725156
805	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36701929	-118.5724649
806	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36702747	-118.5724237

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
807	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36703928	-118.5723162
808	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36688029	-118.5723941
809	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	31	31	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.36676097	-118.5723583
810	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Non-protected	Dead	Dead	Preserve	Outside of Development/FMZ	34.3666348	-118.5607259
811	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36662215	-118.5600957
812	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	16	16	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36663617	-118.5598934
813	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	28	28	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.37096759	-118.5621835
814	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	19	19	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.37042857	-118.5636936
815	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.37045358	-118.5637121
816	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	24	13	11	10	8	8	0	0	0	0	0		Protected	Fair	No tag, estimated data	Preserve	Outside of Development/FMZ	34.37052008	-118.5636437
817	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	8	8	0	0	0	0	0	0	0	0	0		Non-protected	Dead	Estimated data	Preserve	Outside of Development/FMZ	34.37023954	-118.5637954
818	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	11	11	0	0	0	0	0	0	0	0	0		Non-protected	Dead		Preserve	Outside of Development/FMZ	34.37051387	-118.5640785
819	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	6	6	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.37048819	-118.5640666
820	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.37051245	-118.5641057
821	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	21	21	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.37054434	-118.5641681
822	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	34	18	16	1	0	0	0	0	0	0	0		Protected	Fair	Bees	Preserve	Outside of Development/FMZ	34.36921376	-118.5612689
823	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	5	4	1	1	0	0	0	0	0	0	0		Non-protected	Fair		Preserve	Outside of Development/FMZ	34.37037965	-118.5643308
824	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	17	17	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.37032776	-118.5643157
825	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	32	25	7	0	0	0	0	0	0	0	0		Protected	Poor		Preserve	Outside of Development/FMZ	34.37029826	-118.5643361
826	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	9	27	24	3	3	3	3	2	2	2	2	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.37031745	-118.5643549
827	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	10	4	2	2	2	2	2	1	1	1	1	1		Non-protected	Poor		Preserve	Outside of Development/FMZ	34.37030871	-118.5643196
828	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	8	6	2	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.37029201	-118.5642371
829	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	30	15	15	4	3	3	0	0	0	0	0	1	Protected	Fair		Preserve	Outside of Development/FMZ	34.37025367	-118.5642763
830	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	4	35	26	9	8	7	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.37024899	-118.5642724
831	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	35	20	15	0	0	0	0	0	0	0	0	1	Protected	Poor		Preserve	Offsite FMZ (thinning)	34.37023964	-118.5643304
832	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	12	4	2	2	2	1	1	1	1	1	1	1	2,1,2,1,2,1,2,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36568384	-118.5685228
833	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	14	5	3	2	2	1	1	1	1	1	1	1	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36568911	-118.5685674
834	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	14	2	1	1	1	1	1	1	1	1	1	1	2,1,2,1,2,1,2,1,2,1,2,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36576112	-118.569009
835	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	20	8	4	4	3	3	3	3	2	2	2	2	3,1,2,2,1,2,1,2,1,1,1,3,2,1,3,2,1,3,2,3,1,2,1,2,1,1,3,2,1,3,2,3,1,2,1,2,1,1,2,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36567408	-118.5693671

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
836	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	18	6	3	3	3	2	2	2	2	2	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.36355889	-118.5647226
837	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	18	4	2	2	1	1	1	1	1	1	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.36342936	-118.5645555
838	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	18	5	3	2	2	1	1	1	1	1	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.36342911	-118.564475
839	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	12	4	2	2	2	1	1	1	1	1	1	1		Non-protected	Dead		Direct-Removal	Graded Development	34.36353797	-118.5640947
840	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	14	4	2	2	2	2	2	1	1	1	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.36092879	-118.5669466
841	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	2	2	1	1	0	0	0	0	0	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36071204	-118.5669552
842	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	10	3	2	1	1	1	1	1	1	1	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.36289318	-118.5698927
843	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	3	2	1	1	1	0	0	0	0	0	0	0		Non-protected	Dead		Direct-Removal	Graded Development	34.36217954	-118.5698085
844	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	6	3	3	2	2	1	1	0	0	0	0		Non-protected	Dead		Direct-Removal	Graded Development	34.3703067	-118.5643947
845	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	34	30	4	3	0	0	0	0	0	0	0		Non-protected	Dead		Direct-Removal	Graded Development	34.37045368	-118.5644619
846	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	13	9	4	2	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36470017	-118.5650889
847	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	35	35	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36475379	-118.5649835
848	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	33	33	0	0	0	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36424594	-118.5646149
849	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	2	1	1	1	1	1	0	0	0	0	0		Non-protected	Fair		Direct-Removal	Graded Development	34.36415369	-118.5651966
850	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	2	1	1	1	1	1	0	0	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36320239	-118.5650735
851	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	2	1	1	1	1	1	0	0	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36434021	-118.5653794
852	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	2	1	1	1	1	1	1	0	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36147037	-118.5697212
853	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	10	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Good		Direct-Removal	Graded Development	34.361446	-118.5696847
854	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	9	3	2	1	1	1	1	1	1	1	1	0		Non-protected	Good		Direct-Removal	Graded Development	34.36117109	-118.5697994
855	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	4	27	25	2	1	1	0	0	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.36003075	-118.5697426
856	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	2	1	1	1	1	1	1	0	0	0	0	1,1,1,1,1,1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.36548094	-118.5686361
857	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	12	3	2	1	1	1	1	1	1	1	1	1	1,1	Non-protected	Poor		Direct-Removal	Graded Development	34.37049061	-118.563133
858	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	16	4	2	2	2	1	1	1	1	1	1	1	1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.3703004	-118.5629991
859	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	16	6	3	3	2	2	1	1	1	1	1	1	1,1,1,1,1	Non-protected	Good		Direct-Removal	Graded Development	34.37027371	-118.5629941
860	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	6	4	2	2	0	0	0	0	0	0	0		Non-protected	Fair		Direct-Removal	Graded Development	34.36414173	-118.5704596
861	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	5	2	1	1	1	1	1	0	0	0	0	0	1,1,1,1,1,1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.37024381	-118.5629798
862	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	13	2	1	1	1	1	1	1	1	1	1	1	1,1,1,1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.37020473	-118.5630065
863	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	12	3	2	1	1	1	1	1	1	1	1	1	1,1,1,1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.37014769	-118.5630802
864	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	2	1	1	1	1	1	1	0	0	0	0	1,1,1,1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.37024906	-118.5632771
865	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	14	2	1	1	1	1	1	1	1	1	1	1	1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.37048013	-118.5633056

Tree No. (Dudek 2023)	Tree Classification	Botanical Name	Common Name	No. of Stems	Sum of Two Largest Stems (in.)	Individual Stem Diameters (In.)										Additional Stems (in.)	Protection Status	Overall Health	Additional Comments	Disposition	Disposition Type	Latitude	Longitude
						D1	D2	D3	D4	D5	D6	D7	D8	D9	D10								
866	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	5	3	2	1	1	1	1	0	0	0	0	0	1,1,1,1,1	Non-protected	Fair		Direct-Removal	Graded Development	34.37047273	-118.5633165
867	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	6	3	2	1	1	1	1	1	0	0	0	0		Non-protected	Fair		Direct-Removal	Graded Development	34.37032206	-118.563697
868	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	11	2	1	1	1	1	1	1	1	1	1	1		Non-protected	Fair		Direct-Removal	Graded Development	34.37032213	-118.5636833
869	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	12	4	2	2	1	1	1	1	1	1	1	1		Non-protected	Fair		Direct-Removal	Graded Development	34.37025091	-118.5637994
870	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	5	4	2	2	1	1	1	0	0	0	0	0		Non-protected	Fair		Direct-Removal	Graded Development	34.3693998	-118.5611216
871	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	10	5	3	2	2	1	1	1	1	1	1	1		Non-protected	Poor		Direct-Removal	Graded Development	34.36933442	-118.5611885
872	Upland Hardwood	*Sambucus nigra ssp. caerulea*	Blue Elderberry	5	2	1	1	1	1	1	0	0	0	0	0		Non-protected	Poor		Direct-Removal	Graded Development	34.36932762	-118.5611234
873	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	15	12	3	1	1	1	0	0	0	0	0		Protected	Fair		Direct-Removal	Graded Development	34.36417846	-118.5704861
874	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	5	3	2	1	1	1	1	0	0	0	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.364103	-118.5704782
875	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	9	16	14	2	2	1	1	1	1	1	1	0		Protected	Good		Direct-Removal	Graded Development	34.37101233	-118.5655463
876	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	9	7	2	2	1	1	1	0	0	0	0		Protected	Good		Direct-Removal	Graded Development	34.37111793	-118.5653284
877	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	9	8	6	2	2	2	2	1	1	1	1	0		Protected	Good	Scrub oak	Direct-Removal	Graded Development	34.36899354	-118.5673722
878	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	8	4	2	2	1	1	1	1	1	1	0	0		Non-protected	Good		Direct-Removal	Graded Development	34.36797643	-118.5598176
879	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	11	3	2	1	1	1	1	1	1	1	1	1		Non-protected	Fair		Direct-Removal	Graded Development	34.36798164	-118.5597676
880	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	3	2	1	1	1	1	1	0	0	0	0	2	Non-protected	Fair		Direct-Removal	Graded Development	34.36791731	-118.5597001
881	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	11	16	14	2	2	1	1	1	1	1	1	1	1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36708586	-118.561011
882	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0	1,1,1,1,1	Protected	Good		Direct-Removal	Graded Development	34.36710281	-118.560818
883	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	2	26	13	13	0	0	0	0	0	0	0	0		Protected	Poor	Height - 45 ft., - Crown width - 40 ft. Stag headed, branch wounding, and damage. Not suitable for relocation	Direct-Removal	Graded Development	34.37071283	-118.5631385
900	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	5	5	0	0	0	0	0	0	0	0	0		Non-protected	Dead	Tree is dead and decomposing	Direct-Debris Flow	Debris Basin	34.37051545	-118.5629167
901	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	6	6	0	0	0	0	0	0	0	0	0		Protected	Poor	Height - 35 ft., crown - 30 ft. Health and structure poor	Direct-Debris Flow	Debris Basin	34.37058833	-118.5628585
903	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	3	9	9	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.37094764	-118.5616351
904	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	12	12	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.37091162	-118.5613954
905	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Protected	Fair		Preserve	Outside of Development/FMZ	34.37088253	-118.5613337
906	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	22	22	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36973414	-118.5640407
907	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	10	10	0	0	0	0	0	0	0	0	0		Protected	Poor	Height - 50 ft., crown width - 30 ft. Branch dieback, lean, and congested branching structure. Not suitable for relocation	Preserve	Outside of Development/FMZ	34.36979571	-118.5638735
908	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	1	9	9	0	0	0	0	0	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36899199	-118.5623251
909	Upland Hardwood	*Quercus agrifolia*	Coast Live Oak	6	8	4	4	3	2	1	1	0	0	0	0		Protected	Good		Preserve	Outside of Development/FMZ	34.36897369	-118.5624865

Appendix C

SEA Protected Tree List

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APPENDIX A: SEA PROTECTED TREE LIST

** indicates species is listed as a rare plant by California Native Plant Society*

ALTADENA FOOTHILLS & ARROYOS SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Abies concolor	white fir	5”	7”	30”	47”
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Acer negundo	boxelder	6”	8”	36”	56”
Aesculus californica	California buckeye	6”	8”	36”	56”
Alnus rhombifolia	white alder	3”	4”	18”	28”
Arbutus menziesii	Pacific madrone	6”	8”	36”	56”
Arctostaphylos glandulosa (all subspecies)	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Calocedrus decurrens	incense cedar	5”	7”	30”	47”
Ceanothus spinosus	greenbark ceanothus	6”	8”	36”	56”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Fraxinus dipetala	California ash	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Malosma laurina	laurel sumac	6”	8”	36”	56”
Pinus coulteri	Coulter pine	5”	7”	30”	47”
Pinus jeffreyi	Jeffrey pine	5”	7”	30”	47”
Pinus lambertiana	sugar pine	5”	7”	30”	47”
Pinus ponderosa	ponderosa pine	5”	7”	30”	47”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus trichocarpa	black cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Pseudotsuga macrocarpa	bigcone spruce	5”	7”	30”	47”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Quercus chrysolepis	canyon oak	6”	8”	36”	56”
Quercus durata var. *gabrielensis**	San Gabriel Mtns. leather oak	3”	4”	18”	28”
*Quercus engelmannii**	Engelmann oak	3”	4”	18”	28”
Quercus wislizeni	interior live oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”
Salix laevigata	red willow	3”	4”	18”	28”
Salix lasiandra	yellow willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”

ANTELOPE VALLEY SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Abies concolor	white fir	5”	7”	30”	47”
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Acer negundo	boxelder	6”	8”	36”	56”
Adenostoma sparsifolium	red shank	6”	8”	36”	56”
Aesculus californica	California buckeye	6”	8”	36”	56”
Alnus rhombifolia	white alder	3”	4”	18”	28”
Arctostaphylos glandulosa (all subspecies)	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Calocedrus decurrens	incense cedar	5”	7”	30”	47”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Cercocarpus ledifolius	curl leaf/desert mountain mahogany	6”	8”	36”	56”
Fraxinus dipetala	California ash	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Juniperus californica	Califonia juniper	All specimens	NA	35’ canopy spread	NA
Juniperus grandis	Sierra juniper	5”	7”	30”	47”
Juniperus osteosperma	Utah juniper	5”	7”	30”	47”
Malosma laurina	laurel sumac	6”	8”	36”	56”
Pinus coulteri	Coulter pine	5”	7”	30”	47”
Pinus flexilis	limber pine	5”	7”	30”	47”
Pinus jeffreyi	Jeffrey pine	5”	7”	30”	47”
Pinus lambertiana	sugar pine	5”	7”	30”	47”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Pinus monophylla	pinyon pine	5”	7”	30”	47”
Pinus ponderosa	ponderosa pine	5”	7”	30”	47”
Pinus sabiniana	foothill pine	5”	7”	30”	47”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Populus trichocarpa	black cottonwood	3”	4”	18”	28”
Prosopis glandulosa	honey mesquite	6”	8”	36”	56”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Pseudotsuga macrocarpa	bigcone spruce	5”	7”	30”	47”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Quercus chrysolepis	canyon oak	6”	8”	36”	56”
Quercus cornelius-mulleri	Muller’s oak	6”	8”	36”	56”
Quercus john-tuckeri	Tucker oak	6”	8”	36”	56”
Quercus kelloggii	California black oak	6”	8”	36”	56”
Quercus palmeri	Palmer’s oak	6”	8”	36”	56”
Quercus wislizeni var. *frutescens*	interior live oak	6”	8”	36”	56”
Quercus wislizeni var. *wislizeni*	interior live oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”
Salix laevigata	red willow	3”	4”	18”	28”
Salix lasiandra	yellow willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”
Yucca brevifolia	Joshua tree	All specimens	NA	20’ tall	NA

CRUZAN MESA VERNAL POOLS SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Arctostaphylos glandulosa (all subspecies)	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Heteromeles arbutifolia	Toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Juniperus californica	Califonia juniper	All specimens	NA	35’ canopy spread	NA
Malosma laurina	laurel sumac	6”	8”	36”	56”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Quercus john-tuckeri	Tucker oak	6”	8”	36”	56”
Quercus lobata	Valley oak	6”	8”	36”	56”
Quercus wislizeni var. *wislizeni*	interior live oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”

EAST SAN GABRIEL VALLEY SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Acer negundo	boxelder	6”	8”	36”	56”
Alnus rhombifolia	white alder	3”	4”	18”	28”
Arctostaphylos glandulosa	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Ceanothus spinosus	greenbark ceanothus	6”	8”	36”	56”
Ceanothus crassifolius	hoaryleaf ceanothus	6”	8”	36”	56”
Ceanothus megacarpus	big-pod ceanothus	6”	8”	36”	56”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Fraxinus dipetala	California ash	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	Toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Malosma laurina	laurel sumac	6”	8”	36”	56”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Populus trichocarpa	black cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Quercus durata var. *gabrielensis**	San Gabriel Mtns. leather oak	3”	4”	18”	28”
*Quercus engelmannii**	Engelmann oak	3”	4”	18”	28”
Quercus lobata	Valley oak	6”	8”	36”	56”
Quercus wislizeni var. *wislizeni*	interior live oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”
Salix laevigata	red willow	3”	4”	18”	28”
Salix lasiandra	yellow willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”

HARBOR LAKE REGIONAL PARK SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	Toyon	6”	8”	36”	56”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”
Salix laevigata	red willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”

JOSHUA TREE WOODLANDS SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Aesculus californica	California buckeye	6”	8”	36”	56”
Cercocarpus ledifolius	curl-leaf mountain-mahogany	6”	8”	36”	56”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
*Hesperocyparis nevadensis**	Piute cypress	3”	4”	18”	28”
Juniperus californica	Califonia juniper	All specimens	NA	35’ canopy spread	NA
Pinus sabiniana	foothill pine	5”	7”	30”	47”
Prosopis glandulosa	honey mesquite	6”	8”	36”	56”
Yucca brevifolia	Joshua tree	All specimens	NA	20’ tall	NA

PALOS VERDE PENINSULA AND COASTLINE SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	Toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Malosma laurina	laurel sumac	6”	8”	36”	56”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus trichocarpa	black cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Prunus ilicifolia ssp. *lyonii*	Catalina Island cherry	3”	4”	18”	28”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Salix laevigata	red willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”

PUENTE HILLS SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Acer negundo	boxelder	6”	8”	36”	56”
Aesculus californica	California buckeye	6”	8”	36”	56”
Alnus rhombifolia	white alder	3”	4”	18”	28”
Arctostaphylos glandulosa	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Ceanothus megacarpus	big-pod ceanothus	6”	8”	36”	56”
Ceanothus spinosus	greenbark ceanothus	6”	8”	36”	56”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Fraxinus dipetala	California ash	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	Toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Malosma laurina	laurel sumac	6”	8”	36”	56”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Populus trichocarpa	black cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
*Quercus engelmannii**	Engelmann oak	3”	4”	18”	28”
Quercus lobata	Valley oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”
Salix laevigata	red willow	3”	4”	18”	28”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”

Rio Hondo College and Wildlife Sanctuary SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	Toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Malosma laurina	laurel sumac	6”	8”	36”	56”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”

San Andreas SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Abies concolor	white fir	5”	7”	30”	47”
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Acer negundo	boxelder	6”	8”	36”	56”
Aesculus californica	California buckeye	6”	8”	36”	56”
Alnus rhombifolia	white alder	3”	4”	18”	28”
Arctostaphylos glandulosa	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Calocedrus decurrens	incense cedar	5”	7”	30”	47”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Cercocarpus ledifolius	curl leaf/desert mountain mahogany	6”	8”	36”	56”
Fraxinus dipetala	California ash	3”	4”	18”	28”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
*Hesperocyparis nevadensis**	Piute cypress	3”	4”	18”	28”
Heteromeles arbutifolia	Toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Juniperus californica	Califonia juniper	All specimens	NA	35’ canopy spread	NA
Malosma laurina	laurel sumac	6”	8”	36”	56”
Pinus coulteri	Coulter pine	5”	7”	30”	47”
Pinus jeffreyi	Jeffrey pine	5”	7”	30”	47”
Pinus lambertiana	sugar pine	5”	7”	30”	47”
Pinus monophylla	pinyon pine	5”	7”	30”	47”
Pinus ponderosa	ponderosa pine	5”	7”	30”	47”
Pinus sabiniana	foothill pine	5”	7”	30”	47”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Populus trichocarpa	black cottonwood	3”	4”	18”	28”
Prosopis glandulosa	honey mesquite	6”	8”	36”	56”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Pseudotsuga macrocarpa	bigcone spruce	5”	7”	30”	47”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Quercus chrysolepis	canyon oak	6”	8”	36”	56”
Quercus douglasii	blue oak	6”	8”	36”	56”
Quercus garryana	Oregon oak	6”	8”	36”	56”
Quercus john-tuckeri	Tucker oak	6”	8”	36”	56”
Quercus kelloggii	California black oak	6”	8”	36”	56”
Quercus lobata	Valley oak	6”	8”	36”	56”
Quercus wislizeni var. *wislizeni*	interior live oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”
Salix laevigata	red willow	3”	4”	18”	28”
Salix lasiandra	yellow willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Umbellularia californica	California bay	6”	8”	36”	56”
Yucca brevifolia	Joshua tree	All specimens	NA	20’ tall	NA

SAN DIMAS CANYON & SAN ANTONIO WASH SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Abies concolor	white fir	5”	7”	30”	47”
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Acer negundo	boxelder	6”	8”	36”	56”
Adenostoma sparsifolium	red shank	6”	8”	36”	56”
Aesculus californica	California buckeye	6”	8”	36”	56”
Alnus rhombifolia	white alder	3”	4”	18”	28”
Arctostaphylos glandulosa	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Calocedrus decurrens	incense cedar	5”	7”	30”	47”
Ceanothus megacarpus	big-pod ceanothus	6”	8”	36”	56”
Ceanothus spinosus	greenbark ceanothus	6”	8”	36”	56”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Cercocarpus ledifolius	curl leaf/desert mountain mahogany	6”	8”	36”	56”
Fraxinus dipetala	California ash	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	Toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Juniperus grandis	Sierra juniper	5”	7”	30”	47”
Malosma laurina	laurel sumac	6”	8”	36”	56”
Pinus coulteri	Coulter pine	5”	7”	30”	47”
Pinus jeffreyi	Jeffrey pine	5”	7”	30”	47”
Pinus lambertiana	sugar pine	5”	7”	30”	47”
Pinus ponderosa	ponderosa pine	5”	7”	30”	47”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Populus trichocarpa	black cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Pseudotsuga macrocarpa	bigcone spruce	5”	7”	30”	47”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Quercus chrysolepis	canyon oak	6”	8”	36”	56”
Quercus douglasii	blue oak	6”	8”	36”	56”
Quercus durata var. *gabrielensis**	San Gabriel Mtns. leather oak	3”	4”	18”	28”
*Quercus engelmannii**	Engelmann oak	3”	4”	18”	28”
Quercus lobata	Valley oak	6”	8”	36”	56”
Quercus wislizeni var. *wislizeni*	interior live oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”
Salix laevigata	red willow	3”	4”	18”	28”
Salix lasiandra	yellow willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”

SAN GABRIEL CANYON SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Abies concolor	white fir	5”	7”	30”	47”
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Acer negundo	boxelder	6”	8”	36”	56”
Alnus rhombifolia	white alder	3”	4”	18”	28”
Arbutus menziesii	Pacific madrone	6”	8”	36”	56”
Arctostaphylos glandulosa	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Calocedrus decurrens	incense cedar	5”	7”	30”	47”
Ceanothus megacarpus	big-pod ceanothus	6”	8”	36”	56”
Ceanothus spinosus	greenbark ceanothus	6”	8”	36”	56”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Fraxinus dipetala	California ash	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	toyon	6”	8”	36”	56”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Juniperus californica	Califonia juniper	All specimens	NA	35’ canopy spread	NA
Malosma laurina	laurel sumac	6”	8”	36”	56”
Pinus coulteri	Coulter pine	5”	7”	30”	47”
Pinus jeffreyi	Jeffrey pine	5”	7”	30”	47”
Pinus lambertiana	sugar pine	5”	7”	30”	47”
Pinus ponderosa	ponderosa pine	5”	7”	30”	47”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Populus trichocarpa	black cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Pseudotsuga macrocarpa	bigcone spruce	5”	7”	30”	47”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Quercus chrysolepis	canyon oak	6”	8”	36”	56”
Quercus douglasii	blue oak	6”	8”	36”	56”
Quercus durata var. *gabrielensis**	San Gabriel Mtns. leather oak	3”	4”	18”	28”
*Quercus engelmannii**	Engelmann oak	3”	4”	18”	28”
Quercus lobata	Valley oak	6”	8”	36”	56”
Quercus wislizeni var. *wislizeni*	interior live oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”
Salix laevigata	red willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”

SANTA CLARA RIVER SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Acer negundo	boxelder	6”	8”	36”	56”
Adenostoma sparsifolium	red shank	6”	8”	36”	56”
Alnus rhombifolia	white alder	3”	4”	18”	28”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Arctostaphylos glandulosa	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Calocedrus decurrens	incense cedar	5”	7”	30”	47”
Ceanothus spinosus	greenbark ceanothus	6”	8”	36”	56”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Fraxinus dipetala	California ash	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Juniperus californica	Califonia juniper	All specimens	NA	35’ canopy spread	NA
Malosma laurina	laurel sumac	6”	8”	36”	56”
Pinus monophylla	pinyon pine	5”	7”	30”	47”
Pinus sabiniana	foothill pine	5”	7”	30”	47”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Populus trichocarpa	black cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Pseudotsuga macrocarpa	bigcone spruce	5”	7”	30”	47”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Quercus chrysolepis	canyon oak	6”	8”	36”	56”
Quercus cornelius-mulleri	desert scrub oak, Muller oak	6”	8”	36”	56”
Quercus douglasii	blue oak	6”	8”	36”	56”
Quercus garryana	Oregon oak	6”	8”	36”	56”
Quercus john-tuckeri	Tucker oak	6”	8”	36”	56”
Quercus kelloggii	California black oak	6”	8”	36”	56”
Quercus lobata	Valley oak	6”	8”	36”	56”
Quercus palmeri	Palmer’s oak	6”	8”	36”	56”
Quercus wislizeni var. *wislizeni*	interior live oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”
Salix laevigata	red willow	3”	4”	18”	28”
Salix lasiandra	yellow willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”

SANTA FELICIA SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Aesculus californica	California buckeye	6”	8”	36”	56”
Alnus rhombifolia	white alder	3”	4”	18”	28”
Arctostaphylos glandulosa	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Cercocarpus ledifolius	curl leaf/desert mountain mahogany	6”	8”	36”	56”
Fraxinus dipetala	California ash	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Juniperus californica	Califonia juniper	All specimens	NA	35’ canopy spread	NA
Malosma laurina	laurel sumac	6”	8”	36”	56”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Pseudotsuga macrocarpa	bigcone spruce	5”	7”	30”	47”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Quercus chrysolepis	canyon oak	6”	8”	36”	56”
Quercus cornelius-mulleri	desert scrub oak, Muller oak	6”	8”	36”	56”
Quercus douglasii	blue oak	6”	8”	36”	56”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Quercus garryana	Oregon oak	6”	8”	36”	56”
Quercus john-tuckeri	Tucker oak	6”	8”	36”	56”
Quercus kelloggii	California black oak	6”	8”	36”	56”
Quercus lobata	Valley oak	6”	8”	36”	56”
Quercus ×macdonaldii	MacDonald oak	6”	8”	36”	56”
Quercus palmeri	Palmer’s oak	6”	8”	36”	56”
Quercus wislizeni var. *wislizeni*	interior live oak	6”	8”	36”	56”
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”

SANTA SUSANA MOUNTAINS & SIMI HILLS SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Acer negundo	boxelder	6”	8”	36”	56”
Adenostoma sparsifolium	red shank	6”	8”	36”	56”
Alnus rhombifolia	white alder	3”	4”	18”	28”
Arctostaphylos glandulosa	Eastwood manzanita	6”	8”	36”	56”
Arctostaphylos glauca	big berry manzanita	6”	8”	36”	56”
Ceanothus megacarpus	bigpod ceanothus	6”	8”	36”	56”
Ceanothus spinosus	greenbark ceanothus	6”	8”	36”	56”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Fraxinus dipetala	California ash	3”	4”	18”	28”
Fraxinus velutina	velvet ash, Arizona ash	3”	4”	18”	28”
Heteromeles arbutifolia	toyon	6”	8”	36”	56”
*Juglans californica**	southern California black walnut	3”	4”	18”	28”
Malosma laurina	laurel sumac	6”	8”	36”	56”
Platanus racemosa	western sycamore	3”	4”	18”	28”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Populus trichocarpa	black cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Pseudotsuga macrocarpa	bigcone spruce	5”	7”	30”	47”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus berberidifolia	inland scrub oak	6”	8”	36”	56”
Quercus chrysolepis	canyon oak	6”	8”	36”	56”
Quercus douglasii	blue oak	6”	8”	36”	56”
Quercus john-tuckeri	Tucker oak	6”	8”	36”	56”
Quercus lobata	Valley oak	6”	8”	36”	56”
Quercus palmeri	Palmer’s oak	6”	8”	36”	56”
Quercus wislizeni var. *wislizeni*	interior live oak	6”	8”	36”	56”
Salix exigua	narrowleaf / sandbar willow	3”	4”	18”	28”
Salix gooddingii	Goodding's black willow	3”	4”	18”	28”
Salix laevigata	red willow	3”	4”	18”	28”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”
Umbellularia californica	California bay	6”	8”	36”	56”

VALLEY OAKS SAVANNAH SEA

Scientific Name	Common Name	Protected DBH	2-trunk Protected DBH	Heritage DBH	2-trunk Heritage DBH
Acer macrophyllum	bigleaf maple	3”	4”	18”	28”
Cercocarpus betuloides	mountain mahogany	6”	8”	36”	56”
Heteromeles arbutifolia	toyon	6”	8”	36”	56”
Populus fremontii	Fremont cottonwood	3”	4”	18”	28”
Prunus ilicifolia	holly leaf cherry	3”	4”	18”	28”
Quercus agrifolia	coast live oak	6”	8”	36”	56”
Quercus john-tuckeri	Tucker oak	6”	8”	36”	56”
Quercus lobata	Valley oak	6”	8”	36”	56”
Salix lasiolepis	arroyo willow	3”	4”	18”	28”
Sambucus nigra ssp. *caerulea*	blue elderberry	6”	8”	36”	56”

Appendix D
Photograph Log

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Photograph Log – Heritage Tree Relocation Evaluation

All photographs taken July 20, 2023

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Photograph 1: View of Tree no. 57



Photograph 2: View of Tree no. 57



Photograph 3: View of Tree no. 81



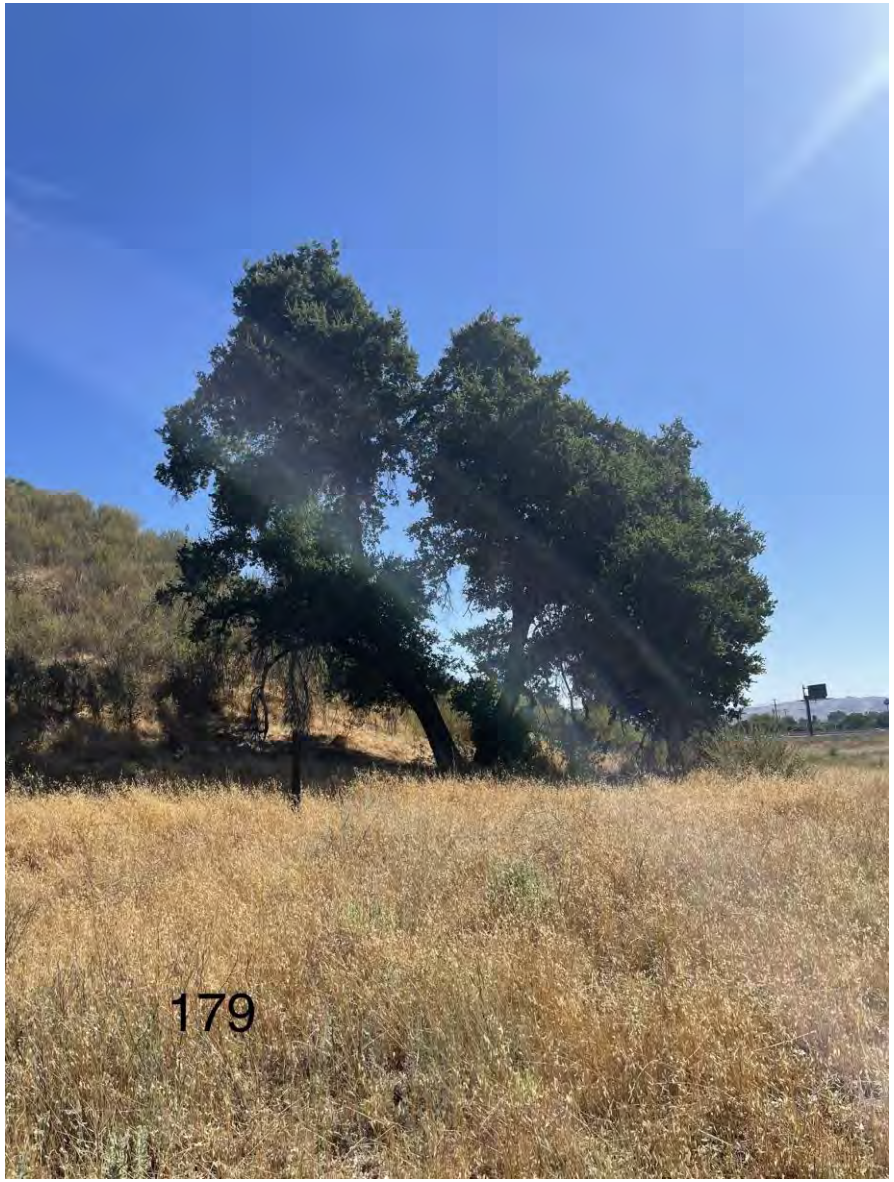
Photograph 4: View of Tree no. 81



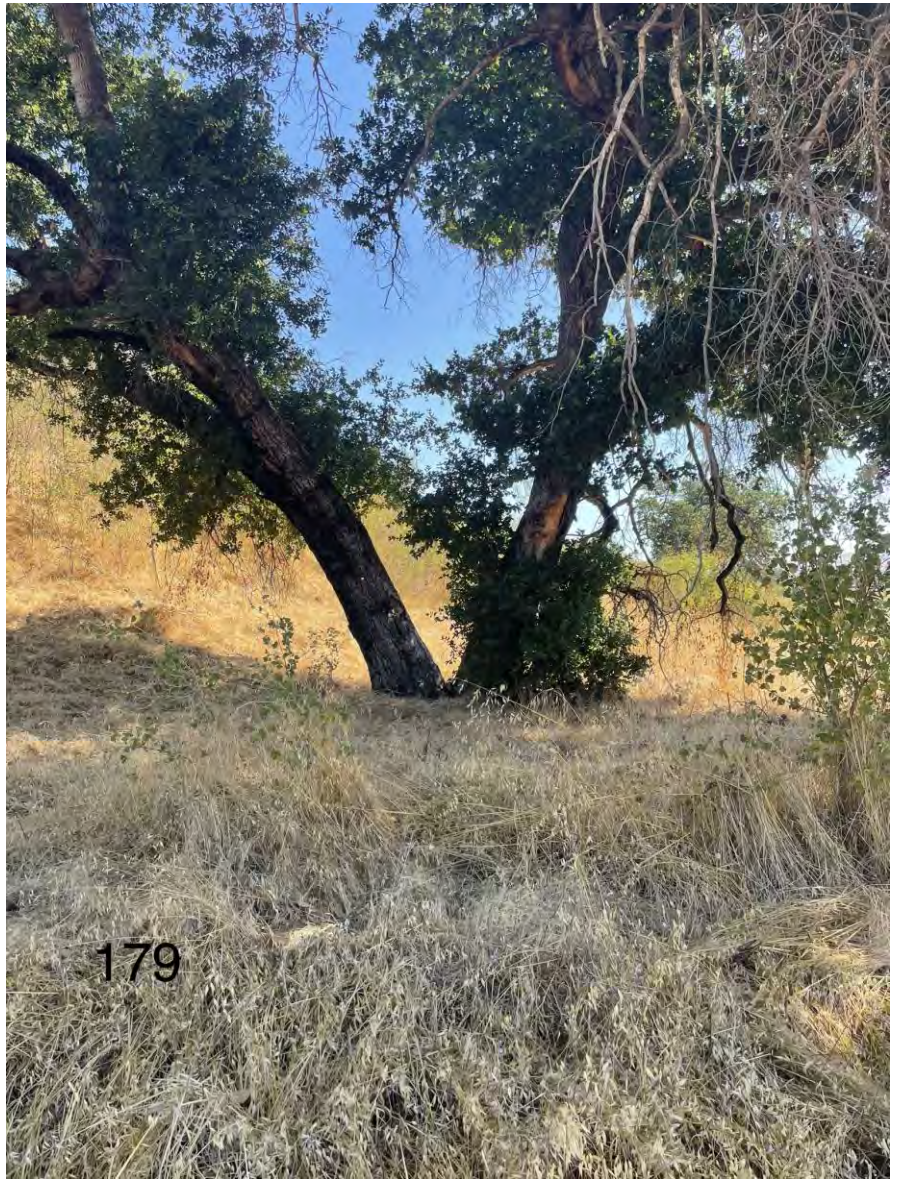
Photograph 5: View of Tree no. 161



Photograph 6: View of Tree no. 161



Photograph 7: View of Tree no. 179



Photograph 8: View of Tree no. 179



Photograph 9: View of Tree no. 186



Photograph 10: View of Tree no. 186



Photograph 11: View of Tree no. 373



Photograph 12: View of Tree no. 373



Photograph 13: View of Tree no. 407



Photograph 14: View of Tree no. 407



Photograph 15: View of Tree no. 428



Photograph 16: View of Tree no. 428



Photograph 17: View of Tree no. 429



Photograph 18: View of Tree no. 429



Photograph 19: View of Tree no. 430



Photograph 20: View of Tree no. 430



Photograph 21: View of Tree no. 482



Photograph 22: View of Tree no. 482



Photograph 23: View of Tree no. 547



Photograph 24: View of Tree no. 547



Photograph 25: View of Tree no. 553



Photograph 26: View of Tree no. 553



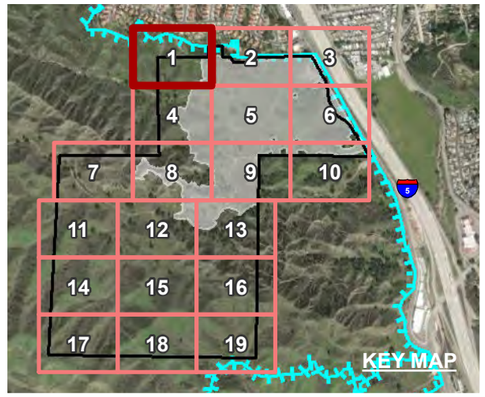
Photograph 26: View of Tree no. 619



Photograph 27: View of Tree no. 619

Appendix E
Tree Impact Mapbook

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- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification
- Santa Susana Mountains/Simi Hills SEA Limits
- Tree Protection Zone
- Debris Extents

Tree Impact Status

- Direct-Removal, Graded Development
- Direct-Encroached, Zone C thinning
- Direct-Debris Flow, Offsite FMZ (thinning)
- Direct-Debris Flow, Outside of Development/FMZ
- Preserve, Zone C thinning
- Preserve, Offsite FMZ (thinning)
- Preserve, Outside of Development/FMZ

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2022

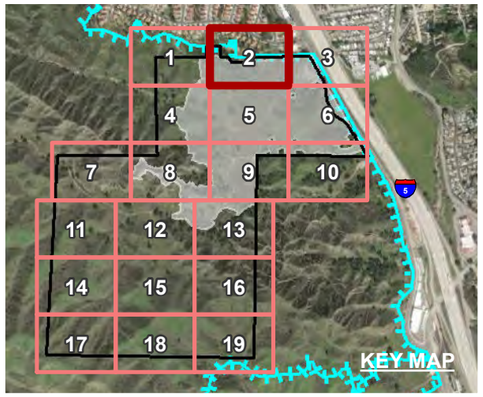
DUDEK

0 40 80 Feet

Sheet 1

Tree Impacts

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification
- Santa Susana Mountains/Simi Hills SEA Limits
- Tree Protection Zone
- Debris Extents

Tree Impact Status

- Direct-Removal, Graded Development
- Direct-Encroached, Zone C thinning
- Direct-Debris Flow, Offsite FMZ (thinning)
- Direct-Debris Flow, Outside of Development/FMZ
- Preserve, Zone C thinning
- Preserve, Offsite FMZ (thinning)
- Preserve, Outside of Development/FMZ

SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2022

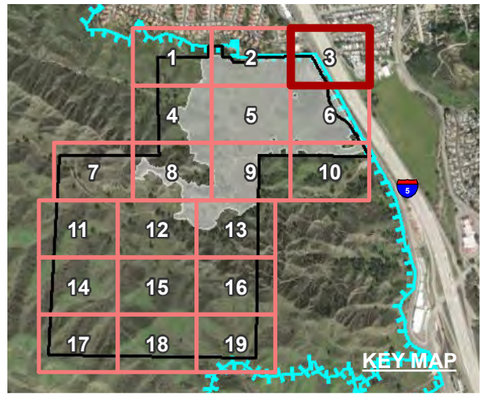
DUDEK

0 40 80 Feet

Sheet 2

Tree Impacts

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification
- Santa Susana Mountains/Simi Hills SEA Limits
- Tree Protection Zone
- Debris Extents

Tree Impact Status

- Direct-Removal, Graded Development
- Direct-Encroached, Zone C thinning
- Direct-Debris Flow, Offsite FMZ (thinning)
- Direct-Debris Flow, Outside of Development/FMZ
- Preserve, Zone C thinning
- Preserve, Offsite FMZ (thinning)
- Preserve, Outside of Development/FMZ



SOURCE: AERIAL-ESRI WORLD IMAGERY; DEVELOPMENT-UNITED CIVIL, INC. 2022

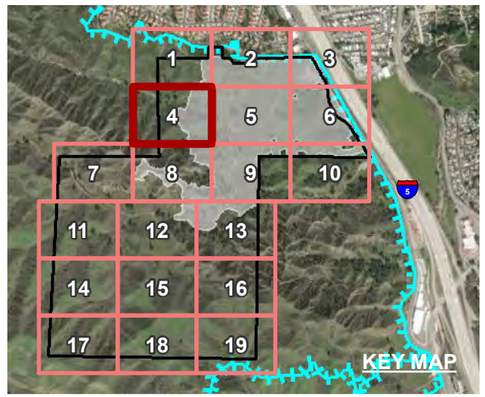
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Sheet 3

Tree Impacts

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



- Project Boundary
- 200-Ft Buffer of Project Development Footprint
- Project Development Footprint
- Fuel Modification
- Santa Susana Mountains/Simi Hills SEA Limits
- Tree Protection Zone
- Debris Extents

Tree Impact Status

- Direct-Removal, Graded Development
- Direct-Encroached, Zone C thinning
- Direct-Debris Flow, Offsite FMZ (thinning)
- Direct-Debris Flow, Outside of Development/FMZ
- Preserve, Zone C thinning
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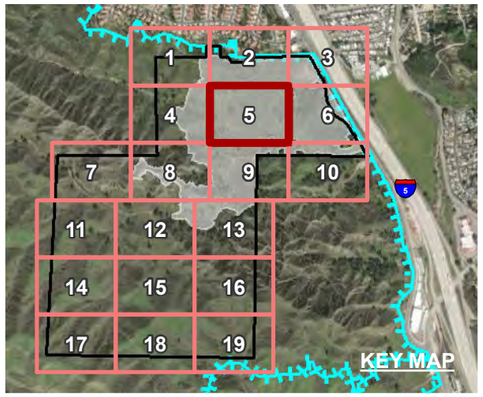
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Sheet 4

Tree Impacts

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



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Tree Impact Status

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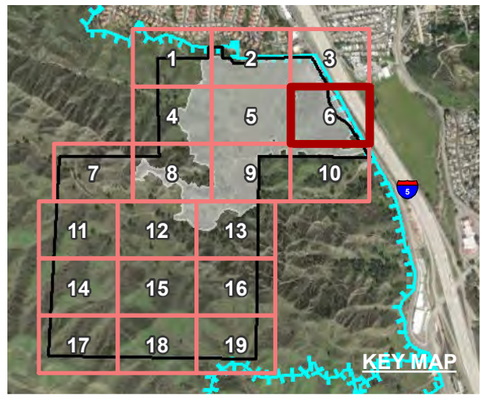
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Sheet 5

Tree Impacts

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



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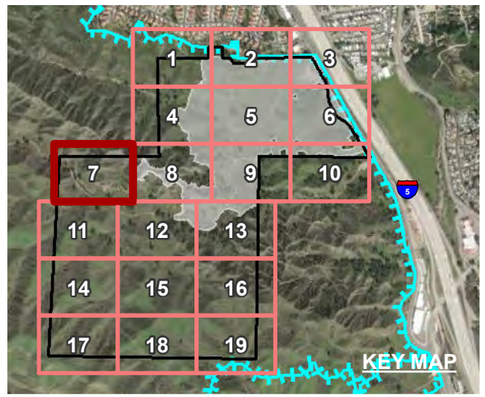
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Sheet 6

Tree Impacts

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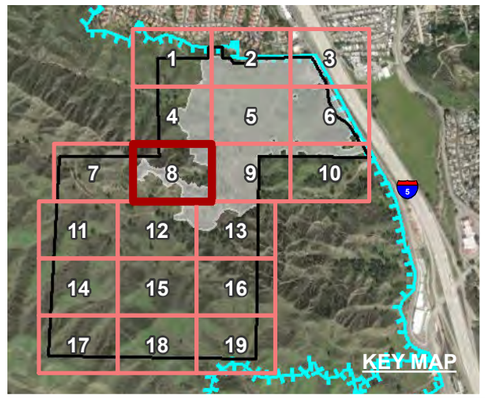
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Sheet 7

Tree Impacts

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



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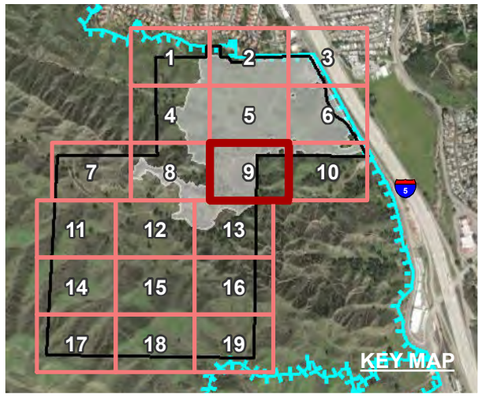
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Sheet 8

Tree Impacts

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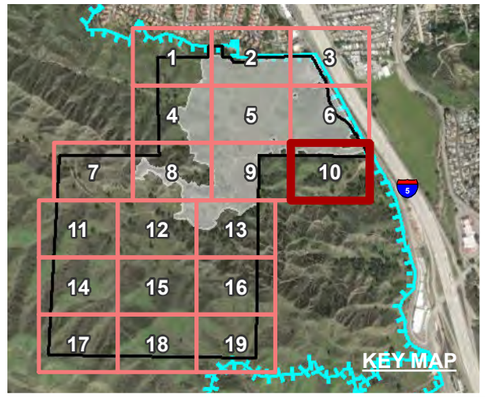
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Sheet 9

Tree Impacts

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



Project Boundary

200-Ft Buffer of Project Development Footprint

Project Development Footprint

Fuel Modification

Santa Susana Mountains/Simi Hills SEA Limits

Tree Protection Zone

Debris Extents

Tree Impact Status

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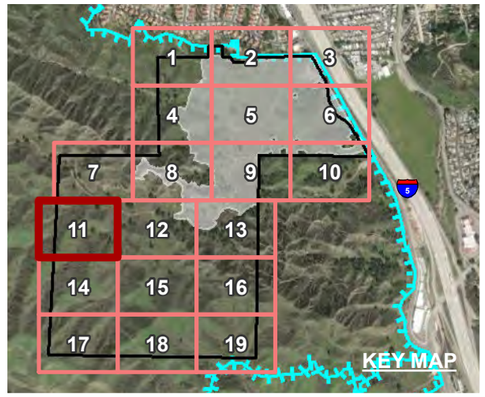
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Sheet 10

Tree Impacts

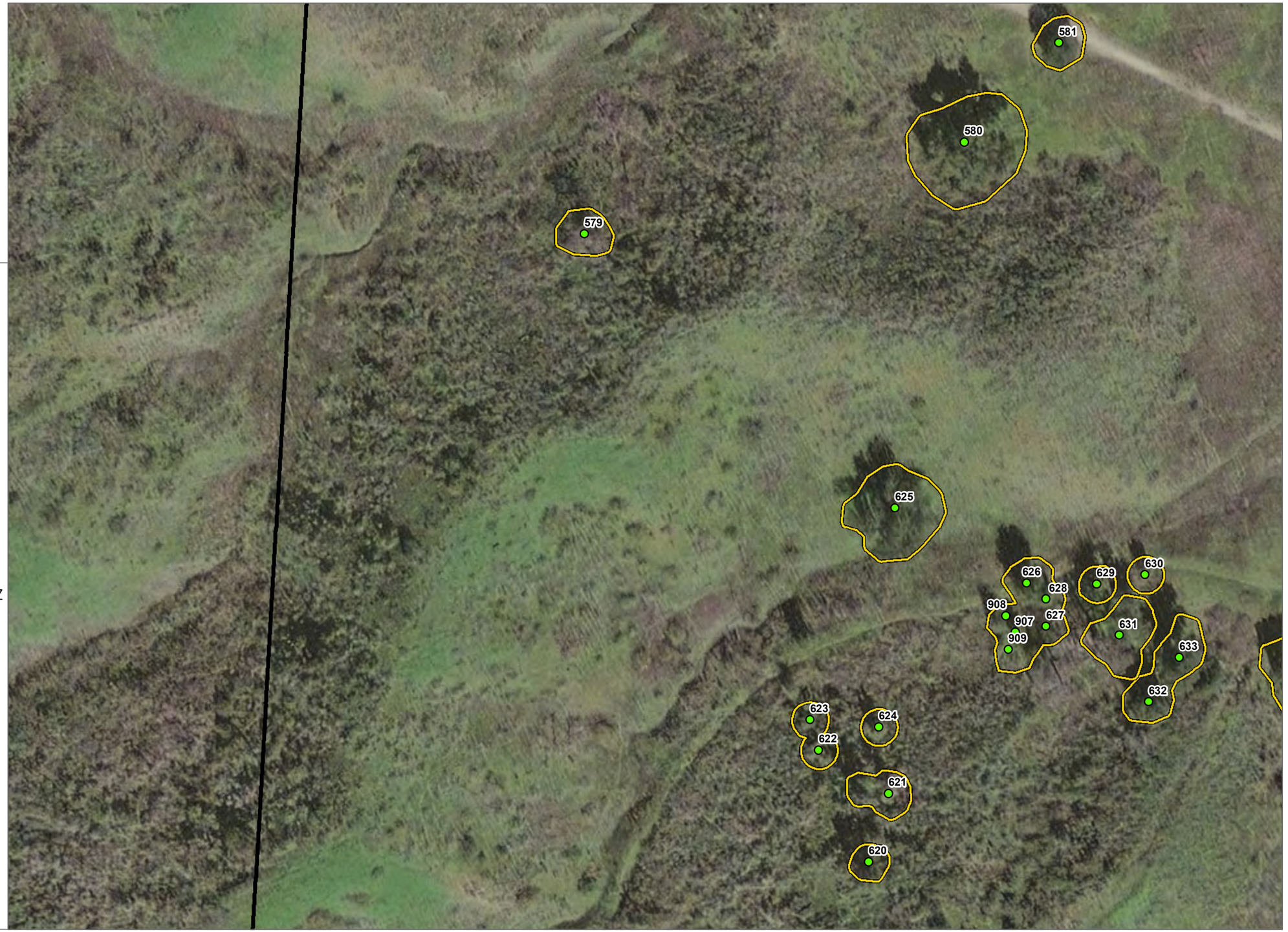
Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



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Tree Impact Status

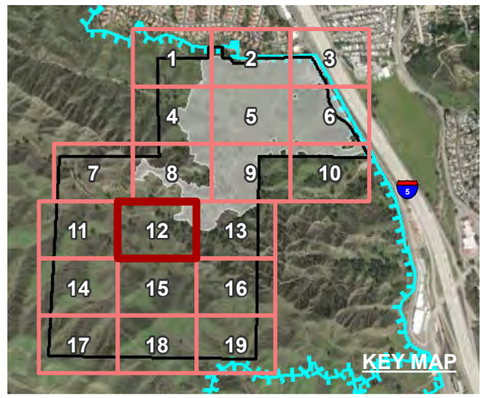
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- Project Boundary
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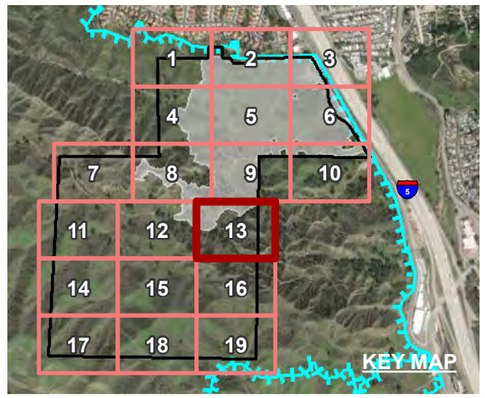
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Sheet 12

Tree Impacts

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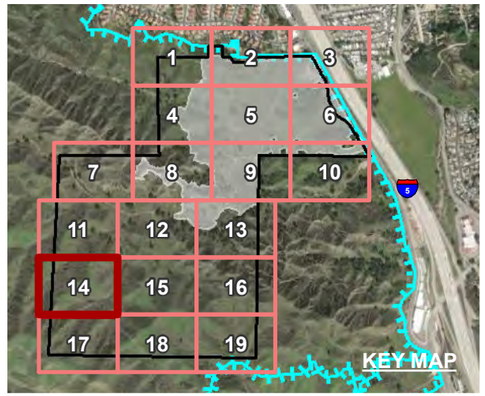
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Sheet 13

Tree Impacts

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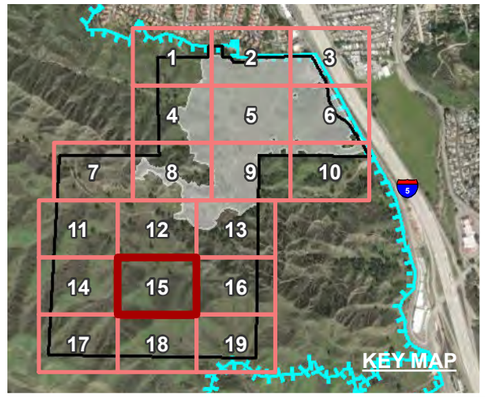
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Sheet 14

Tree Impacts

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



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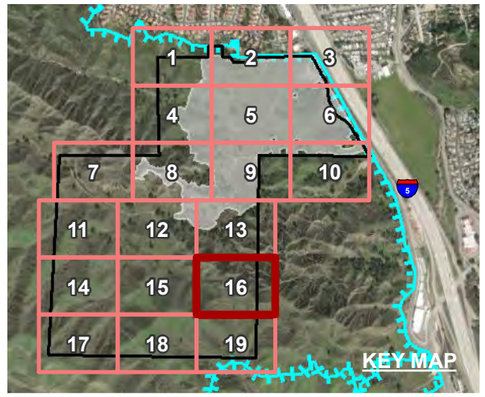
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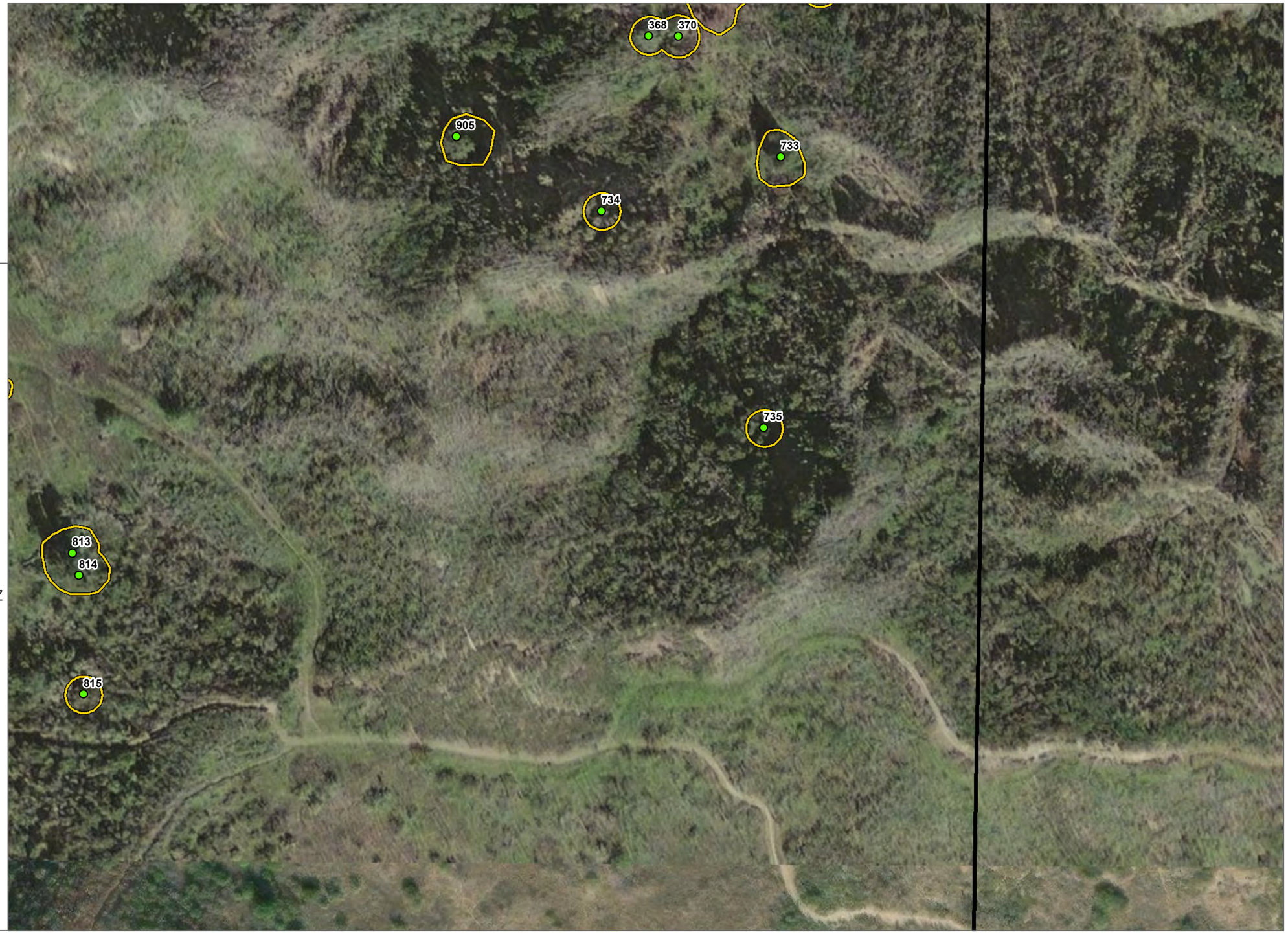
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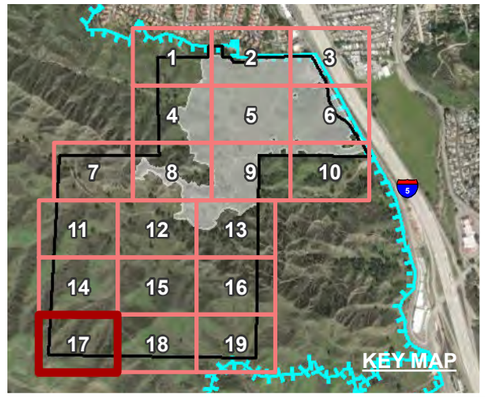


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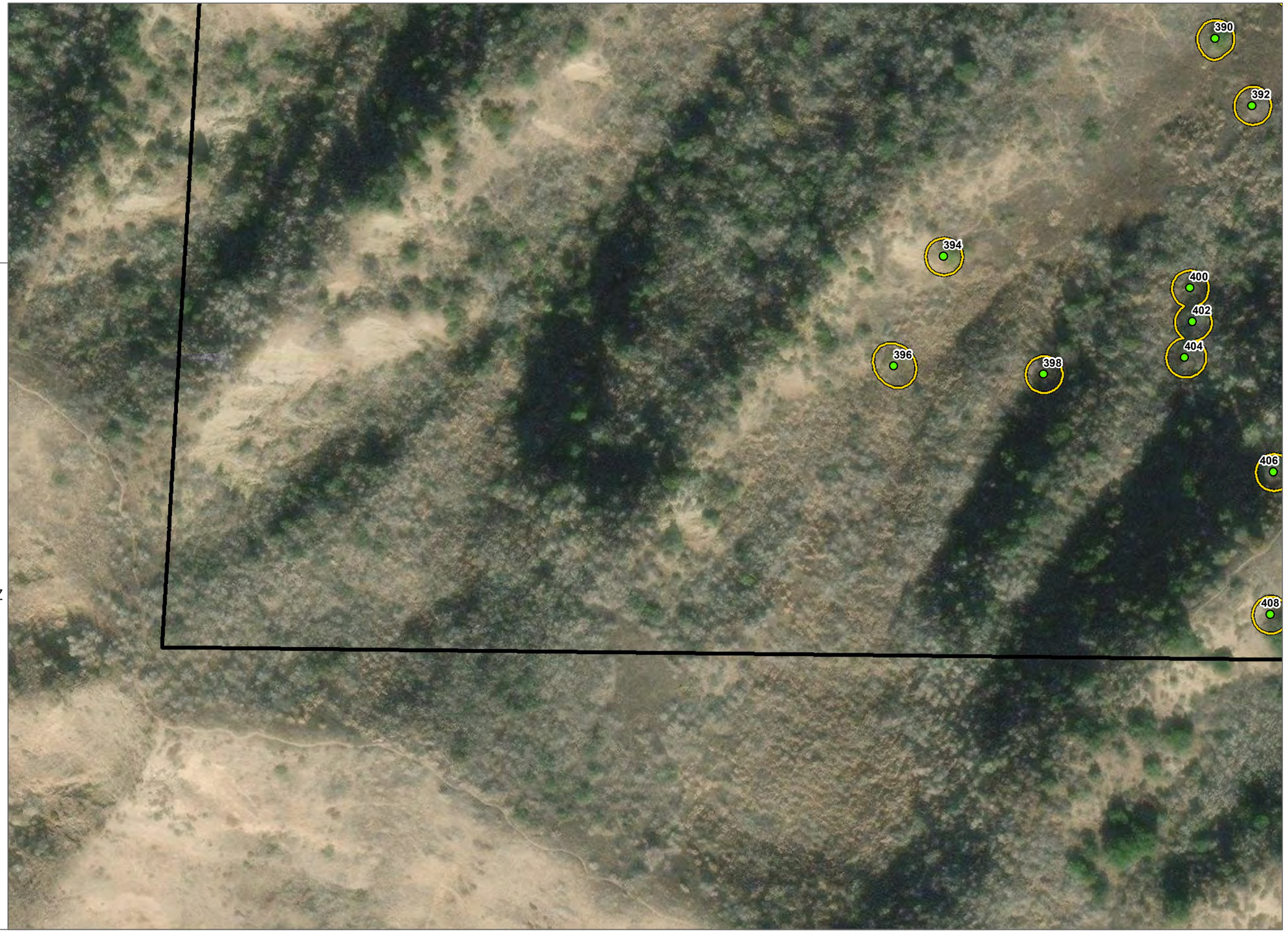
Tree Impacts



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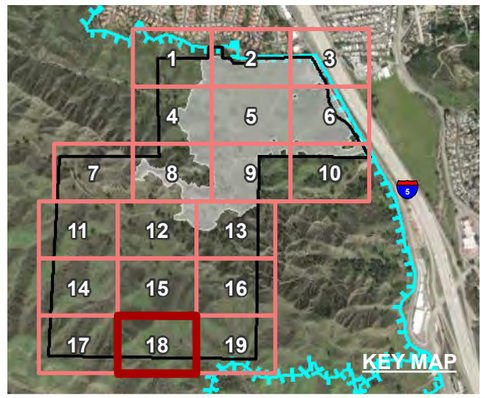
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Sheet 17

Tree Impacts

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project



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Tree Impact Status

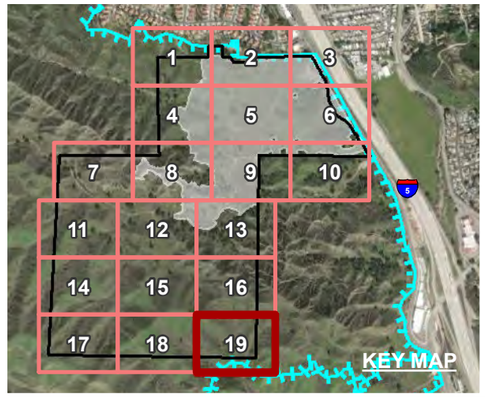
- Direct-Removal, Graded Development
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Sheet 19

Tree Impacts

Response to Comments: Significant Ecological Area (SEA) Protected Tree Report for the Trails at Lyons Canyon Project

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Appendix F
Tree Protection Measures

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Tree Protection Measures

The following tree protection measures are provided as general guidelines for tree protection from construction impacts. The measures presented should be monitored by arborists and enforced by contractors and developers for maximum benefit to the trees.

Tree Protection Measures Prior to Construction

Prior to any construction activity (drainage, demolition, material removal or delivery), oak and landmark trees with canopies that fall within 30 feet of construction activity shall be protected by fencing and signage. All contractors shall be made aware of the tree protection measures. A project arborist shall be assigned to monitor tree health and construction activity near retained trees on site. The project arborist shall be an International Society of Arboriculture (ISA) Certified Arborist.

Fencing. A 6-foot high, chain link fence with tree protection signs shall be erected around all trees (or tree groups) with canopies that fall within 30 feet of construction activity. The protective fence should be installed at a distance from the trunk that is equal to the dripline radius plus 5 feet (protected tree zone). For any trees that would be encroached upon by construction activities, fencing shall be placed as far away from trunk of the tree as possible while still allowing the required construction activities to proceed. This fencing will delineate the tree protection zone and prevent unwanted activity in and around the trees in order to reduce soil compaction in the root zones of the trees and other damage from heavy equipment. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. In areas where fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base. Tree protection signs should be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities are complete.

Pre-Construction Meeting. A pre-construction meeting shall be held between all contractors and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, shall provide written acknowledgement of their receiving tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

Protection and Maintenance During Construction

Once construction activities have begun, the following measures shall be adhered to:

Avoidance: Signs, ropes, cables, or any other items shall not be attached to any tree.

Equipment Operation and Storage. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles shall stay out of the fenced tree protection zone, unless where specifically approved in writing by the City Arborist and under the supervision of an ISA Certified Arborist

Storage and Disposal. Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the fenced tree protection zone. Remove all foreign debris within the fenced tree protection zone; it is important

to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as: gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked outside of the fenced tree protection zone of retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

Moving Construction Materials. Moving Construction Materials: Care will be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around retained trees (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red ribbon. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using ISA or ANSI A300 standards.

Grade Changes. Grade changes, including adding fill, are not permitted within the tree protection zone, without special written authorization and under supervision by a Certified Arborist. Lowering the grade within this area will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots.

Root Pruning. Except where specifically approved in writing, all trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction, forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts shall be clean and sharp, to minimize ripping, tearing, and fracturing the root system. The trench shall be made no deeper than necessary.

Trenching. Unless a Tree Permit has been issued for trenching activity within the fenced tree protection zone, all trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary

Irrigation. Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first twelve months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every two to four weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced tree protection zone ***but never soaking the area located within 6- feet of the tree trunk***.

Pruning. Do not prune any of the trees until all construction is completed. This will help protect the tree canopies from damage. All pruning shall be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Only dead wood shall be removed from tree canopies.

Washing. Periodic washing of the foliage is recommended during construction but no more than once every two weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the

construction period at a less frequent rate with a high-powered hose only in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

Inspection. An ISA Certified Arborist shall inspect the trees on at least a monthly basis for the duration of construction activity. A summary report documenting observations and management recommendations shall be submitted to the owner following each inspection. Photographs of representative trees are to be included in each report.

Maintenance After Construction

Once construction is complete the tree protection fencing may be removed and the following measures performed to sustain and enhance the vigor of the preserved trees.

Mulch. Provide a 4-inch mulch layer of mulch under the canopy of trees. Mulch shall be clean and organic and provide long-term soil conditioning, soil moisture retention, and soil temperature control.

Pruning. Pruning should only be done to maintain clearance and remove broken, dead or diseased branches. Pruning shall only take place following a recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 15% of the canopy shall be removed at any one time. All pruning shall conform to ISA or ANSI A300 standards.

Watering. Retained trees on site shall be watered as they were prior to the commencement of construction activity. Supplemental irrigation may be necessary for twelve months following substantial root pruning.

Watering Adjacent Plant Material. All plants near the trees shall be compatible with water requirements of said trees. Watering regime included in the site's landscape plan shall be developed with consideration for the water needs of retained trees.

Spraying. If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

Inspection. All trees within 30 feet of construction activity shall be monitored by an ISA Certified Arborist for the first two years after construction completion. An annual monitoring report shall be submitted to the City Arborist. Each report shall summarize the inspection efforts, document observations and management actions taken, include photographs of each tree, and compare postconstruction tree conditions with the original, pre-construction baseline condition. If any retained trees die within this inspection period, they shall be replaced at a ratio approved by the City.

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Appendix B
Photo Exhibit

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Photo 1: View of the *Quercus agrifolia* forest & Woodland Alliance present at the Project site.



Photo 2: View of the *Salix laevigata* forest & Woodland Alliance present at the Project site.



Photo 3: View of the *Adenostoma fasciculatum* Shrubland Alliance present at the Project site.



Photo 4: Example of the *Artemisia californica* Shrubland Alliance present at the Project site (foreground).



Photo 5: View of the *Baccharis salicifolia* Shrubland Alliance present at the Project site.



Photo 6: View of the *Brassica nigra–Centaurea melitensis* Herbaceous Seminatural Stands present at the Project site.



Photo 7: View of the *Eriodictyon crassifolium* Provisional Shrubland Alliance present at the Project site.



Photo 8: View of the *Eriogonum fasciculatum* Shrubland Alliance present at the Project site (background).

	
Photo 9: View of the *Eriogonum davidsonii/Croton setiger* Grassland Alliance present at the Project site.	**Photo 10:** View of an example of developed areas present at the Project site.

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Appendix C
Plant Compendium

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Pteridophytes

PTERIDACEAE—BRAKE FERN FAMILY

Pellaea andromedifolia—coffee fern
Pellaea mucronata—birdsfoot fern
Pellaea mucronata var. *mucronate—birdsfoot fern*
Pentagramma triangularis—goldenback fern

Selaginellales

SELAGINELLACEA—SPIKEMOSS FAMILY

Selaginella bigelovii—Bigelow's moss fern

Gymnosperms

CUPRESSACEAE—CYPRESS FAMILY

Cupressus ssp.—cypress tree

PINACEAE—PINE FAMILY

Pinus halepensis—Aleppo pine*
Pinus ssp.—pine

ADOXACEAE—ELDERBERRY FAMILY

Sambucus nigra subsp. caerulea —blue elderberry

AGAVACEAE—AGAVE FAMILY

Chlorogalum pomeridianum—soap plant
Hesperoyucca whipplei - Our Lord's candle

ALLIACEAE—ONION FAMILY

Allium neapolitanum—onion

AMARANTHACEAE—AMARANTH FAMILY

Amaranthus albus —tumbleweed*

ANACARDIACEAE—SUMAC FAMILY

Malosma laurina—laurel sumac
Rhus ovata—sugar bush
Rhus trilobata—skunkbush
Rhus trilobata var. *quinate*—slender-twig skunkbush
Toxicodendron diversilobum—poison oak*

APIACEAE—CARROT FAMILY

Bowlesia incana—hoary bowlesia
Conium maculatum—poison hemlock*
Daucus pusillus—rattlesnake week
Foeniculum vulgare—sweet fennel*
Lomatium utriculatum—biscuit root
Sanicula bipinnata—poison sanicle
Sanicula crassicaulis - Pacific sanicle
Tauschia arguta—southern tauschia

APOCYNACEAE—DOGBANE FAMILY

Asclepias californica—California milkweed
Asclepias eriocarpa—Indian milkweed
Asclepias fascicularis—narrow-lead milkweed
Vinca major—periwinkle*

ARECACEAE—PALM FAMILY

Phoenix canariensis—Canary Island palm*
Washingtonia robusta—Mexican fan palm*

ASTERAEAE—SUNFLOWER FAMILY

Achillea millefolium—common white yarrow
Achyrachaena mollis—blow-wives
Acourtia microcephala—sacapellote
Agoseris grandiflora—large-flowered mountain dandelion
Ambrosia acanthicarpa—annual bur-sage
Ambrosia confertiflora—weak leaved burweed
Ambrosia psilostachya var. *californica*—western ragweed
Ancistrocarphus filagineus - woolly fishhooks
Artemisia californica - California sagebrush
Artemisia douglasiana—mugwort
Artemisia dracunculus—tarragon
Artemisia tridentata ssp. *tridentata* - big sagebrush
Baccharis pilularis—coyote brush
Baccharis salicifolia - mule fat
Bidens pilosa—common beggar ticks*
Brickellia californica - California brickellbush
Carduus pycnocephalus - Italian thistle*
Carthamus tinctorius—safflower*
Centaurea benedicta—blessed thistle*
Centaurea melitensis—tocalote*

Centaurea solstitialis - yellow star thistle*
Cirsium occidentale—cobweb thistle
Cirsium occidentale var. *californicum*—California thistle
Cirsium occidentale var. *occidentale*—western thistle
Cirsium vulgare—bull thistle*
Corethrogyne filaginifolia—California cudweed aster
Corethrogyne filaginifolia var. *virgata*—virgate sand aster
Deinandra fasciculata—clustered tarweed
Encelia californica—bush sunflower
Ericameria ericoides—mock heather
Ericameria nauseosa—rubber rabbitbrush
Ericameria palmeri var. *pachylepis*—thickbracted goldenbush
Ericameria pinifolia—pine bush
Erigeron canadensis—Canada horseweed
Erigeron foliosus—leafy fleabane
Eriophyllum confertiflorum var. *confertiflorum*—golden yarrow
Gazania linearis—trailing ganzania*
Hazardia squarrosa var. *squarrosa*—sawtooth goldenbush
Hedypnois rhagadioloides—Crete hedypnois*
Helianthus annus—western sunflower
Helianthus gracilentus—slender sunflower
Heterotheca grandiflora—telegraph weed
Heterotheca sessiliflora ssp. *echioides*—hairy golden aster
Heterotheca sessiliflora ssp. *sessiliflora*—sessileflower false goldenaster
Heterotheca subaxillaris—camphor weed
Lactuca biennis—biennial wild lettuce*
Lactuca saligna—willow lettuce*
Lactuca serriola—prickly lettuce*
Lasthenia gracilis—common goldfields
Logfia filaginoides—California cottonrose
Logfia gallica—narrowleaf cottonrose
Madia elegans—elegant madia
Madia gracilis—gumweed
Madia sativa—coastal tarweed
Malacothrix clevelandii—Cleveland's cliff aster
Malacothrix glabrata—desert dandelion
Malacothrix saxatilis var. *tenuifolia*—cliff aster
Matricaria discoidea—pineapple weed
Micropus californicus var. *californicus*—slender cottonseed
Microseris douglasii—Douglas' microseris

Pseudognaphalium californicum—*California everlasting*
Pseudognaphalium californicum—California everlasting
Pseudognaphalium luteoalbum—cudweed everlasting*
Pseudognaphalium microcephalum—white everlasting
Psilocarphus tenellus—slender woollyheads
Rafinesquia californica—California chicory
Senecio flaccidus var. *douglasii*—Douglas butterweed
Senecio vulgaris—groundsel
Silybum marianum—milk-thistle*
Solidago confinis—southern goldenrod
Sonchus asper—prickly sow-thistle*
Sonchus oleraceus—common sow-thistle*
Stephanomeria virgata—twiggy wreath plant
Uropappus lindleyi—silverpuffs

BORAGINACEAE—BORAGE FAMILY

Amsinckia intermedia—common fiddleneck
Amsinckia menziesii—small-flowered fiddleneck
Cryptantha intermedia—common cryptantha
Cryptantha muricata—prickly cryptantha
Cryptantha ssp.—cryptantha
Emmenanthe penduliflora—whispering bells
Eriodictyon crassifolium x trichocalyx—thickleaf yerba santa hybrid
Eucrypta chrysanthemifolia var. *chrysanthemifolia*—eucryta
Heliotropium curassavicum—alkali heliotrope
Nemophila ssp.—nemophila
Pectocarya linearis ssp. *ferocula*—narrow-toothed pectocarya
Pectocarya penicillate—winged pectocarya
Phacelia cicutaria var. *hispida*—Caterpillar phacelia
Phacelia distans—common phacelia
Phacelia imbricata—imbricate phacelia
Phacelia tanacetifolia—tansy-leaf phacelia
Phacelia viscida—phacelia
Plagiobothrys canescens var. *canescens*—valley popcornflower
Plagiobothrys nothofulvus—rusty popcornflower

BRASSICACEAE—MUSTARD FAMILY

Brassica nigra—black mustard*
Capsella bursa-pastoris—shepherd's purse
Hirschfeldia incana—short-pod mustard*
Lepidium latifolium—broad-leaved peppergrass

Sisymbrium altissimum—tumble mustard
Sisymbrium orientale—hedge mustard
Thysanocarpus laciniatus—fringepod

CAPRIFOLIACEAE—HONEYSUCKLE FAMILY

Lonicera interrupta—chaparral honeysuckle
Sambucus Mexicana—Mexican elderberry

CARYOPHYLLACEAE—CARNATION FAMILY

Silene gallica—windmill pink*
*Spergula arvensis—corn spurry**
Stellaria media—chickweed
Stellaria nitens—shining chickweed

CHENOPODIACEAE—GOOSEFOOT FAMILY

Atriplex canescens—fourwing saltbush
Atriplex rosea—redscale*
Atriplex semibaccata—Australian saltbush
Atriplex serenana var. *serenana*—bracted saltscale
Chenopodium album—lambs quarters*
Chenopodium californicum—California goosefoot
Chenopodium murale—nettle-leaved goosefoot*
Chenopodium ssp.—goosefoot
Dysphania pumilio—Tasmanian goosefoot*
Salsola tragus—Russian thistle

CISTACEAE—ROCK ROSE FAMILY

Crocanthemum scoparium—rush rose

ONVOLVULACEAE—MORNING GLORY FAMILY

Calystegia macrostegia ssp. *intermedia*—chaparral morning-glory
Calystegia peirsonii—Peirson's morning glory
Convolvulus arvensis—field bindweed*
Cuscuta californica—California dodder

CRASSULACEAE—STONECROP FAMILY

Crassula connata—sand pigmy weed
Dudleya lanceolata—lanceleaf live-forever

CUCURBITACEAE—GOURD FAMILY

Cucurbita foetidissima—coyote melon
Marah macrocarpa—large-fruited man-root

ERICACEAE—HEATH FAMILY

Arctostaphylos glauca—bigberry manzanita

EUPHORBIACEAE—SPURGE FAMILY

Croton californicus—California croton
Croton setiger—dove weed
Euphorbia albomarginata—rattlesnake sandmat
Euphorbia maculate—spotted spurge*
Euphorbia peplus—petty spurge*
Ricinus communis—castor bean*

FABACEAE—LEGUME FAMILY

Acmispon glaber—deerweed
Acmispon americanus var. *americanus*—Pursh's lotus
Acmispon maritimus—coastal lotus
Acmispon strigosus—strigose lotus
Amorpha californica—false indigo
Astragalus didymocarpus var. *didymocarpus*—two-seeded milkvetch
Astragalus trichopodus var. *phoxus*—Antisell three-pod milkvetch
Cercis occidentalis—western redbud
Lathyrus vestitus ssp.—pacific peavine
Lotus corniculatus—birdsfoot trefoil*
Lotus micranthus—small flowered lotus
Lupinus bicolor—miniature lupine
Lupinus hirsutissimus—stinging lupine
Lupinus microcarpus var. *microcarpus*—chick lupine
Lupinus sparsiflorus ssp. *sparsiflorus*—few-flowered lupine
Lupinus succulentus—arroyo lupine
Lupinus truncates—truncate-leaved lupine
Medicago polymorpha—bur-clover*
Melilotus alba—white sweetclover*
Melilotus indica—yellow sweetclover*
Robinia pseudoacacia—black locust*
Spartium junceum—Spanish broom
Trifolium gracilentum—pin-point clover
Trifolium hirtum—rose clover*
Trifolium willdenovii—tomcat clover

FAGACEAE—OAK-BEECH FAMILY

Quercus agrifolia—coast live oak
Quercus berberidifolia—scrub oak

Quercus douglasii—blue oak
Quercus john-tuckeri—Tucker oak
Quercus lobata—valley oak

GERANIACEAE—GERANIUM FAMILY

Erodium botrys—long-beaked filaree*
Erodium cicutarium—red-stemmed filaree*

GROSSULARIACEAE—GOOSEBERRY FAMILY

Ribes aureum var. *gracillimum*—golden current
Ribes malvaceum—chaparral current

HYDROPHYLLACEAE—WATERLEAF FAMILY

Emmenanthe penduliflora var. *penduliflora*—whispering bells
Eriodictyon crassifolium var. *nigrescens*—thickleaf yerba santa
Eucrypta chrysanthemifolia var. *chrysanthemifolia*—common eucrypta
Phacelia brachyloba—lobed phacelia
Phacelia cicutaria var. *hispida*—caterpillar phacelia
Phacelia distans—common phacelia
Phacelia imbricata—imbricate phacelia
Phacelia ramosissima var. *latifolia*—branching phacelia
Phacelia tanacetifolia—tansy phacelia
Phacelia viscida—sticky phacelia

JUGLANDACEAE—WALNUT FAMILY

Juglans californica—Southern California black walnut

JUNCACEAE—RUSH FAMILY

Juncus mexicanus—Mexican rush

LAMIACEAE—MINT FAMILY

Lamium amplexicaule—henbit*
Marrubium vulgare—horehound*
Salvia apiana—white sage
Salvia columbariae—chia
Salvia leucophylla—purple sage
Salvia mellifera—black sage
Trichostema lanatum—wholly blue-curls
Trichostema lanceolatum—vinegar weed

LILIACEAE—LILY FAMILY

Calochortus clavatus var. *clavatus*—club-haired mariposa lily

Calochortus clavatus var. *gracilis*—slender mariposa lily
Calochortus plummerae—Plummer's mariposa
Calochortus splendens—splendid mariposa

LOASACEAE—STICKLEAF FAMILY

Mentzelia laevicaulis—blazing star
Mentzelia micrantha—tiny-flowered stickleaf

LYTHRACEAE—LOOSESTRIFE FAMILY

Lagerstroemia indica—crape-myrtle*

MAGNOLIACEAE—MAGNOLIA FAMILY

Magnolia grandiflora—southern magnolia*

MALVACEAE—MALLOW FAMILY

Malacothamnus fasciculatus—chaparral mallow
Malva parviflora—cheeseweed

MYOPORACEAE—MYOPORUM FAMILY

Myoporum laetum—myoporum*

NYCTAGINACEAE—FOUR-O'CLOCK FAMILY

Mirabilis laevis var. *crassifolia*—California wishbone bush

OLEACEAE—OLIVE FAMILY

Fraxinus dipetala—California flowering ash

ONAGRACEAE—EVENING PRIMROSE FAMILY

Camissoniopsis bistorta—California sun-cup
Camissoniopsis hirtella—field sun-cup
Clarkia cylindrica—speckled clarkia
Clarkia epilobioides—willow-herb clarkia
Clarkia purpurea—winecup clarkia
Clarkia purpurea ssp. *quadrivulnera*—four-spotted purple clarkia
Clarkia unguiculata—elegant clarkia
Epilobium canum—California fuchsia
Epilobium ciliatum ssp. *ciliatum*—northern willow-herb
Eulobus californicus—mustard primrose
Eremothera boothii—shredding primrose
Oenothera californica—California evening primrose

OROBANCHACEAE—BROOM-RAPE FAMILY

Aphyllon fasciculatum—pine broom-rape
Aphyllon tuberosum—chaparral broom-rape
Castilleja exserta—purple owl's clover
Castilleja foliolosa—woolly Indian paintbrush
Cordylanthus rigidus ssp. *setiger*—dark-tipped rigid bird's-beak

PAEONIACEAE—PEONY FAMILY

Paeonia californica—California peony

PAPAVERACEAE—POPPY FAMILY

Dendromecon rigida—California bush poppy
Eschscholzia californica—California poppy

PHRYMACEAE—MONKEYFLOWER FAMILY

Diplacus aurantiacus—bush monkeyflower
Diplacus brevipes—wide-throat monkeyflower

PLANTAGINACEAE—PLANTAIN FAMILY

Antirrhinum coulterianum—white snapdragon
Collinsia heterophylla—Chinese houses
Keckiella cordifolia—heart-leaved bush beardtongue
Keckiella ternata—blue-stemmed keckiella
Penstemon centranthifolius—scarlet bugler
Penstemon heterophyllus—foothill beardtongue
Plantago erecta—California plantain
Plantago lanceolata—English plantain*
Plantago major—broadleaf plantain*
Sairocarpus multiflorus—sticky snapdragon

PLATANACEAE—SYCAMORE FAMILY

Platanus racemosa—California sycamore

POACEAE—GRASS FAMILY

Avena fatua—wild oat*
Bromus diandrus—ripgut grass*
Bromus madritensis—foxtail chess*
Distichlis spicata—salt grass
Elymus condensatus—giant wild-rye
Hordeum murinum—wall barley
Schismus barbatus—Mediterranean grass
Stipa pulchra—purple needlegrass

POLEMONIACEAE—PHLOX FAMILY

Allophyllum gilioides—straggling allophyllum
Allophyllum glutinosum—sticky allophyllum
Eriastrum sapphirinum—sapphire woollystar
Gilia ochroleuca—gilia
Leptodactylon californicum ssp. *glandulosum*—glandular prickly phlox
Leptosiphon liniflorus—flax-flowered linanthus
Navarretia atractyloides—rough navarretia
Navarretia hamata—hooked pincushion

POLYGONACEAE—BUCKWHEAT FAMILY

Chorizanthe staticoides—Turkish rugging
Chorizanthe xanti—Riverside spineflower
Eriogonum angulosum—angle-stemmed buckwheat
Eriogonum davidsonii—Davidson's buckwheat
Eriogonum elongatum—long-stemmed buckwheat
Eriogonum fasciculatum—California buckwheat
Eriogonum fasciculatum var. *polifolium*—hoary California buckwheat
Polygonum arenastrum—common knotweed*
Polygonum argyrocoleon—silver-sheath knotweed*
Pterostegia drymarioides—fairy mist
Rumex crispus—curly dock*
Rumex hymenosepalus—wild rhubarb
Rumex salicifolius—willow dock

PORTULACACEAE—PRIMROSE FAMILY

Calandrinia menziesii—red maids
Claytonia parviflora—miner's lettuce

PRIMULACEAE—CROWFOOT FAMILY

Clematis ligusticifolia—western virgin's bower
Delphinium parryi ssp. *parryi*—Parry's larkspur

RHAMNACEAE—BUCKTHORN FAMILY

Ceanothus crassifolius var. *crassifolius*—hoary-leaf ceanothus
Frangula californica ssp. *californica*—California coffeeberry
Frangula californica ssp. *tomentella*—hoary coffeeberry
Rhamnus ilicifolia—hollyleaf redberry

RHAMNACEAE—BUCKTHORN FAMILY

Ceanothus crassifolius var. *crassifolius*—hoary-leaf ceanothus
Frangula californica ssp. *californica*—California coffeeberry

Frangula californica ssp. *tomentella*—hoary coffeeberry
Rhamnus ilicifolia—hollyleaf redberry

ROSACEAE—ROSE FAMILY

Adenostoma fasciculatum—chamise
Cercocarpus betuloides var. *betuloides*—birchleaf mountain mahogany
Heteromeles arbutifolia—toyon
Prunus ilicifolia—hollyleaf cherry
Pyracantha ssp.—firethorn*
Rosa californica—California rose
Rubus ursinus—Pacific blackberry

RUBIACEAE—MADDER FAMILY

Galium angustifolium ssp. *angustifolium*—chaparral bedstraw
Galium aparine—common bedstraw
Galium porrigens var. *porrigens*—climbing bedstraw

AXIFRAGACEAE—SAXIFRAGE FAMILY

Micranthes californica—Greene's saxifrage

SALICACEAE—WILLOW FAMILY

Populus fremontii ssp. *fremontii*—Fremont cottonwood
Salix laevigata—red willow
Salix lasiolepis—arroyo willow

SIMAROUBACEAE—QUASSIA FAMILY

Ailanthus altissima—tree-of-heaven*

SOLANACEAE—NIGHTSHADE FAMILY

Datura wrightii—Jimson weed
Nicotiana glauca—tree tobacco*
Nicotiana quadrivalvis—Indian tobacco
Solanum Americanum—white nightshade
Solanum douglasii—Douglas' nightshade
Solanum xanti—chaparral nightshade

THEMIDACEAE—ASPARAGUS FAMILY

Dichelostemma capitatum—blue-dicks

VERBENACEAE—VERBENA FAMILY

Verbena lasiostachys—common verbena

VISCACEAE—MISTLETOE FAMILY

Phoradendron villosum—oak mistletoe

VIOLACEAE—VIOLET FAMILY

Viola pedunculata—Johnny-jump-up

ZYGOPHYLLACEAE—CALTROP FAMILY

Tribulus terrestris—puncture weed*

MONOCOTS

AGAVACEAE—AGAVE FAMILY

Hesperoyucca whipplei—chaparral yucca

CYPERACEAE—SEDGE FAMILY

Carex ssp.—sedge

CYPERACEAE—SEDGE FAMILY

Carex ssp.—sedge

IRIDACEAE—IRIS FAMILY

Sisyrinchium bellum—blue-eyed grass

JUNCACEAE—RUSH FAMILY

Juncus balticus—Baltic rush

Juncus mexicanus—Mexican rush

LILIACEA —LILY FAMILY

Calochortus clavatus var. *clavatus X C. clavatus* var. *gracilis*—club-haired mariposa lily x slender mariposa lily

Calochortus clavatus var. *gracilis*—slender mariposa lily

Calochortus plummerae—Plummer's mariposa lily

Calochortus venustus—butterfly mariposa lily

Chlorogalum pomeridianum var. *pomeridianum*—common soap lily

POACEAE—GRASS FAMILY

Avena barbata—slender wild oat*

Avena fatua—wild oat*

Bromus sitchensis var. *carinatus*—California brome

Bromus diandrus—ripgut grass*

Bromus hordeaceus—soft chess*

Bromus rubens—red brome*

Bromus madritensis ssp. *madritensis*—Madrid brome
Bromus tectorum—cheat grass*
Cynodon dactylon—Bermuda grass*
Distichlis spicata—salt grass
Elymus elymoides—bottlebrush squirreltail
Elymus glaucus—blue wildrye
Hordeum murinum—winter barley*
Hordeum vulgare—cultivated barley
Lamarckia aurea—goldentop
Leymus condensatus—giant wildrye
Leymus triticoides—creeping wildrye
Lolium perenne ssp. *multiflorum*—Italian ryegrass
Melica imperfecta—coast melic grass
Muhlenbergia microsperma—littleseed muhly
Schismus barbatus—Mediterranean grass*
Stipa cernua—nodding needlegrass
Stipa lepida—foothill needlegrass
Stipa pulchra—purple needlegrass
Stipa miliacea—smilo grass*
Poa secunda—nodding bluegrass
Polypogon monspeliensis—rabbitsfoot grass*
Stipa coronata—giant needlegrass
Vulpia microstachys var. *microstachys*—annual fescue
Vulpia myuros—rattail fescue*

THEMIDACEAE—BRODIAEA FAMILY

Bloomeria crocea var. *crocea*—goldenstar
Dipterostemon capitatus ssp. capitatus—blue dicks

*signifies introduced (non-native) species

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Appendix D
Wildlife Compendium

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INSECTS

Hymenoptera—Ants, Bees, and Wasps

APIDAE—BEES

Apis mellifera—western honey-bee*

Bombus crotchii—Crotch's bumble bee†

Xylocopa violacea—carpenter bee

FORMICIDAE—ANTS

Pogonomyrmex californicus—California harvester ant

MUTILLIDAE—ANTS

Dasymutilla occidentalis—velvet ant

Lepidoptera—Butterflies

HESPERIIDAE—SKIPPERS

Erynnis funeralis—funereal duskywing

Hylephila phyleus—fiery skipper

LYCAENIDAE—GOSSAMER-WING BUTTERFLIES

Lycaena helloides—purplish copper

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Precis coenia—common buckeye

Vanessa cardui—painted lady

Vanessa virginiensis—American lady

PIERIDAE—WHITES AND SULPHURS

Anthocharis sara—sara orangetip

Colias harfordii—Harford's sulphur

Pieris rapae—cabbage white*

Pontia protodice—checkered white

REPTILES

COLUBRIDAE—COLUBRID SNAKES

Arizona elegans occidentalis—California glossy snake†

Pituophis catenifer—gopher snake

PHRYNOSOMATIDAE—SPINY LIZARDS

Sceloporus occidentalis—great basin fence lizard

Uta stansburiana—common side-blotched lizard

BIRDS

ACCIPITRIDAE—KITES, EAGLES, AND HAWKS

Accipiter cooperii—Cooper's hawk†

Buteo jamaicensis—red-tailed hawk

Buteo lineatus—red-shouldered hawk

Elanus leucurus—white-tailed kite†

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus—bushtit

APODIDAE—SWIFTS

Aeronautes saxatilis—white-throated swift

BOMBYCILLIDAE—WAXWINGS

Bombycilla cedrorum—cedar waxwing

CARDINALIDAE—CARDINALS, GROSBEAKS AND ALLIES

Passerina caerulea—blue grosbeak

Pheucticus melanocephalus—black-headed grosbeak

Piranga ludoviciana—western tanager

CATHARTIDAE—NEW WORLD VULTURES

Cathartes aura—turkey vulture

COLUMBIDAE—PIGEONS AND DOVES

Streptopelia decaocto—Eurasian collared-dove*

Patagioenas fasciata—band-tailed pigeon

Zenaida macroura—mourning dove

CORVIDAE—CROWS AND JAYS

Aphelocoma californica—California scrub-jay

Corvus brachyrhynchos—American crow

Corvus corax—common raven

EMBERIZIDAE—EMBERIZIDS

Aimophila ruficeps—Southern California rufous-crowned sparrow†

Chondestes grammacus—lark sparrow

Melospiza melodia—song sparrow
Melozone crissalis—California towhee
Pipilo maculatus—spotted towhee
Zonotrichia leucophrys—white-crowned sparrow

FALCONIDAE—FALCONS

Falco sparverius—American kestrel
Falco columbarius—merlin

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus—house finch
Spinus lawrencei—Lawrence's goldfinch
Spinus psaltria—lesser goldfinch

HIRUNDINIDAE—SWALLOWS

Hirundo rustica—barn swallow
Petrochelidon pyrrhonota—cliff swallow
Stelgidopteryx serripennis—northern rough-winged swallow
Tachycineta thalassina—violet-green swallow

ICTERIDAE—BLACKBIRDS

Icterus *bullockii*—Bullock's oriole
Icterus cucullatus—hooded oriole
Molothrus ater—brown-headed cowbird

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird
Toxostoma redivivum—California thrasher

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

PARIDAE—TITMICE AND CHICKADEES

Baeolophus inornatus—oak titmouse
Poecile gambeli—mountain chickadee

PARULIDAE—WOOD WARBLERS AND RELATIVES

Dendroica petechia—yellow warbler†
Geothlypis trichas—common yellowthroat
Setophaga coronata—yellow-rumped warbler
Setophaga townsendi—Townsend's warbler
Vermivora celata—orange-crowned warbler

Wilsonia pusilla—Wilson's warbler

PICIDAE—WOODPECKERS

Melanerpes formicivorus—acorn woodpecker
Poecile gambeli—northern flicker
Picoides albolarvatus—white-headed woodpecker
Picoides nuttallii—Nuttall's woodpecker
Picoides pubescens turati—downy woodpecker

PTILOGONATIDAE—SILKY FLYCATCHERS

Phainopepla nitens—phainopepla

REGULIDAE—KINGLETS

Regulus calendula—ruby-crowned kinglet

SITTIDAE—NUTHATCHES

Sitta carolinensis—white-breasted nuthatch

SYLVIIDAE—OLD WORLD WARBLERS AND GNATCATCHERS

Polioptila caerulea—blue-gray gnatcatcher

TIMALIIDAE—BABBLERS

Chamaea fasciata—wrentit

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird
Calypte costae—Costa's hummingbird
Selasphorus sasin—Allen's hummingbird

TROGLODYTIDAE—WRENS

Thryomanes bewickii—Bewick's wren
Troglodytes aedon—house wren

TURDIDAE—THRUSHES

Sialia mexicana—western bluebird

TYRANNIDAE—TYRANT FLYCATCHERS

Empidonax difficilis—Pacific-slope flycatcher
Empidonax hammondii—Hammond's flycatcher
Myiarchus cinerascens—ash-throated flycatcher
Sayornis saya—Say's phoebe
Tyrannus verticalis—western kingbird
Tyrannus vociferans—Cassin's kingbird

TYTONIDAE—BARN OWLS

Tyto alba—barn owl

SITTIDAE—NUTHATCHES

Sitta carolinensis—white-breasted nuthatch

STRIGIDAE—TYPICAL OWLS

Bubo virginianus—great horned owl

STURNIDAE—STARLINGS AND MYNAS

Sturnus vulgaris—European starling*

VIREONIDAE—VIREOS

Vireo gilvus—warbling vireo

MAMMALS

CANIDAE—FOXES, WOLVES AND ALLIES

Canis familiaris—feral dog*

Canis latrans—coyote

Urocyon cinereoargenteus—gray fox

CERVIDAE—DEER, ELK AND ALLIES

Odocoileus hemionus—mule deer

CRICETIDAE—WOODRATS

Neotoma lepida intermedia—San Diego desert woodrat†

Peromyscus maniculatus—deer mouse

Reithrodontomys megalotis—western harvest mouse

FELIDAE—CATS

Lynx rufus—bobcat

Puma concolor californica—California mountain lion†

LEPORIDAE—RABBITS AND HARES

Sylvilagus audubonii—desert (Audubon's) cottontail

MEPHITIDAE—SKUNKS

Mephitis mephitis—striped skunk

MOLOSSIDAE—FREE-TAILED BATS

Eumops perotis californicus—western mastiff bat†

MUSTELIDAE—WEASELS

Taxidea taxus—American badger†

SCIURIDAE—SQUIRRELS, CHIPMUNKS, AND MARMOTS

Otospermophilus beecheyi—California ground squirrel

VESPERTILIONIDAE—EVENING BATS AND VESPER BATS

Antrozous pallidus—pallid bat†

* signifies introduced (non-native) species
* signifies special-status species

Appendix E

Assessment of Special-Status Plant Species Potentially Occurring in the Project Site

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Scientific Name	Common Name	Status[1] (Federal/State/CRPR)	Habitat Requirements	Potential to Occur
Acanthoscyphus parishii var. *parishii*	Parish's oxytheca	None/None/4.2	Sandy or gravelly soils in chaparral and lower montane coniferous forest.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Astragalus brauntonii	Braunton's milk-vetch	FE/SE/1B.1	Closed-cone coniferous forest, chaparral, coastal sage scrub, valley and foothill grassland. Usually carbonate soils. Recent burn or disturbed areas.	Not expected to occur. The Project site is outside of the recorded range of the species and it was not detected during focused surveys.
Berberis nevinii	Nevin's barberry	SE/FE/1B.1	Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub.	Not expected to occur. Suitable habitat is present, and the Project site is within the range of the species, but this conspicuous shrub species was not detected during focused surveys.
Calandrinia breweri	Brewer's calandrinia	None/None/4.2	Chaparral and coastal sage scrub. Usually sandy and loamy soils. Recent burn or disturbed areas.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Calochortus catalinae	Catalina mariposa lily	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Calochortus clavatus var. *clavatus*	club-haired mariposa-lily	None/None/4.3	Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland. Usually occurring on serpentinite, clay, and rocky soils.	Present. The species was detected during focused surveys.
Calochortus clavatus var. *gracilis*	slender mariposa lily	None/None/1B.2	Chaparral and coastal sage scrub.	Present. The species was detected during focused surveys.
Calochortus fimbriatus	late-flowered mariposa-lily	None/None/1B.3	Chaparral, cismontane woodland, riparian woodland. Often associated with serpentinite.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.

Scientific Name	Common Name	Status[1] (Federal/State/CRPR)	Habitat Requirements	Potential to Occur
Calochortus palmeri var. *palmeri*	Palmer's mariposa lily	None/None/1B.2	Mesic soils in chaparral, lower montane coniferous forest, and meadows and seeps.	Not expected to occur. Mesic soils are not present within the Project site and the species was not detected during focused surveys.
Calochortus plummerae	Plummer's mariposa lily	None/None/4.2	Granitic, rock soils within chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, valley and foothill grassland.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Calystegia peirsonii	Peirson's morning-glory	None/None/4.2	Chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland.	Present. The species was detected during focused surveys.
Canbya candida	white pygmy-poppy	None/None/4.2	Gravelly, sandy, and granitic soils in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	Not expected to occur. Habitat for this species is not present within the Project site.
Castilleja gleasoni	Mount Gleason paintbrush	None/None/1B.2	Granitic soils in chaparral, lower montane coniferous forest, and pinyon and juniper woodland.	Not expected to occur. The Project site is located outside of the recorded range and known elevation range for this species.
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1	Disturbed habitats, margins of marshes and swamps, vernally mesic valley and foothill grassland, vernal pools.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Cercocarpus betuloides var. *blancheae*	island mountain-mahogany	None/None/4.3	Closed-cone coniferous forest, Chaparral.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	Candidate/SE/Rank 1B.1	Coastal sage scrub, occurring on sandy soils.	Not expected to occur. Suitable habitat is present and the nearest known occurrence is approximately 3.3 miles to the north; however, the species was not detected during focused surveys.
Chorizanthe parryi var. *parryi*	Parry's spineflower	None/None/1B.1	Sandy or rocky soils in open habitats of chaparral and coastal sage scrub.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.

Scientific Name	Common Name	Status[1] (Federal/State/CRPR)	Habitat Requirements	Potential to Occur
Clinopodium mimuloides	monkey-flower savory	None/None/4.2	Streambanks, mesic soils. Chaparral, North Coast coniferous forest.	Not expected to occur. Mesic soils are not present within the Project site and the species was not detected during focused surveys.
Convolvulus simulans	small-flowered morning-glory	None/None/4.2	Chaparral (openings), coastal sage scrub, valley and foothill grassland. Occurring on clay soils and serpentinite seeps.	Not expected to occur. Clay and serpentine soils are not present within the Project site.
Deinandra minthornii	Santa Susana tarplant	None/Rare/1B.2	Chaparral and coastal sage scrub. Occurring on rocky soils.	Not expected to occur. Suitable habitat is present; however, the Project site is outside of the recorded range of the species and this conspicuous perennial was not detected during focused surveys.
Deinandra paniculata	paniculate tarplant	None/None/4.2	Usually in vernally mesic, sometimes sandy soils in coastal scrub, valley and foothill grassland, and vernal pools.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Delphinium parryi ssp. *purpureum*	Mount Pinos larkspur	None/None/4.3	Chaparral, Mojavean desert scrub, pinyon and juniper woodland.	Not expected to occur. The Project site is located outside of the known elevation range for this species.
Dodecahema leptoceras	slender-horned spineflower	FE/SE/1B.1	Sandy soils in alluvial scrub, chaparral, and cismontane woodland located on hydrologically connected upper flood terraces.	Not expected to occur. The Project site lacks the alluvial scrub and hydrologically connected upper flood terraces the species is associated with, and the species was not detected during focused surveys.
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	None/None/1B.1	Coastal bluff scrub, chaparral, coastal sage scrub, valley and foothill grassland. Rocky soils, often of clay or serpentinite.	Not expected to occur. Rocky, clay, and serpentine soils are not present within the Project site and the species was not detected during focused surveys.
Dudleya cymose ssp. *agourensis*	Agoura Hills dudleya	FT/None/1B.2	Rocky and volcanic soils in chaparral and cismontane woodland.	Not expected to occur. Rocky and volcanic soils are not present within the Project site and the species was not detected during focused surveys.

Scientific Name	Common Name	Status[1] (Federal/State/CRPR)	Habitat Requirements	Potential to Occur
Dudleya multicaulis	many-stemmed dudleya	None/None/1B.2	Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils.	Not expected to occur. Clay soils are not present within the Project site.
Harpagonella palmeri	Palmer's grapplinghook	None/None/4.2	Chaparral, coastal sage scrub, valley and foothill grassland. Occurring in clay soils.	Not expected to occur. Clay soils are not present within the Project site.
Helianthus inexpectatus	Newhall sunflower	None/None/1B.1	Freshwater and seeps in marshes, swamps, and riparian woodland.	Not expected to occur. Freshwater and seeps are not present within the Project site.
Hordeum intercedens	vernal barley	None/None/3.2	Coastal dunes, coastal sage scrub, valley and foothill grassland (saline flats and depressions), vernal pools.	Not expected to occur. Habitat for this species does not occur within the Project site.
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/1B.1	Sandy or gravelly soils in chaparral (maritime), cismontane woodland, and coastal scrub.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Hulsea vestita ssp. *parryi*	Parry's (sunflower) hulsea	None/None/4.3	Granitic or carbonate soils, Rocky soils, Openings. Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest.	Not expected to occur. Habitat for this species does not occur within the Project site.
Juglans californica	Southern California black walnut	None/None/4.2	Chaparral, cismontane woodland, coastal sage scrub, alluvial surfaces.	Present. The species was detected during focused surveys.
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	None/None/4.2	Coastal dunes, meadows and seeps, marshes and swamps.	Not expected to occur. Habitat for this species does not occur within the Project site.
Keckiella ternata	scarlet keckiella	None/None/None[2]	Chaparral, lower montane coniferous forest; canyons and slopes.	Present. The species was detected during focused surveys.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1	Playas, vernal pools, marshes and swamps (coastal salt).	Not expected to occur. Playas, vernal pools, and marshes and swamps are not present within the Project site.
Lepidium virginicum var. *robinsonii*	Robinson's pepper grass	None/None/4.3	Chaparral, coastal sage scrub.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.

Scientific Name	Common Name	Status[1] (Federal/State/CRPR)	Habitat Requirements	Potential to Occur
Lilium humboldtii ssp. *ocellatum*	ocellated Humboldt lily	None/None/4.2	Chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, riparian woodland. Occurring in openings.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Lupinus paynei	Payne's bush lupine	None/None/1B.1	Coastal scrub, riparian scrub, valley and foothill grassland.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Malacothamnus davidsonii	Davidson's bush-mallow	None/None/1B.2	Chaparral, cismontane woodland, coastal sage scrub, riparian woodland.	Not expected to occur. Suitable habitat is present, and the Project site is within the range of the species, but this conspicuous shrub species was not detected during focused surveys.
Monardella hypoleuca ssp. *hypoleuca*	white-veined monardella	None/None/1B.3	Chaparral and cismontane woodland.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Navarretia fossalis	spreading navarretia	FT/None/1B.1	Vernal pools, playas, chenopod scrub, marshes and swamps (assorted shallow freshwater).	Not expected to occur. Vernal pools, playas, chenopod scrub, and marshes and swamps are not present within the Project site.
Navarretia ojaiensis	Ojai navarretia	None/None/1B.1	Chaparral (openings), coastal scrub (openings), valley and foothill grassland.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Navarretia setiloba	Piute Mountains navarretia	None/None/1B.1	Clay or gravelly loam in cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland.	Not expected to occur. Clay or gravelly loam soils are not present within the Project site and the species was not detected during focused surveys.
Nolina cismontana	chaparral nolina	None/None/1B.2	Chaparral, coastal sage scrub. Occurring on sandstone or gabbro substrates.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.

Scientific Name	Common Name	Status[1] (Federal/State/CRPR)	Habitat Requirements	Potential to Occur
Opuntia basilaris var. *brachyclada*	short-joint beavertail	None/None/1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	Not expected to occur. Suitable habitat is present, but the Project site is outside the recorded range of the species and it was not detected during focused surveys.
Orcuttia californica	California Orcutt grass	FE/SE/1B.1	Vernal pools.	Not expected to occur. No vernal pools or seasonal pools are present within the Project site and the species was not detected during focused surveys.
Phacelia hubbyi	Hubby's phacelia	None/None/4.2	Gravelly, rocky, and talus soils in chaparral, coastal scrub, and valley and foothill grassland.	Not expected to occur Gravelly, rocky, and talus soils are not present at the Project site.
Phacelia mohavensis	Mojave phacelia	None/None/4.3	Sandy or gravelly soils in cismontane woodland, lower montane coniferous forests, meadows and seeps, pinyon and juniper woodland.	Not expected to occur. Habitat for this species is not present at the Project site.
Physalis lobata	lobed ground-cherry	None/None/2B.3	Mojavean desert scrub, playas.	Not expected to occur. Habitat for this species is not present within the Project site.
Pseudognaphalium leucocephalum	white rabbit-tobacco	None/None/2B.2	Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Senecio aphanactis	chaparral ragwort	None/None/4.3	Chaparral, cismontane woodland, coastal scrub. Sometimes associated with alkaline soils.	Low potential to occur. Suitable habitat is present, and the Project site is within the range of the species, but the species was not detected during focused surveys.
Stylocline masonii	Mason's neststraw	None/None/1B.1	Sandy soils in chenopod scrub and pinyon and juniper woodland.	Not expected to occur. Habitat for this species is not present within the Project site.
Symphyotrichum greatae	Greata's aster	None/None/1B.3	Mesic soils in broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland.	Not expected to occur. Mesic soils are not present within the Project site and the species was not detected during focused surveys.

Notes:

[1] **Status Abbreviations**

Federal and State Statuses
FE: Federally listed as endangered
FT: Federally listed as threatened
SE: State listed as endangered
ST: State listed as threatened
SR: State designated as rare
CRPR: California Rare Plant Rank
CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3: Plants about which more information is needed
CRPR 4: Plants of limited distribution
- .1 – Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- .2 – Moderately threatened in California (20% - 80% of occurrences threatened/moderate degree and immediacy of threat)
- .3 – Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat)

[2] Recognized by the County as a Sensitive Local Native Resources

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Appendix F

Assessment of Special-Status Wildlife Species Potentially Occurring in the Project Site

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Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur[2]
Invertebrates				
Bombus crotchii	Crotch bumble bee	None/CSE	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert. Open grassland and scrub communities supporting suitable floral resources.	Present. The species was detected foraging in the Project site during focused surveys. No nests/burrows were observed.
Branchinecta lynchi	vernal pool fairy shrimp	FT/None	Seasonal vernal pools.	Not expected to occur. Habitat for this species does not occur within the Project site.
Danaus plexippus pop. 1	monarch butterfly - California overwintering population	FC/None	Roosts in winter in wind-protected tree groves along the California coast from northern Mendocino to Baja California, Mexico.	Moderate potential to occur during spring/summer months only for foraging. Not expected to occur during winter roosting period. No distinctive stands of milkweed (*Asclepias* spp.) host plants were noted occurring within the Project footprint, so there is low potential for the species to breed on site.
Euphydryas editha quino	quino checkerspot butterfly	FE/None	Larval and adult phases each have distinct habitat requirements tied to host plant species and topography. Larval host plants include Plantago erecta and Castilleja exserta. Adults occur on sparsely vegetated rounded hilltops and ridgelines and are known to disperse through disturbed habitats to reach suitable nectar plants.	Not expected to occur. This species is considered extirpated from the vicinity of the Project site.
Fish				
Catostomus santaanae	Santa Ana sucker	FT/None	Small, shallow streams, less than 7 meters in width, with currents ranging from swift in the canyons to sluggish in the bottom lands. 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.	Not expected to occur. Aquatic habitat is not present within the Project site.

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur[2]
Gasterosteus aculeatus williamsoni	unarmored threespine stickleback	FE/SE, FP	Slow-moving reaches or quiet-water microhabitats in streams and rivers, usually shaded by dense and abundant vegetation.	Not expected to occur. Aquatic habitat is not present within the Project site.
Gila orcutti	arroyo chub	None/SSC	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.	Not expected to occur. Aquatic habitat is not present within the Project site.
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	None/SSC	Occurs in the headwaters of the Santa Ana and San Gabriel Rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temperatures of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Not expected to occur. Aquatic habitat is not present within the Project site.
Amphibians				
Anaxyrus californicus	arroyo toad	FE/SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Not expected to occur. Slow-moving streams with open, sandy terraces are not present within the Project site or within one-half mile of the Project site (based on aerial imagery review).
Rana draytonii	California red-legged frog	FT/SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	Not expected to occur. Permanent sources of deep water are not present within the Project site or within one-half mile of the Project site (based on aerial imagery review).
Spea hammondii	western spadefoot	None/SSC	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Not expected to occur. No breeding habitat in the form of seasonal pools are present within the Project site.
Taricha torosa	Coast Range newt	None/SSC	In southern California, drier chaparral, oak woodland, and grasslands are used. The species needs intermittent streams for breeding.	Not expected to occur. Intermittent streams are not present.

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur[2]
Reptiles				
Anniella sp. 1	California legless lizard	None/SSC	Common in several habitats but especially in coastal dune, valley-foothill, chaparral, and coastal scrub types.	High potential to occur. Suitable habitat is present for the species and there are recent local records.
Arizona elegans occidentalis	California glossy snake	None/SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Present. The species was detected during focused surveys.
Aspidoscelis tigris stejnegeri	coastal whiptail	None/SSC	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	High potential to occur. Suitable habitat is present for the species and there are recent local records.
Emys marmorata	western pond turtle	None/SSC	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	Not expected to occur. No ponds or in-stream pools are present within the Project site or within one-half mile of the Project site (based on aerial imagery review).
Phrynosoma blainvillii	coast horned lizard	None/SSC	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	High potential to occur. Suitable habitat is present for the species and there are recent local records.
Thamnophis hammondii	two-striped garter snake	None/SSC	Aquatic snake typically associated with wetland habitats such as streams, creeks, and pools.	Not expected to occur. Aquatic habitat is not present within the Project site.
Birds				
Accipiter cooperi (nesting)	Cooper's hawk	None/WL	Primarily occurs in riparian areas and oak woodlands, most commonly in montane canyons. Known to use urban areas, occupying trees among residential and commercial.	Present. The species was detected during biological surveys.

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur[2]
Agelaius tricolor (nesting colony)	tricolored blackbird	None/CE, SSC	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	Not expected to occur (nesting). Suitable breeding habitat is not present.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL [2]	Oak woodlands, arid scrub, and grassland margins.	Present. The species was detected during biological surveys.
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Open grassland and prairies with patches of bare ground. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	Not expected to occur (nesting). Suitable breeding habitat for the species is not present. The species may be transient during foraging and migration.
Aquila chrysaetos (nesting and wintering)	golden eagle	None/FP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Not expected to occur (nesting and wintering). Suitable nesting and wintering habitat are not present. This species was not observed nesting/breeding during 2003-2005, 2015, and 2020-2022 field efforts. The species may be transient in the Project site during foraging.
Artemisiospiza belli belli	Bell's sage sparrow	None/WL	Chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains.	Moderate potential to occur. Suitable nesting and foraging habitat are present, but most records of the species are from further inland.
Athene cunicularia	burrowing owl	None/SSC	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Low potential to occur. The species was not detected during focused surveys and breeding onsite is not expected due to the lack of areas of low growing vegetation and associated foraging areas. The species may be transient in the site during winter and migration.

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur[2]
Buteo swainsoni (nesting)	Swainson's hawk	None/ST	Summer in wide open spaces of the American West. Nest in grasslands but can use sage flats and agricultural lands. Nests are placed in lone trees.	Not expected to occur (nesting). Suitable nesting habitat for the species is not present and the Project site is located outside of the known breeding range for this species. The species may be transient in the Project site during migration.
Cardellina pusilla	Wilson's warbler	None/None [2]	Breeds across Canada and the western United States in willow, alder, and shrubby thickets near streams. Also uses forest edges or forest openings with a dense understory of flowering plants such as aspen stands.	Present. This species was observed foraging within the Project site, but was not observed nesting/breeding during 2003-2005, 2015, and 2020-2022 field efforts. It is not expected to nest on site since the Project site is outside the breeding range of the species.
Cathartes aura (breeding)	turkey vulture	None/None [2]	Wide-range of foraging habitats in southern California. Nesting occurs on rocky cliffs, caves, mammal burrows and abandoned hawk or heron nests.	Present. This species was observed foraging within the Project site, but was not observed nesting/breeding during 2003-2005, 2015, and 2020-2022 field efforts and suitable nesting habitat is not present.
Catharus ustulatus (nesting)	Swainson's thrush	None/None [2]	Coniferous forests and willow thickets.	Low potential to occur. Only a limited amount (1.25 acre) of willow habitat is present on site and is not expected to support this species. In addition, no coniferous forest habitats are located within one-half mile of the Project site (based on aerial imagery review).
Chordeiles acutipennis	lesser nighthawk	None/None [2]	Open areas in arid and semi-arid lowlands. Eggs on the ground, often in areas with small pebbles.	Moderate potential to occur (foraging). Suitable habitat for foraging is present in the eastern portion of the Project site and there are recent records in the Project vicinity (eBird 2023). Not expected to occur for nesting. Suitable nesting habitat is not present.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT/SE	Dense, wide riparian woodlands with well-developed understories.	Not expected to occur. Riparian stands within the Project site consist of low, dense riparian scrub and oak riparian lacking a developed understory.

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur[2]
Elanus leucurus (nesting)	white-tailed kite	None/FP	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	Present. This species was observed foraging within the Project site, but was not observed nesting/breeding during 2003-2005, 2015, and 2020-2022 field efforts.
Eremophila alpestris actia	California horned lark	None/WL	Occupies a variety of open habitats, usually where trees and large shrubs are absent.	Low potential to occur. Large areas of open ground or sparse vegetative cover expected to support groups of this gregarious species are not located within the Project site.
Falco mexicanus (nesting)	prairie falcon	None/WL [2]	Breeds in mountainous regions and shortgrass prairies, nesting on cliff ledges.	Not expected to occur (nesting). This species was not observed nesting/breeding during 2003-2005, 2015, and 2020-2022 field efforts. The species may be transient in the Project site during foraging.
Geococcyx occidentalis	greater roadrunner	None/None [2]	Arid scrub, chaparral, savannah, and open woodlands.	High potential to occur. Suitable habitat is present on the Project site and continues to the west.
Gymnogyps californianus	California condor	FE/SE, FP	Nests on high mountain cliff faces. Scavenges in habitats ranging from Pacific beaches to mountain forests and meadows.	Low potential to occur (foraging only). While the nearest known nesting occurrences include the Sespe Condor Sanctuary and Tejon Ranch, approximately 17 miles from the Project site at the nearest, this species maintains a large home range and may travel large distances to forage for carrion. As such, the species may be transient in the Project site during foraging. USFWS tracking data for the species from 2022 and 2023 was reviewed, and the species did not have records onsite or within 1.5 miles, and only 20 records within five miles of the Project site (USFWS 2024).
Icteria virens	yellow-breasted chat (nesting)	None/SSC	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Not expected to occur (nesting). Suitable nesting habitat for the species is not present. The species may be transient during migration.

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur[2]
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Forages over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	Low potential to occur (nesting). Local records of the species are from outside the breeding season (eBird 2023), with breeding records occurring further inland (CDFW 2023a). As such, the species may forage on the Project site.
Picoides villosus	hairy woodpecker	None/None [2]	Deciduous forests and forest edges.	Moderate potential to occur. Suitable habitat is present but there are many records of the species in the Project vicinity (eBird 2023).
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Low elevation coastal sage scrub and coastal bluff scrub.	Not expected to occur. The species was not detected during focused surveys.
Riparia riparia (nesting)	bank swallow	None/ST	Low areas along rivers, streams, ocean coasts or reservoirs. Often use human-made sites.	Not expected to occur. Steep banks and human-made structures are not present within the Project site.
Setophaga petechia (nesting)	yellow warbler	None/SSC	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Present. The species was detected during biological surveys and suitable habitat is present.
Vireo bellii pusillus	least Bell's vireo	FE/SE	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Not expected to occur. The species was not detected during focused surveys.
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Present. The species was detected during focused surveys.

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur[2]
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Coniferous forests and woodlands, deciduous riparian woodland, semi-desert and montane shrublands.	Low potential to occur (foraging only). This species has the potential to forage within the site but was not detected during focused surveys.
Euderma maculatum	spotted bat	None/SSC	Arid or ponderosa pine forests and marshlands. Roost in small cracks in cliffs and stony outcrops.	Not expected to occur. Pine forest and marshland habitats are not present within the Project site.
Eumops perotis californicus	western mastiff bat	None/SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Present. This species was detected in a foraging role during focused surveys.
Lasionycteris noctivagans	silver-haired bat	None/SSC	Temperate, northern hardwoods with ponds or streams nearby. Roost in hollow snags and bird nests.	Not expected to occur. The species was not observed during focused surveys.
Lasiurus cinereus	hoary bat	None/SSC	Prefers trees at the edge of clearings, but have been found in trees in heavy forests, open wooded glades, and shade trees along urban streets and in city parks.	Present. The species was detected during focused surveys.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/SSC	Occupies a variety of habitats but is most common among shortgrass habitats. Also occurs in sage scrub but needs open habitats.	Moderate potential to occur. Suitable habitat is present in the eastern portion and canyon bottoms of the Project site.
Macrotus californicus	California leaf-nosed bat	None/SSC	Roosts in caves, mines, and buildings.	Not expected to occur. The species was not observed during focused surveys.
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	Present. The species was detected during focused surveys.
Onychomys torridus ramona	southern grasshopper mouse	None/SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	Low potential to occur. Suitable habitat for this species does not occur within the site.

Scientific Name	Common Name	Status[1] (Federal/State)	Habitat	Potential to Occur[2]
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/SSC	Fine, sandy soils in coastal sage scrub and grasslands.	Not expected to occur. Sandy soils are not present in association with coastal sage scrub and grassland habitats within the Project site, and the Project site is outside the recorded range of the species.
Puma concolor californica	California mountain lion	None/SC	A wide variety of habitats ranging from montane coniferous forest to low elevation desert scrublands.	Present. The species was detected during focused surveys.
Taxidea taxus	American badger	None/SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	Present. The species was detected during biological surveys.

Notes:

[1] Status Abbreviations

FE: Federally listed as endangered
FT: Federally listed as threatened
SE: State listed as endangered
ST: State listed as threatened
CSE: Candidate for State Endangered
CST: Candidate for State Threatened
FP: California Fully Protected Species
SSC: California Species of Special Concern
WL: CDFW Watch List

[2] Recognized by the County as a Sensitive Local Native Resources

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Appendix G

Southwestern Willow Flycatcher and Least Bell's Vireo Surveys

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GLENN LUKOS ASSOCIATES
Regulatory Services

August 30, 2021

Mr. Chris Kofron
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

SUBJECT: Submittal Report for Southwestern Willow Flycatcher and Least Bell's Vireo Surveys for the Lyons Canyon Project, Near the City of Santa Clarita, Los Angeles County, California

Dear Mr. Kofron:

This letter report summarizes the methodology and findings of presence/absence surveys for the federally listed endangered southwestern willow flycatcher (***Empidonax traillii extimus***) ("SWIFL") conducted by Glenn Lukos Associates, Inc. (GLA) within the above referenced property located near the City of Santa Clarita, Los Angeles County, California. In addition, this report also provides the result of surveys for the federally listed endangered least Bell's vireo (***Vireo bellii pusillus***) ("LBV") that were conducted in conjunction with the flycatcher surveys.

SWIFL surveys were conducted from May 20 through July 17, 2021 in all areas of suitable habitat in accordance with U.S. Fish and Wildlife Service (USFWS) guidelines. LBV surveys were conducted from April 18 through July17, 2021 in all areas of suitable habitat in accordance with U.S. Fish and Wildlife Service (USFWS) guidelines. The SWIFL, additional willow flycatcher ("WIFL") subspecies, and the LBV were not detected during the focused surveys.

1.0 INTRODUCTION

Southwestern Willow Flycatcher (SWIFL)

The SWIFL is a small, migratory songbird, which inhabits riparian habitats throughout southern California and is one of four subspecies of willow flycatcher (WIFL) currently recognized. It was officially designated as a state-endangered species on January 2, 1991 and federally designated as endangered on March 29, 1995. The SWIFL measures about 5.75 inches (15 cm) in length, and weighs only about 0.4 ounces (12 g). Overall, it is roughly the size of a small

sparrow. Both sexes look alike. Its appearance is overall greenish or brownish gray above, with a white throat that contrasts with a pale olive breast. The belly is pale yellow. Two white wing bars are visible, but the eye ring is faint or absent. The upper mandible is dark and the lower mandible light (USGS). It closely resembles the other races of willow flycatcher, and several other species of the ***Empidonax*** genus, particularly the closely related Alder flycatcher (***Empidonax alnorum***). The SWIFL breeds in relatively dense riparian habitats in all or parts of seven southwestern states, from near sea level to over 2,000 m (6,100 ft). More specifically, the SWIFL breeds in riparian habitats along rivers, streams, or other wetlands, where relatively dense growths of trees and shrubs are established, near or adjacent to surface water or underlain by saturated soil (McCabe 1991). Common tree and shrub species comprising nesting habitat include willow (***Salix*** sp.), boxelder (***Acer negundo***), tamarisk (***Tamarix ramosissima***), and Russian olive (***Eleagnus angustifolia***) (USFWS 2002).

Habitat characteristics such as plant species composition, size and shape of habitat patch, canopy structure, vegetation height, and vegetation density vary across the subspecies range. However, regardless of the plant species composition or height, occupied sites usually consist of dense vegetation in the patch interior, or an aggregate of dense patches interspersed with openings. In most cases this dense vegetation occurs within the first 3-4 m (10-13 ft) above ground. These dense patches are often interspersed with small openings, open water or marsh, or shorter/sparser vegetation creating a mosaic that is not uniformly dense (USFWS 2002). The SWIFL winters in Mexico and Central America and northern South America (Phillips 1948, Gorsiki 1969, McCabe 1991, Koronkiewicz et al. 1998, Unitt 1999).

Least Bell's Vireo (LBV)

The LBV is a small, migratory songbird, which inhabits riparian habitats throughout southern California. The LBV is one of four subspecies of Bell's Vireo recognized by the American Ornithologist's Union (AOU 1957) and is the western-most subspecies, breeding entirely within California and northern Baja California. The LBV was officially designated as a state-endangered species on October 2, 1980 and achieved federally endangered status on May 2, 1986 (USFWS 1986).

The LBV generally begins arriving to its breeding grounds during the third week in March. The height of the breeding season generally extends from April 10 through July 31, although it can begin before and end later than these dates. During the breeding season, the LBV primarily occupies riverine riparian habitats that typically feature dense cover within 1-2 meters of the ground and a dense, stratified canopy. It inhabits low, dense riparian growth along water or along dry parts of intermittent streams. Typically, the species is associated with southern willow scrub, cottonwood forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, wild blackberry, or mesquite in desert localities.

The LBV primarily nests in small, remnant segments of vegetation typically dominated by willows and mule fat but may also use a variety of shrubs, trees, and vines. The birds forage in riparian and adjoining chaparral or scrub habitat (Salata 1983). Nests are typically built within one meter of the ground in the fork of willows (***Salix*** sp.), mule fat (***Baccharis salicifolia***), wild rose (***Rosa californica***), or other understory vegetation (Franzreb 1989). Cover surrounding nests is moderately open mid-story, with an overstory of willow, cottonwood, sycamore, or oak. Crown cover is usually more than 50 percent and contains occasional small openings. The most critical structural component to LBV breeding habitat is a dense shrub layer at one to three meters (three to 10 feet) above the ground (Goldwasser 1981, Franzreb 1989).

During the spring and fall migration, the LBV occupies a wider range of habitats including coastal sage scrub and woodland habitats. The LBV generally departs to its wintering grounds during August and September. The LBV winters in southern Baja California and central Mexico. Winter range habitat includes thorn scrub vegetation adjacent to watercourses or in riparian gallery forests along the west coast of north and central Mexico. The LBV generally does not occur within California during its wintering season, but some occurrences near San Diego have been documented. Decreases in populations of least Bell's vireo have been attributed to habitat degradation/destruction and cowbird parasitism.

2.0 SITE LOCATION AND DESCRIPTION

The Project site (survey area) occurs near the City of Santa Clarita, Los Angeles County, California [Exhibit 1 – Regional Map]. The Project site is located south of the Stevenson Ranch community and west of the City of Santa Clarita. The Project site is bound by designated open space and privately owned, undeveloped land to the south and west, The Old Road and Interstate 5 to the east, and single-family residential and commercial development to the north. The Project site is depicted in Sections 4 and 9 of Township 3 North, Range 16 West of the U.S. Geological Survey (USGS) Oat Mountain, California 7.5" topographic quadrangle map (dated 1952 and photorevised in 1969) [Exhibit 2 – Vicinity Map]. Specifically, the Universal Transverse Mercator (UTM) coordinates approximately corresponding to the site are 356075.65 mE and 3803986.45 mN.

Dominant riparian species within the survey area includes a mixture of the following species: mulefat (***Baccharis salicifolia***), blue elderberry (***Sambucus cerulea***), red willow (***Salix laevigata***), black willow (***Salix gooddingii***), Fremont's cottonwood (***Populus fremontii***), and coast live oak (***Quercus agrifolia***). Other common species includes sandbar willow (***Salix exigua***), yerba santa (***Eriodictyon californicum***), bush mallow (***Malacothamnus fasciculatus***), shortpod mustard (***Hirschfeldia incana***), and coyote brush (***Baccharis pilularis***).

3.0 METHODOLOGY

Surveys for the SWIFL were conducted in accordance with the 2010 U.S. Fish and Wildlife Service (USFWS) guidelines[1], which stipulate that five surveys (divided into three survey periods) shall be conducted in all areas of suitable habitat. One survey was conducted during the first survey period (May 15 to May 31). Two surveys were conducted during the second survey period (June 1 to June 24), and two surveys were conducted during the third survey period (June 25 to July 17). GLA biologist Jeff Ahrens (TE 052159-5) conducted SWIFL surveys on May 20, June 4, June 19, July 9, and July 17, 2021.

Surveys for the LBV were conducted in accordance with the 2001 USFWS survey protocol, which stipulates all riparian areas and any other potential vireo habitats should be surveyed at least (8) times during the period from April 18 to July 17. GLA biologist Jason Fitzgibbon conducted LBV surveys on April 18, April 29, and May 10, 2021. Mr. Ahrens conducted LBV surveys on May 20, June 4, June 19, July 9, and July 17, 2021. Per USFWS guidance, when LBV and SWIFL surveys were conducted concurrently, the SWIFL survey was conducted first, followed by the LBV survey on the return pass.

All surveys were conducted during the morning hours and were completed before 11:00 A.M. No surveys were conducted during extreme weather conditions (i.e., winds exceeding 15 miles per hour, rain, or temperatures in excess of 95ºF). All areas of suitable habitat were surveyed on foot by walking slowly and methodically. Taped vocalizations primarily using the WIFL's main contact call "fitz-bew" were used to elicit responses from WIFLs that might be present on site. The detection method of WIFLs that might be present on site was based on both sight and call. The presence/absence of LBV was determined by identifying all birds by sight and call, aided by the use of binoculars. No taped vocalizations were used to elicit a response from LBV or any other species potentially present.

Weather conditions during the LBV surveys were conducive to a high level of bird activity. Temperatures ranged from approximately 54 degrees Fahrenheit to 88 degrees Fahrenheit. Wind speeds ranged from 0-12 miles per hour during the surveys. Table 1 summarizes the survey dates and weather information for each survey date. Weather conditions during the SWIFL surveys were conducive to a high level of bird activity. Temperatures ranged from approximately 54 degrees Fahrenheit to 85 degrees Fahrenheit. Wind speeds ranged from 0-4 miles per hour during the surveys. Table 2 summarizes the survey dates and weather information for each survey date.

[1] ***A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher***, prepared by the USGS.

Table 1. Summary of SWIFL Survey Dates and Weather Conditions

Date	Survey	Start/End Time	Surveyor	Temp ºF, (start/end)	Wind Speed (MPH) (start/end)	% Cloud Cover (start/end)
5/20/21	SWIFL	0700/1105	JA	54/80	1-2/2-3	0/0
6/4/21	SWIFL	0630/1040	JA	61/75	2-4/1-3	0/0
6/19/21	SWIFL	0625/1035	JA	64/77	0-1/1-2	50/20
7/9/21	SWIFL	0630/1040	JA	67/85	2-3/2-3	0/0
7/17/21	SWIFL	0625/1030	JA	63/80	1-3/1-2	30/20

Table 2. Summary of LBV Survey Dates and Weather Conditions

Date	Survey	Start/End Time	Surveyor	Temp ºF, (start/end)	Wind Speed (MPH) (start/end)	% Cloud Cover (start/end)
4/18/21	LBV	0845/1100	JF	70/88	7-12/7-12	0/0
4/29/21	LBV	0545/0900	JF	56/68	2-3/2-3	0/0
5/10/21	LBV	0843/1100	JF	63/74	1-5/1-5	50/0
5/20/21	LBV	0700/1105	JA	54/80	1-2/2-3	0/0
6/4/21	LBV	0630/1040	JA	61/75	2-4/1-3	0/0
6/19/21	LBV	0625/1035	JA	64/77	0-1/1-2	50/20
7/9/21	LBV	0630/1040	JA	67/85	2-3/2-3	0/0
7/17/21	LBV	0625/1030	JA	63/80	1-3/1-2	30/20

JA = Jeff Ahrens, JF = Jason Fitzgibbon

4.0 RESULTS

GLA biologists did not detect the SWIFL (including any additional WIFL subspecies) or the LBV during the focused surveys. The brown-headed cowbird (***Molothrus ater***), a known nest parasite of the LBV and of other riparian bird species was also not detected during the focused surveys. Sensitive species detected on site during the focused surveys included the yellow warbler (***Setophaga petechia***).

Bird species commonly observed during the focused surveys included the following: song sparrow (***Melospiza melodia***), mourning dove (***Zenaida macroura***), common yellowthroat (***Geothlypis trichas***), bushtit (***Psaltriparus minimus***), California scrub jay (***Aphelocoma californica***), oak titmouse (***Baeolophus inornatus***), Say's phoebe (***Sayornis saya***), phainopepla (***Phainopepla nitens***), Nuttall's woodpecker (***Picoides nuttallii***), black-headed grosbeak

(***Pheucticus melanocephalus***), house finch (***Carpodacus mexicanus***), lesser goldfinch (***Spinus psaltria***), Anna's hummingbird (***Calypte anna***), black phoebe (***Sayornis nigricans***), Allen's hummingbird (***Selasphorus sasin***), house wren (***Troglodytes aedon***), and northern mockingbird (***Mimus polyglottos***). An avian compendium is included in Appendix A.

Data sheets and an avian compendium listing all avian species detected during the focused surveys is included at the end of this report. Exhibits 3 and 4 depict the survey area on an aerial map and topographic map, respectively.

If you have any questions, please contact me at jahrens@wetlandpermitting.com or (949) 340-2521.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.

Jeff Ahrens — TE-052159-5 — August 30, 2021

Jeff Ahrens — Permit # — Date
Biologist

p:0218-19_SWIFL(2021).rpt

5.0 REFERENCES

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APPENDIX A

AVIAN COMPENDIUM

The avian compendium lists bird species identified on the Site.

† = special-status species

ACCIPITERIDAE	**Hawks, Old World Vultures and Harriers**
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
AEGITHALIDAE	**Bushtit**
Psaltriparus minimus	bushtit
APODIDAE	**Swifts**
Aeronautes saxatalis	white-throated swift
CARDINALIDAE	**Cardinals, Grosbeaks And Allies**
Pheucticus melanocephalus	black-headed grosbeak
COLUMBIDAE	**Pigeons and Doves**
Zenaida macroura	mourning dove
CORVIDAE	**Jays, Magpies and Crows**
Aphelocoma californica	California scrub-jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
EMBERIZIDAE	**Emberizines**
Aimophila ruficeps	rufous-crowned sparrow
Chondestes grammacus	lark sparrow
Melospiza melodia	song sparrow
Melozone crissalis	California towhee
Pipilo maculatus	spotted towhee
FRINGILLIDAE	**Finches**
Carduelis psaltria	lesser goldfinch
Carpodacus mexicanus	house finch
HIRUNDINIDAE	**Swallows**
Hirundo rustica	barn swallow
Stelgidopteryx serripennis	northern rough-winged swallow

ICTERIDAE	**Blackbirds**
Icterus bullockii	Bullock's oriole
MIMIDAE	**Mockingbirds and Thrashers**
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
ODONTOPHORIDAE	**New World Quails**
Callipepla californica	California quail
PARULIDAE	**Wood Warblers and Relatives**
Cardellina pusilla	Wilson's warbler
Geothlypis trichas	common yellowthroat
†***Setophaga petechial***	yellow warbler
Vermivora celata	orange-crowned warbler
PICIDAE	**Woodpeckers**
Melanerpes formicivorus	acorn woodpecker
Picoides nuttallii	Nuttall's woodpecker
PTILOGONATIDAE	**Silky-flycatchers**
Phainopepla nitens	phainopepla
SITTIDAE	**Nuthatches**
Sitta carolinensis	white-breasted nuthatch
STRIGIDAE	**True Owls**
Bubo virginianus	great horned owl
SYLVIIDAE	**Sylviid warblers**
Chamaea fasciata	wrentit
TROCHILIDAE	**Hummingbirds**
Calypte anna	Anna's hummingbird
Calypte costae	Costa's hummingbird
Selasphorus sasin	Allen's hummingbird
TROGLODYTIDAE	**Wrens**
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
TYRANNIDAE	**Tyrant Flycatchers**
Myiarchus cinerascens	ash-throated flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe

Tyrannus verticalis	western kingbird
Tyrannus vociferans	Cassin's kingbird

TYTONIDAE	**Barn Owls**
Tyto alba	barn owl

Appendix 1. Willow Flycatcher Survey and Detection Form

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (http://www.fws.gov/southwest/es/arizona/) for the most up-to-date version.

Willow Flycatcher (WIFL) Survey and Detection Form (revised April 2010)

Site Name The Trails at Lyons Canyon Project State CA County Los Angeles
USGS Quad Name Oat Mountain Elevation ~427 (meters)
Creek, River, Wetland, or Lake Name Unnamed
Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes X No ___

Survey Coordinates: Start: E 355527.84 N 3803840.54 UTM Datum 83 (See instructions)
Stop: E 355909.66 N 3804070.44 UTM Zone 11
If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.
*** Fill in additional site information on back of this page ****

Survey # / Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N If Yes, number of nests	Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator	GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary.
Survey # 1 Observer(s) Jeff Ahrens	Date 5/20/21 Start 0700 Stop 1105 Total hrs 4hr 5m	—	—	—	—	—	#Birds / Sex / UTM E / UTM N
Survey # 2 Observer(s) JA	Date 6/4/21 Start 0630 Stop 1040 Total hrs 4hr 10m	—	—	—	—	—	#Birds / Sex / UTM E / UTM N
Survey # 3 Observer(s) JA	Date 6/19/21 Start 0625 Stop 1035 Total hrs 4hr 10m	—	—	—	—	—	#Birds / Sex / UTM E / UTM N
Survey # 4 Observer(s) JA	Date 7/9/21 Start 0630 Stop 1040 Total hrs 4hr 10m	—	—	—	—	—	#Birds / Sex / UTM E / UTM N
Survey # 5 Observer(s) JA	Date 7/17/21 Start 0625 Stop 1030 Total hrs 4hr 5m	—	—	—	—	—	#Birds / Sex / UTM E / UTM N

Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total Survey Hrs 20hr 40m	Total Adult Residents	Total Pairs	Total Territories	Total Nests	Were any Willow Flycatchers color-banded? Yes___ No ___ If yes, report color combination(s) in the comments section on back of form and report to USFWS.
	—	—	—	—	

Reporting Individual Jeff Ahrens Date Report Completed 8/30/21
US Fish and Wildlife Service Permit # TE 052159-5 State Wildlife Agency Permit # 1933007

Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.

Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.

Reporting Individual Jeff Ahrens Phone # (949) 322-9990
Affiliation Glenn Lukos Associates E-mail wildlife_biologist@yahoo.com
Site Name The Trails at Lyons Canyon Project Date Report Completed 8/30/21

Did you verify that this site name is consistent with that used in previous years? Yes X No ____ Not Applicable ____
If site name is different, what name(s) was used in the past? ____
If site was surveyed last year, did you survey the same general area this year? Yes ____ No ____ If no, summarize below.
Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area : Federal ____ Municipal/County ____ State ____ Tribal ____ Private X
Name of Management Entity or Owner (e.g., Tonto National Forest) NUWI Lyons Canyon, LLC

Length of area surveyed: ~1600 (meters)

Vegetation Characteristics: Mark the category that best describes the predominant tree/shrub foliar layer at this site (check one):

X Native broadleaf plants (entirely or almost entirely, > 90% native, includes high-elevation willow)

____ Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
Sambucus cerulea, Salix gooddingii, Baccharis salicifolia, Quercus agrifolia

Average height of canopy (Do not include a range): 6-8 (meters)

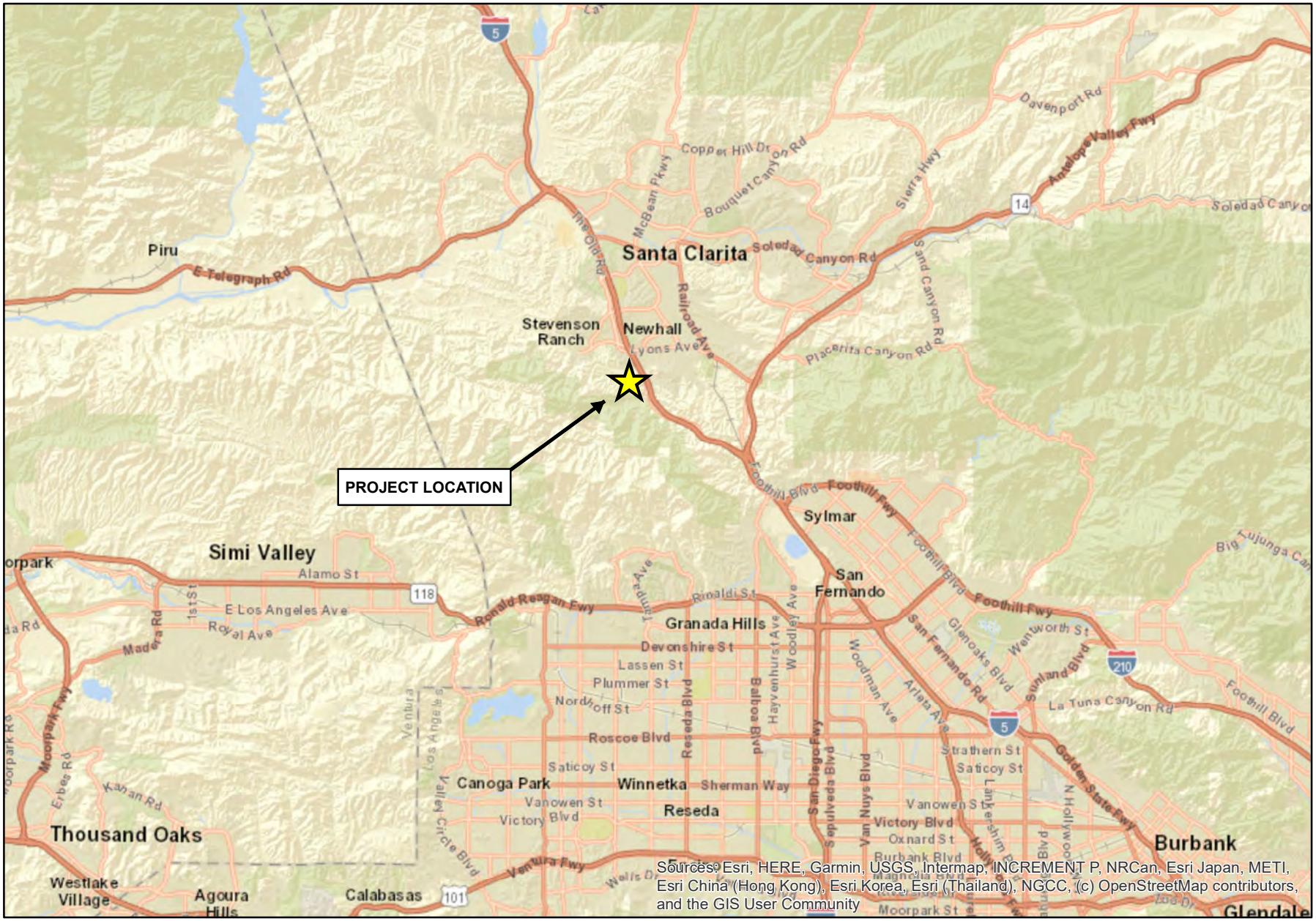
Attach copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections.
Attach sketch or aerial photo showing site location, patch shape, survey route, location of any WIFLs or WIFL nests detected.
Attach photos of the interior of the patch, exterior of the patch, and overall site; describe any unique habitat features.

Comments (attach additional sheets if necessary)

Territory Summary Table. Provide the following information for each verified territory at your site.

Territory Number	All Dates Detected	UTM N	UTM E	Pair Confirmed? Y or N	Nest Found? Y or N	Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior)

Attach additional sheets if necessary



Source: ESRI World Street Map

N

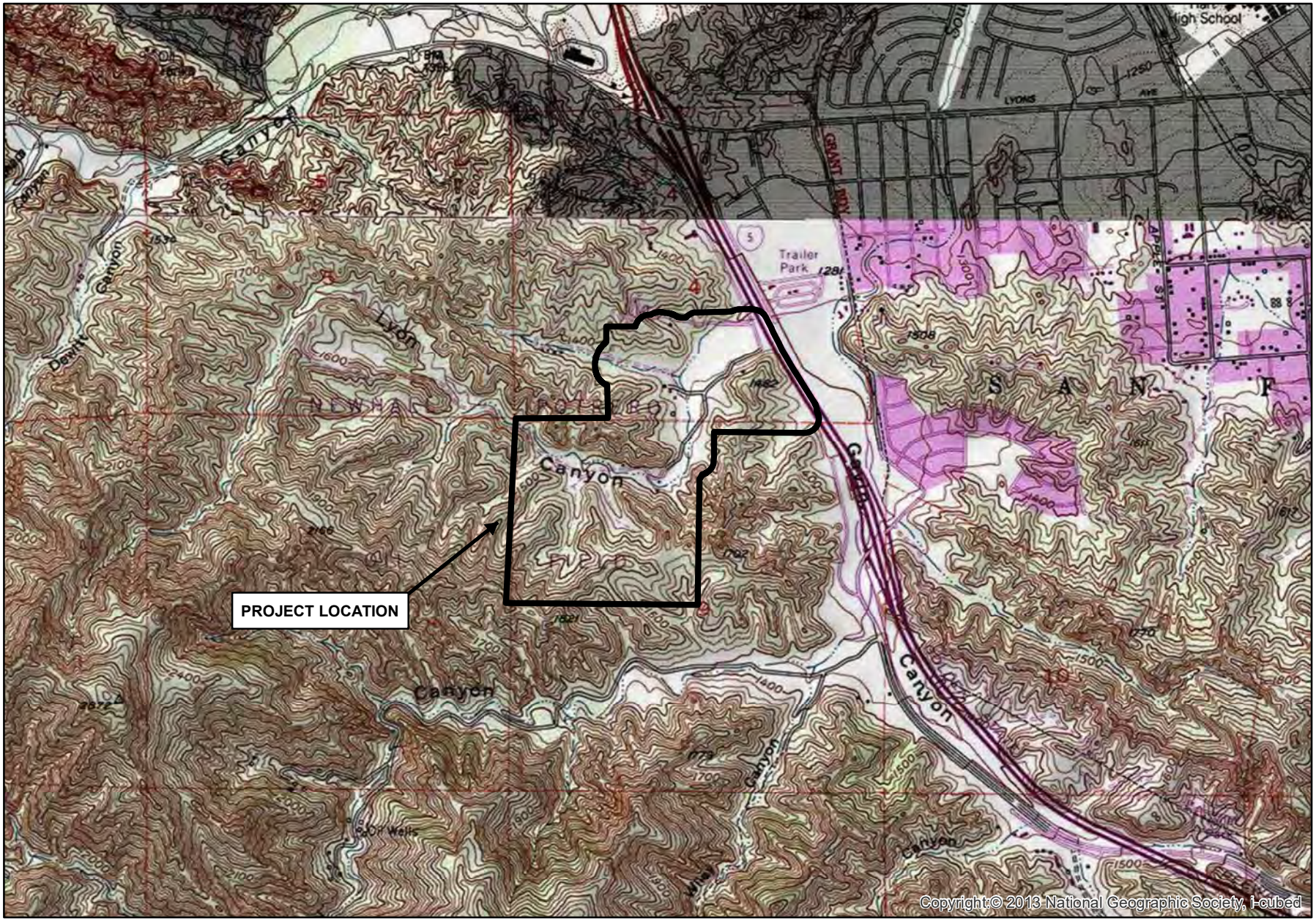
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THE TRAILS AT LYONS CANYON

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS Oat Mountain, CA quadrangle

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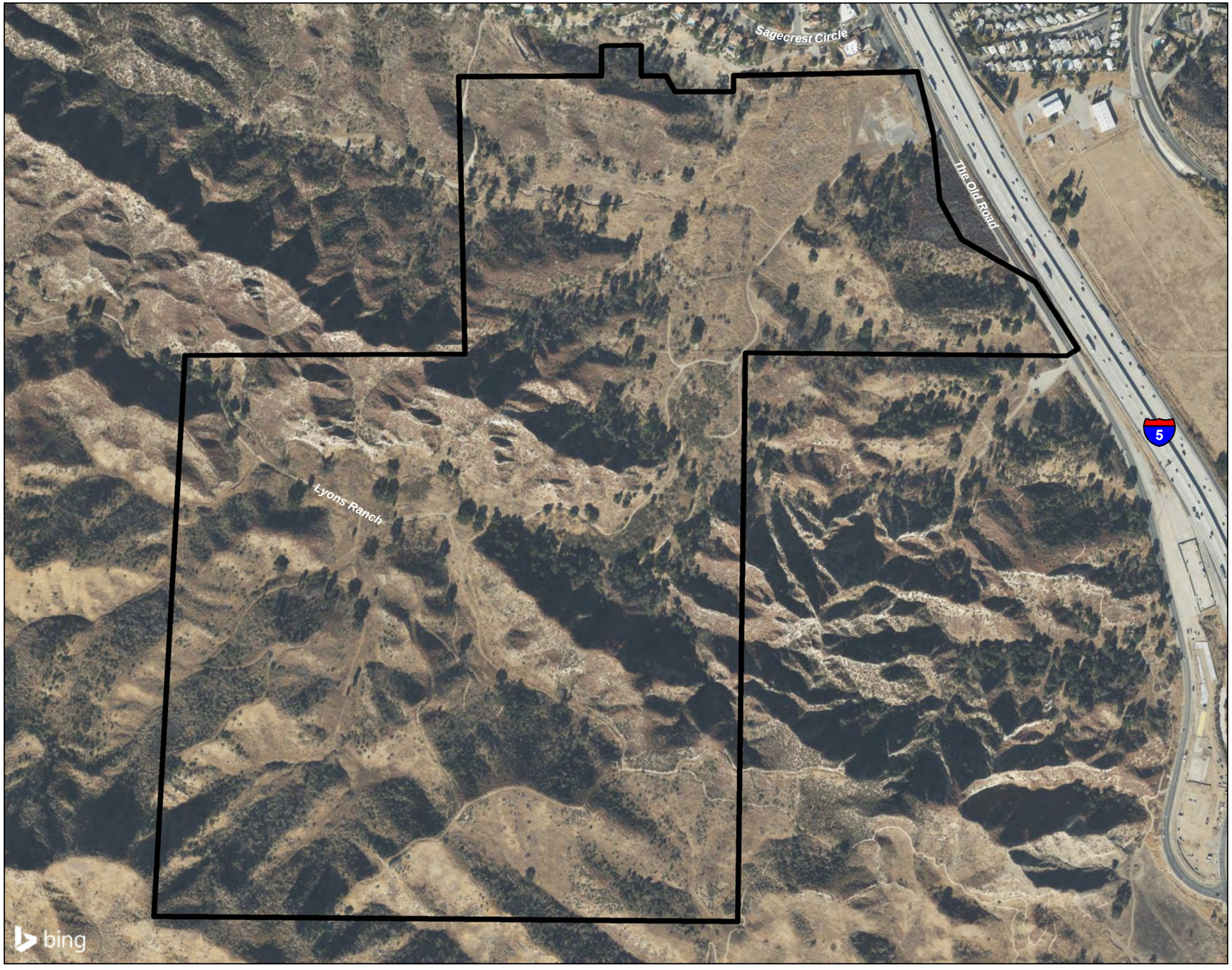
0 1,000 2,000 4,000 Feet

THE TRAILS AT LYONS CANYON

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



Property Boundary

N

0 225 450 900

Feet

1 inch = 450 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 23, 2021

THE TRAILS AT LYONS CANYON

LBV/SWIFL Survey Area Map

GLENN LUKOS ASSOCIATES

Exhibit 3

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Property Boundary

N

0 225 450 900

Feet

1 inch = 450 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: August 23, 2021

THE TRAILS AT LYONS CANYON

LBV/SWIFL Survey Area Map

GLENN LUKOS ASSOCIATES

Exhibit 4

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Appendix H

Results of Protocol Coastal California Gnatcatcher Surveys

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GLENN LUKOS ASSOCIATES
Regulatory Services

June 21, 2021

Mr. Chris Kofron
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

SUBJECT: Results of Protocol Coastal California Gnatcatcher Surveys for the NUWI Lyons Canyon, LLC Property, Located South of the Stevenson Ranch Community in Los Angeles County, California

Dear Mr. Kofron:

This letter report documents the results of protocol presence/absence surveys conducted by Glenn Lukos Associates, Inc. (GLA) for the federally listed threatened Coastal California gnatcatcher (*Polioptila californica californica*) at the property referenced above. GLA was contracted by Mr. Jason Han of NUWI Lyons Canyon, LLC to conduct the 2021 survey.

The general purpose of performing protocol surveys for the California gnatcatcher is to facilitate the implementation of research and recovery efforts to enhance the species' survival. The purpose of the proposed surveys for the Lyons Canyon Property is to determine the presence/absence and potential extent of gnatcatchers within the survey area and develop conservation measures to further support the species' recovery efforts.

Surveys were conducted from April 26, 2021, through June 2, 2021, in areas of potentially suitable habitat per U.S. Fish and Wildlife Service (USFWS) survey guidelines. The survey was initiated to update the breeding season protocol surveys conducted by Rincon Consulting in 2015[1]. The 2021 survey corroborates the results of the prior surveys in which no coastal California gnatcatchers were detected within or adjacent to the survey area.

1.0 SITE LOCATION AND DESCRIPTION

The Lyons Canyon Property (Property) is in the Stevenson Ranch area of Los Angeles County, California [Exhibit 1 – Regional Map]. The Property is bound by designated open space and

[1] Rincon Consultants, Inc., "45-day Summary Report of Focused Presence/Absence Surveys for the Lyons Canyon Ranch Project (TTN 53653), Santa Clarita Area, Unincorporated Los Angeles County, California; August 7, 2015.

privately owned, undeveloped land to the south and west, The Old Road and Interstate 5 to the east, and single-family residential and commercial development to the north. The location is depicted in Sections 4 and 9 of Township 3 North, Range 16 West of the U.S. Geological Survey (USGS) Oat Mountain, California 7.5" topographic quadrangle map (dated 1952 and photorevised in 1969) [Exhibit 2 – Vicinity Map]. Approximate Universal Transverse Mercator (UTM) coordinates for the site are 356307 mE and 3804257 mN (Zone 11S). [Exhibit 3 – Site Map].

The Property is vacant and largely undeveloped. Topography in the vicinity of the Property is mountainous, with onsite elevations ranging from approximately 1,300 feet to 1,700 feet above mean sea level (MSL). The Lyons Canyon coastal California gnatcatcher survey area (Exhibit 3) is composed predominantly of chamise (*Adenostoma fasciculatum*) and scrub oak (*Quercus berberidifolia*) habitats with an understory of deerweed (*Acmispon glaber*), tocalote (*Centaurea melitensis*), and non-native grasses (*Bromus* sp. and *Avena* sp.). A ribbon of oak riparian woodland (*Quercus agrifolia*) connects the proposed development area in the northeast to the proposed conservation area to the southwest. Patches of California sagebrush (*Artemisia californica*) are present but are fragmented and small. Sage scrub and chaparral habitats are interspersed between prominent groupings of bush mallow (*Malacothamnus fasciculatus*), likely an early successional response to wildfire.

2.0 METHODOLOGY

Protocol surveys for the coastal California gnatcatcher were performed in accordance with the 1997 USFWS survey guidelines, which stipulate that during the breeding season, six surveys shall be conducted in all areas of suitable habitat with at least seven days between site visits. The USFWS survey guidelines also stipulate that no more than 80 acres of suitable habitat shall be surveyed per biologist per day. The survey area contains less than 80 acres of suitable habitat for the gnatcatcher. As such, the site consisted of one survey polygon requiring one "survey-day" per week.

GLA biologist Kevin Livergood (TE-172638-2) conducted the presence/absence surveys on April 26, May 3, May 10, May 17, May 24, and June 2, 2021. Areas of suitable habitat were surveyed by walking slowly and methodically along transect routes based on the vegetation and topographic conditions. The presence/absence of coastal California gnatcatchers was determined through vocalization and visual identification. A combination of gnatcatcher vocalization recordings and "pishing" sounds were used (as needed depending on the vegetation density and topography) to elicit responses from gnatcatchers.

Weather conditions during the surveys were conducive to a high level of bird activity. All surveys were conducted during the morning hours and were completed by 12:00 P.M. No surveys were conducted during extreme weather conditions (i.e., winds exceeding 15 miles per hour, rain, or temperatures above 35ºC/95ºF). Table 1 summarizes the survey dates/times and weather conditions.

Table 1. Summary of Survey Dates and Weather Data.

Date	Survey Time	Temperature (ºF) Start/End	% Cloud Cover Start/End	Wind Speed (Mph)	Surveying Biologist
April 26, 2021	0745-1200	52/61	90/80	2-5	K. Livergood
May 3, 2021	0750-1200	59/81	Clear	2-9	K. Livergood
May 10, 2021	0745-1200	58/70	100/Clear	2-6	K. Livergood
May 17, 2021	0830-1200	59/66	50/10	2-6	K. Livergood
May 24, 2021	0830-1200	69/84	Clear	4-8	K. Livergood
June 2, 2021	0800-1200	70/84	Clear	1-6	K. Livergood

3.0. RESULTS

The Property boundaries inclusive of the survey area are depicted in Exhibit 3. No coastal California gnatcatchers were detected within or adjacent to the survey area during the 2021 breeding season survey. Appendix A is an avian compendium of birds observed. Following is an alphabetical listing of birds observed.

Birds observed during the protocol surveys included the following: acorn woodpecker (*Melanerpes formicivorus*), Allen's hummingbird (*Selasphorus sasin*), American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), ash-throated flycatcher (*Myiarchus cinerascens*), Bewick's wren (*Thryomanes bewickii*), black-headed grosbeak (*Pheucticus melanocephalus*), blue-gray gnatcatcher (*Polioptila caerulea*), brown-headed cowbird (*Molothrus ater*), Bullock's oriole (*Icterus bullockii*), bushtit (*Psaltriparus minimus*), California quail (*Callipepla californica*), California scrub-jay (*Aphelocoma californica*), California thrasher (*Toxostoma redivivum*), California towhee (*Melozone crissalis*), Cassin's kingbird (*Tyrranis vociferans*), common raven (*Corvus corax*), Hammond's flycatcher (*Empidonax hammondii*), hooded oriole (*Icterus cucullatus*), house finch (*Carpodacus mexicanus*), house wren (*Troglodytes aedon*), lesser goldfinch (*Carduelis psaltria*), mourning dove (*Zenaida macroura*), northern flicker (*Colaptes auratus*), northern mockingbird (*Mimus polyglottos*), Nuttall's woodpecker (*Picoides nuttallii*), oak titmouse (*Baeolophus inornatus*), pacific-slope flycatcher (*Empidonax difficilis*), phainopepla (*Phainopepla nitens*), red-tailed hawk (*Buteo jamaicensis*), rufous-crowned sparrow (*Aimophila ruficeps*), song sparrow (*Melospiza melodia*), spotted

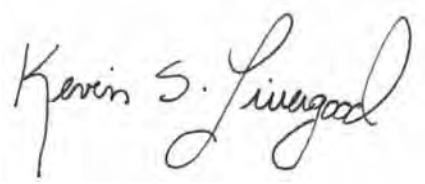
towhee (*Pipilo maculatus*), turkey vulture (*Cathartes aura*), western bluebird (*Sialia Mexicana*), western kingbird (*Tyrannus verticalis*), western tanager (*Piranga ludoviciana*), white-breasted nuthatch (*Sitta carolinensis*), white-throated swift (*Aeronautes saxatalis*), Wilson's warbler (*Cardellina pusilla*), and wrentit (*Chamaea fasciata*).

The brown-headed cowbird (*Molothrus ater*) was detected onsite during the protocol survey.

If you have any questions regarding the findings of this report, I can be contacted at klivergood@wetlandpermitting.com.

I certify that the information in this survey report and attached exhibits fully and accurately represents our work.

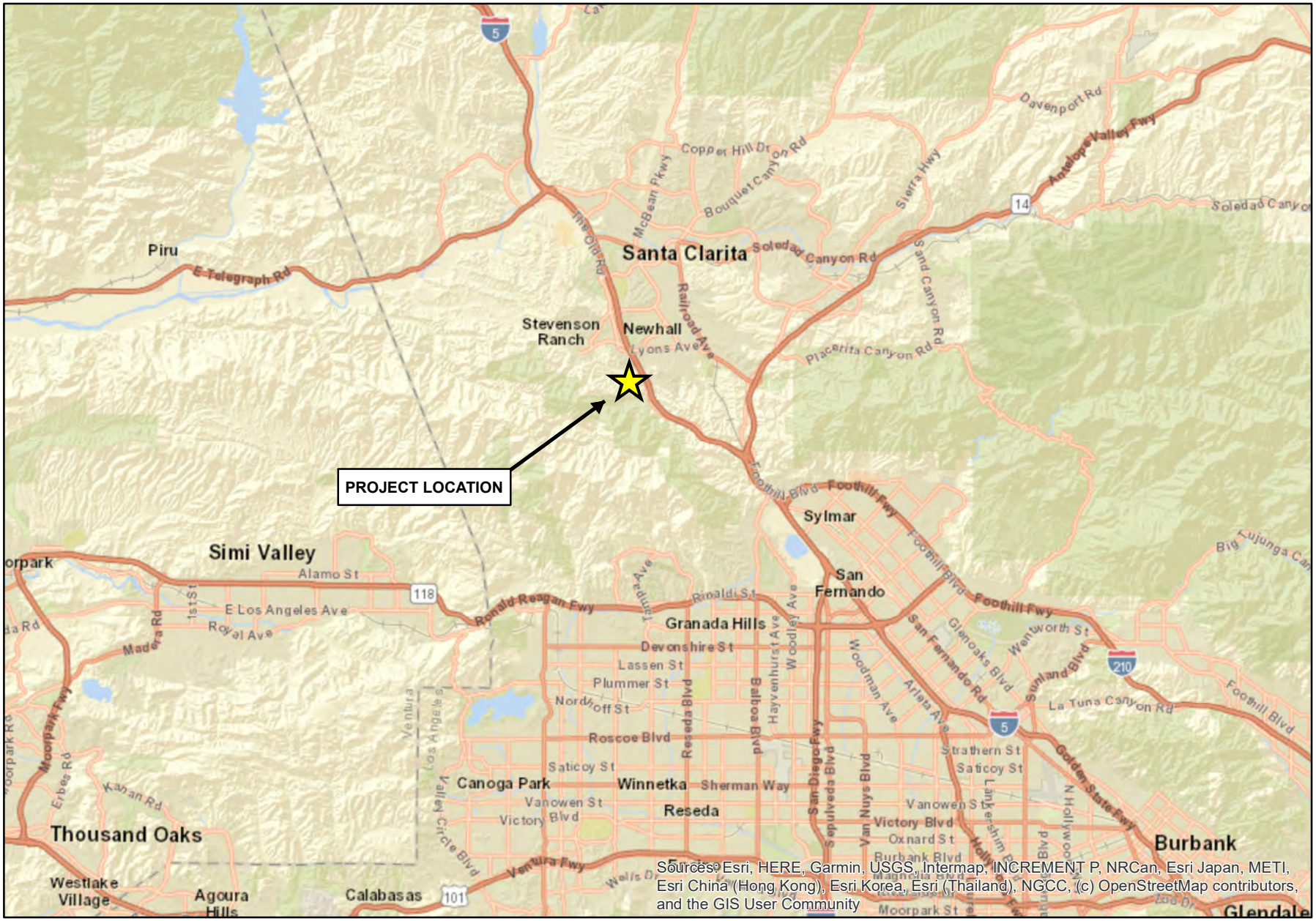
GLENN LUKOS ASSOCIATES, INC.



TE-172638-2	June 21, 2021
Permit #	Date

Kevin Livergood
Biologist

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Source: ESRI World Street Map

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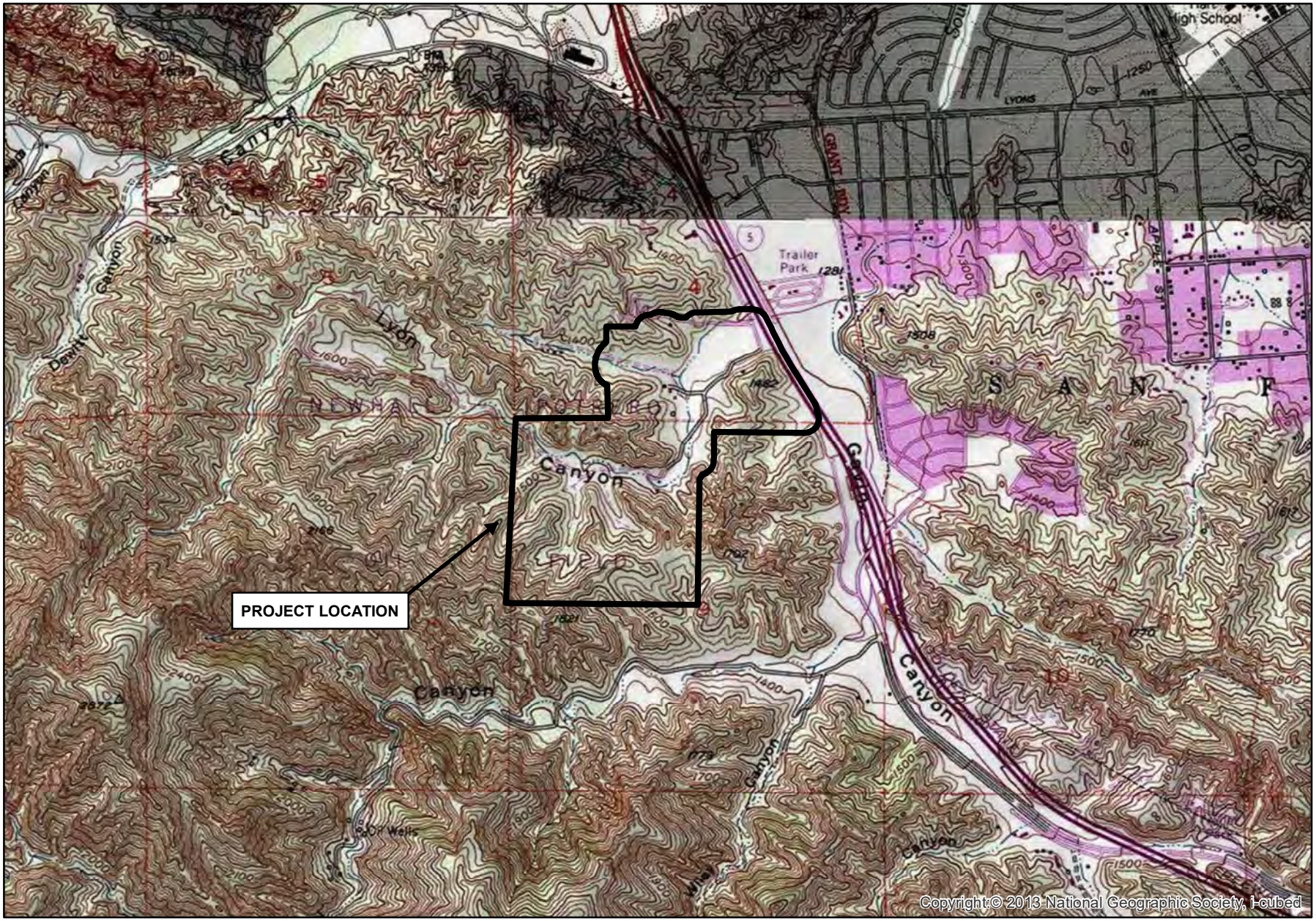
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THE TRAILS AT LYONS CANYON

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS Oat Mountain, CA quadrangle

N

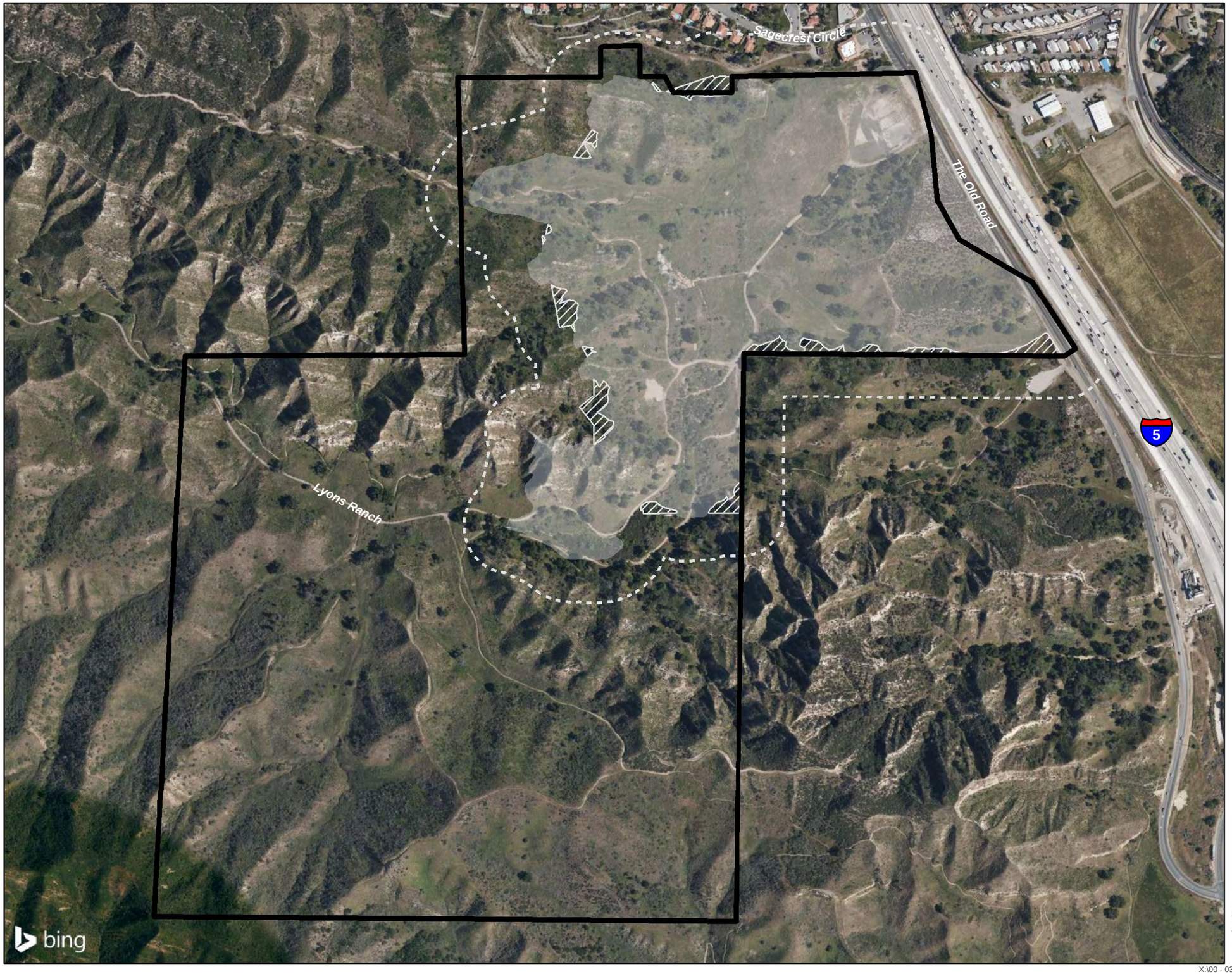
0 1,000 2,000 4,000 Feet

THE TRAILS AT LYONS CANYON

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



Property Boundary

Project Development Footprint

Fuel Modification Zone

200' Buffer of
Project Development Footprint
and Fuel Modification Zones

N

0 225 450 900

Feet

1 inch = 450 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: April 7, 2021

THE TRAILS AT LYONS CANYON

California Gnatcatcher Survey Area

GLENN LUKOS ASSOCIATES

Exhibit 3

X:\00 - 0362 ONLY\0218-19LYON\218-19_GIS\BirdsGIS\CAGN\218-19_CAGNSurveyArea.mxd

ACCIPITRIDAE	**HAWKS**
Buteo jamaicensis	red-tailed hawk
CARDINALIDAE	**TANAGERS, CARDINALS & ALLIES**
Pheucticus melanocephalus	black-headed grosbeak
Piranga ludoviciana	western tanager
CATHARTIDAE	**NEW WORLD VULTURES**
Cathartes aura	turkey vulture
COLUMBIDAE	**PIGEONS AND DOVES**
Zenaida macroura	mourning dove
CORVIDAE	**JAYS AND CROWS**
Aphelocoma californica	California scrub-jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
PASSERELLIDAE	**SPARROWS & ALLIES**
Aimophila ruficeps	rufous-crowned sparrow
Melospiza melodia	song sparrow
Pipilo crissalis	California towhee
Pipilo maculatus	spotted towhee
FRINGILLIDAE	**FINCHES**
Carpodacus mexicanus	house finch
Carduelis psaltria	lesser goldfinch
ICTERIDAE	**ORIOLES**
Icterus bullockii	Bullock's oriole
Icterus cucullatus	hooded oriole
Molothrus ater	brown-headed cowbird
MIMIDAE	**THRASHERS**
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
ODONTOPHORIDAE	**UPLAND GAME BIRDS**
Callipepla californica	California quail

PARULIDAE	**WOOD-WARBLERS**
Cardellina pusilla	Wilson's warbler
PICIDAE	**WOODPECKERS**
Melanerpes formicivorus	acorn woodpecker
Colaptes auratus	northern flicker
Picoides nuttallii	Nuttall's woodpecker
POLIOPTILIDAE	**GNATCATCHERS**
Polioptila caerulea	blue-gray gnatcatcher
TURDIDAE	**THRUSHES**
Sialia mexicana	western bluebird
PTILOGONATIDAE	**SILK-FLYCATCHERS**
Phainopepla nitens	phainopepla
SYLVIIDAE	**WRENTITS**
Chamaea fasciata	wrentit
APODIDAE	**SWIFTS**
Aeronautes saxatalis	white-throated swift
TROCHILIDAE	**HUMMINGBIRDS**
Calypte anna	Anna’s hummingbird
Selasphorus sasin	Allen’s hummingbird
PARIDAE/AEGITHALIDAE/SITTIDAE	**CHICKADEES/NUTHATCHES/ALLIES**
Baeolophus inornatus	oak titmouse
Psaltriparus minimus	bushtit
Sitta carolinensis	white-breasted nuthatch
TROGLODYTIDAE	**WRENS**
Thryomanes bewickii	Bewick’s wren
Troglodytes aedon	house wren

TYRANNIDAE	**TYRANT FLYCATCHERS**
Empidonax difficilis	pacific-slope flycatcher
Empidonax hammondii	Hammond's flycatcher
Myiarchus cinerascens	ash-throated flycatcher
Tyrannus verticalis	western kingbird
Tyrannus vociferans	Cassin's kingbird

Appendix I

Trails at Lyons Canyon Project – Off-Site Mitigation Option – Natural Resources Analysis for Assessor Parcel Numbers 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-0412826-014-057, and 2826-014-067

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MEMORANDUM

To:	Joe Decruyenaere, Senior Biologist, Los Angeles County Department of Regional Planning
From:	Michael Cady, Senior Biologist, Dudek
Subject:	Trails at Lyons Canyon Project—Offsite Mitigation Option—Natural Resources Analysis for APNs 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-041, 2826-014-057, and 2826-014-067
Date:	March 8, 2024
Cc:	Jonathan Frankel, New Urban West Inc.; Kristin Starbird, Dudek; Daria Saraf, Dudek
Attachment:	Figure 1a and 1b. Vegetation Desktop Assessment; Figure 2a and 2b. Aquatic Resources Desktop Assessment

This memorandum documents the analysis of the natural resources located on four parcels that are proposed for preservation as mitigation for impacts that would occur for the construction of the Trails at Lyons Canyon Project ("Project"). The Project is in unincorporated Los Angeles County and within the Santa Susana Mountains/Simi Hills Significant Ecological Area (SEA) established by the County of Los Angeles' (County) SEA Ordinance. The four parcels are located within the same SEA, approximately one mile south-southwest of the Project site. The Assessor Parcel Numbers (APN) are 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-0412826-014-057, and 2826-014-067. The approximately 491-acres of the four parcels was assessed to determine if SEA Resource Category 1, 2, 3, and 4 vegetation resources were present.

Methods

Dudek Senior Biologist Michael Cady conducted a reconnaissance survey on APN 2826-018-034 on October 17, 2023. Access was made into the northern portion of the parcel by taking a trail that branched off an official trail in the Santa Clarita Woodlands Park that is in Towsley Canyon. Vegetation communities within view of the surveyor were mapped using the Environmental Systems Research Institute (Esri) Collector, a mobile data collection application, on a digital aerial-based background. Vegetation communities were mapped using A Manual of California Vegetation, Online Edition.[1] Following the completion of the fieldwork, the remaining portions of Parcel #17 were mapped using the areas that were mapped and extrapolated to other areas using Google Earth imagery (1985-2023) and National Agriculture Imagery Program imagery, including four band imagery, color infrared, and Normalized Difference Vegetation Index, using Esri ArcGIS software.

In January 2024, an airplane was used to collect one-foot topography of bare earth values (derived from LiDAR collected data at one hundred points per square meter) and aerial orthoimagery of the four parcels. Following the processing of the data, Mr. Cady used the high-resolution data to complete the desktop vegetation classification for the remaining parcels and to refine the classification for APN 2826-018-034. The LiDAR data was used to determine topography and flow channels in the parcels to determine where streams occurred. Three types of streams were classified and given buffers to estimate width between top of streambank: 2.0 acres contributing area or more (5-foot buffer), 1.0 acres contributing area or more (2.5-foot buffer), and 0.2 acres contributing area

[1] California Native Plant Society. 2023. A Manual of California Vegetation, Online Edition. Accessed October 2023. https://www.cnps.org/vegetation.

or more (1-foot buffer). A 15-foot buffer was done for these classified streams to capture adjacent oak trees within the *Pseudotsuga macrocarpa–Quercus agrifolia* Association and *Quercus agrifolia* Association to define oak riparian forest. Per the SEA Implementation Guidelines, this riparian vegetation would be considered an SEA Resource Category 1 (Water Resources).

Results

Except for roads and a small, developed area in 2826-017-041, the parcels contain contiguous, mature vegetation communities. Additionally, the parcels have numerous drainages that have hardwood forests and shrub vegetation.

Vegetation Communities

Nine vegetation communities were mapped in the six parcels, as listed in Table 1, and shown in Attachment A. One community, *Quercus agrifolia* Association - southern coast live oak riparian forest, is considered a SEA Resource Category 1 because it is associated with the streams within the parcels. Two SEA Resource Category 3 communities, *Pseudotsuga macrocarpa–Quercus agrifolia* Association (bigcone Douglas fir-coast live oak forest) and *Quercus agrifolia* Association (coast live oak woodland and forest) occur, primarily on north-facing slopes and canyon bottoms. The seven SEA Resource Category 4 communities are shrub-dominated and consist of chaparral and coastal scrub species.

Table 1. Vegetation Communities on APNs 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-0412826-014-057, and 2826-014-067

Vegetation Community	Acres
SEA Resource Category 1	
Quercus agrifolia Association - southern coast live oak riparian forest (Water Resources)	27.47
SEA Resource Category 3	
Pseudotsuga macrocarpa–Quercus agrifolia Association	4.02
Quercus agrifolia Association	50.89
Sub-Total:	*54.91*
SEA Resource Category 4	
Adenostoma fasciculatum–Salvia leucophylla Association	11.35
Adenostoma fasciculatum–Salvia mellifera / mixed shrub Association	1.16
Adenostoma fasciculatum Association	77.08
Artemisia californica–Eriogonum fasciculatum Association	2.08
Ceanothus crassifolius–Adenostoma fasciculatum–Rhus ovata Association	249.26
Ceanothus crassifolius–Adenostoma fasciculatum Association	14.37
Malacothamnus fasciculatus–Salvia leucophylla Association	2.54
Malosma laurina–Eriogonum fasciculatum Association	12.93
Wild oats and annual brome grasslands Semi-Natural Alliance	12.24
Sub-Total:	*383.01*

Table 1. Vegetation Communities on APNs 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-0412826-014-057, and 2826-014-067

Vegetation Community	Acres
Other Land Cover	
Urban/Developed	1.31
Total:	**466.70**

Table 1 Notes: Totals may not add up due to rounding.

Streams and Riparian Vegetation

The drainages in the six parcels are part of the Wiley Canyon and Towsley Canyon watersheds that contribute to the South Fork of the Santa Clara River, as shown in Attachment B. The desktop analysis resulted in 13.30 acres of potential streams in the six parcels. The method for determining potential adjacent riparian oak forest resulted in 27.47 acres of SEA Category 1 Water Resources. The remaining 54.91 acres of *Pseudotsuga macrocarpa–Quercus agrifolia* Association and *Quercus agrifolia* Association would be considered upland and SEA Resource Category 3.

Other Natural Resources

The California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database[2] (CNDDB) includes mapped areas of southern coast live oak riparian forest, valley oak woodland, and California walnut woodland on the southern parcels. The U.S. Fish and Wildlife Service (USFWS) has designated critical habitat for coastal California gnatcatcher (*Polioptila californica californica*) that overlaps the three northernmost parcels.[3] The desiccated remains of lilies were observed during the reconnaissance survey on APN 2826-018-034, with their being numerous slender mariposa lily (*Calochortus clavatus* var. *gracilis*) mapped occurrences in the CNDDB to the east and west of the southern parcel. There are numerous rocky, vertical cliff faces with cracks and crevasses that could support roosting bats.

Discussion

The proposed Project includes the preservation of vegetation communities within an onsite Conservation Area, as required by Mitigation Measure- (MM-) BIO-1. As shown in Table 2, the Conservation Area provides sufficient acreage to fully offset impacts to SEA Resource Category 4 vegetation communities[4] and to partially offset impacts to SEA Resource Category 3.[5]

[2] CDFW. 2024. California Natural Diversity Database (CNDDB). RareFind 5.0 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. Accessed January 2024. https://nrmsecure.dfg.ca.gov/cnddb/Default.aspx.

[3] U.S. Fish and Wildlife Service. 2024. Accessed January 2024. Critical Habitat Mapper; online viewer https://ecos.fws.gov/ecp/report/table/critical-habitat.html

[4] For SEA Resource Category 4, preservation can be out-of-kind if the resource is of the same category.

[5] For this discussion, the creation of vegetation communities within the *Brassica nigra–Centaurea melitensis* Herbaceous Semi-natural Stands is not included; however, if oak trees are planted as replacement for SEA protected trees, then an argument will be made that planted oaks also constitute the creation of oak woodland.

Table 2. Impacts to SEA Resource Category Communities and Proposed Preservation for the Trails at Lyon's Canyon Project Using APNs 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-0412826-014-057, and 2826-014-067

SEA Resource Category	Total Impacts (Acres)	Mitigation Requirement (Acres)[1]	On-site Preservation (Acres)[2]	In-Kind Offsite Preserved Acres Needed[3]	In-Kind Acres Provided by the Six Parcels[4]	Out of--Kind Offsite Preserved Acres Needed[5]	Out of--Kind Acres Provided by the Six Parcels[6]	Total Preservation (Acres)	Preservation to Impact Ratio: Required	Preservation to Impact Ratio: Provided
1	3.67	18.35	0.52	17.83	0	26.74	27.47	27.99	7.5:1	7.6:1
3	13.53	40.59	12.40	32.01	28.94	4.74	54.91	67.31	4.5:1	5.0:1
4[7]	33.07	66.16	120.16	0	383.01	NA	NA	503.17	3:1	15.2:1
5[8]	33.99[9]	NA	0	NA	NA	NA	NA	NA	NA	NA

Table 2 Notes: NA=Not Applicable

1 This determined by the impacts multiplied by the ratio of preservation required per the County of Los Angeles' SEA Implementation Guide (5:1 for Category 1, 3:1 for Category 3, and 2:1 for Category 4).
2 Preserved in the Conservation Area established by the proposed MM-BIO-1.
3 In-kind preservation within the Santa Susana Mountains/Simi Hills SEA, per proposed MM-BIO-2.
4 Out-of-kind preservation within the Santa Susana Mountains/Simi Hills SEA is at 1.5:1 for same category and 1.25:1 for a higher category, per proposed MM-BIO-2.
5 APNs 2826-018-034, 2826-017-044, 2826-017-043, 2826-017-0412826-014-057, and 2826-014-067
6 Out-of-kind preservation of SEA Resource Category 1 (southern coast live oak riparian forest and coast live oak woodland)
7 For SEA Resource Category 4, preservation can be out-of-kind if the resource is of the same category.
8 No preservation ratio is needed for SEA Resource Category 5, per se, only that the values that it supports (such as movement opportunities) are preserved.
9 50.62 acres if MM-BIO-3, Habitat Mitigation and Monitoring Plan is fully implemented.

MM-BIO-2 requires the remaining impact to vegetation communities be mitigated by preserving areas offsite. The mitigation measure allows for different preservation scenarios that include in-kind and out-of-kind vegetation communities, and within and outside the Santa Susana Mountains/Simi Hills SEA. Multipliers to the ratios of preservation required per the County of Los Angeles' (County) SEA Implementation Guide are used for out-of-kind and out of SEA preservation. Out-of-kind preservation must use a vegetation community classified as the same SEA Resource Category or a higher category.

As shown in Table 2, the 27.47 acres of SEA Category 1 Water Resources and the 54.91 acres of SEA Resources Category 3 provides the necessary acres of preservation for these two categories. The parcels provide an additional 26.72 acres of SEA Resource Category 3 vegetation communities in the form of *Quercus agrifolia* Forest and Woodland, which results in 5.0:1 preservation for this category.

Per Chapter 8 of the SEA Ordinance Implementation Guide, proposed mitigation areas may also be given added conservation value should they possess the following characteristics:

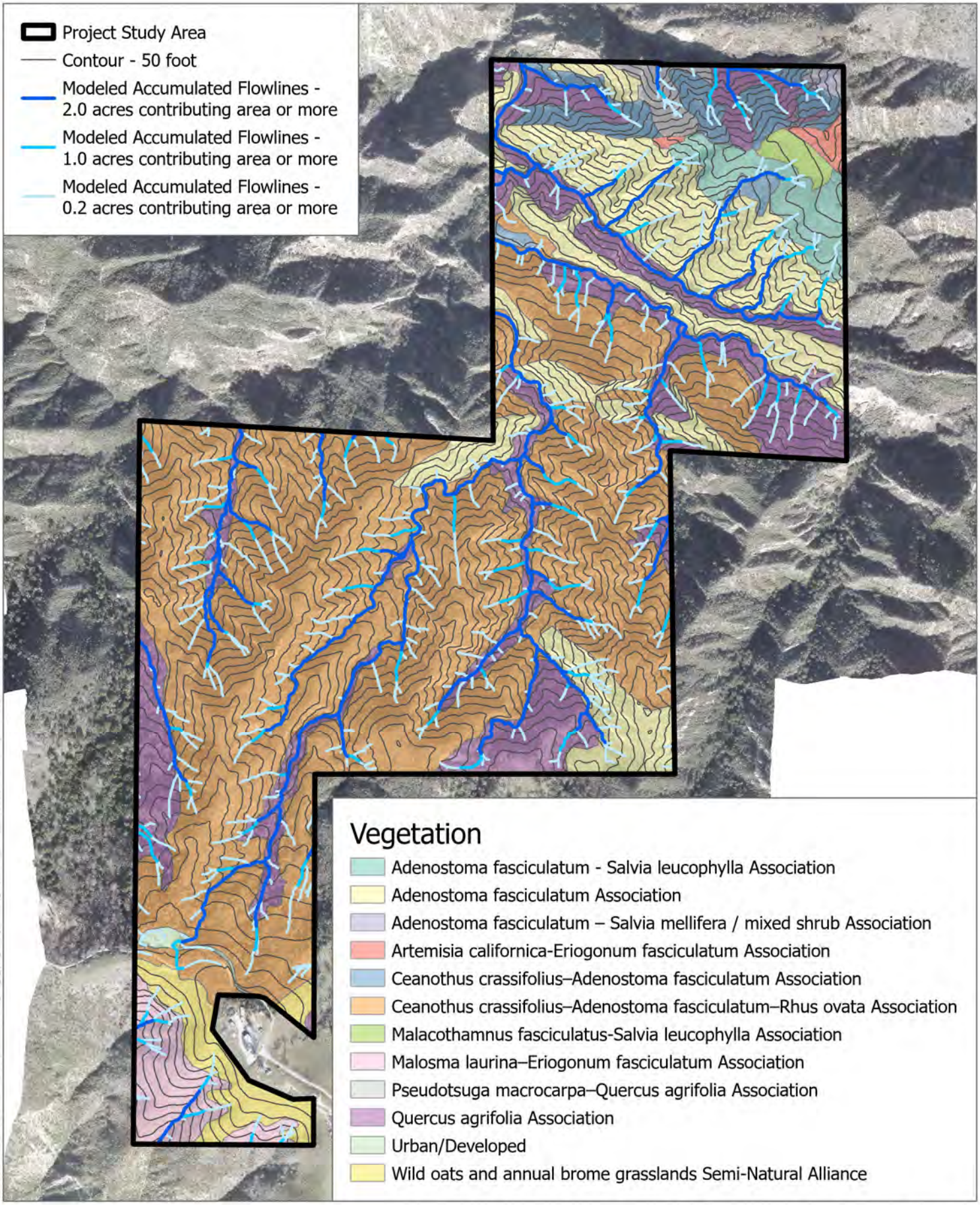
> "Added value" can be given to proposed natural open space areas if they also contain unique or valuable habitat linkage resources, additional special-status species, surface waters, or sensitive habitats, etc. Proposed open-space with such added-value characteristics may be allowed to be smaller than the area that would typically be required and still be determined to be consistent with the SEA Program goals subject to the discretion of the Department and a determination of consistency with the SEA Findings by SEATAC."

The Conservation Area and the six parcels proposed for preservation provide over 617 acres of relatively undisturbed vegetation that would be expected to support numerous plant and wildlife species, including the special-status species found on the Project site and in the vicinity. The parcels provide numerous potential streams and many acres of sensitive woodland habitats associated with uplands and riparian areas. The parcels are immediately adjacent to the approximately 3,250-acre Santa Clarita Woodlands Park that is managed by the Mountains Recreation and Conservation Authority. As such, the four parcels would be a valuable addition to the preserved lands within the Santa Susana Mountains/Simi Hills SEA by preserving sensitive resources and increasing the habitat linkages in the region.

Attachment A

Vegetation Desktop Assessment

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SOURCE: Dudek

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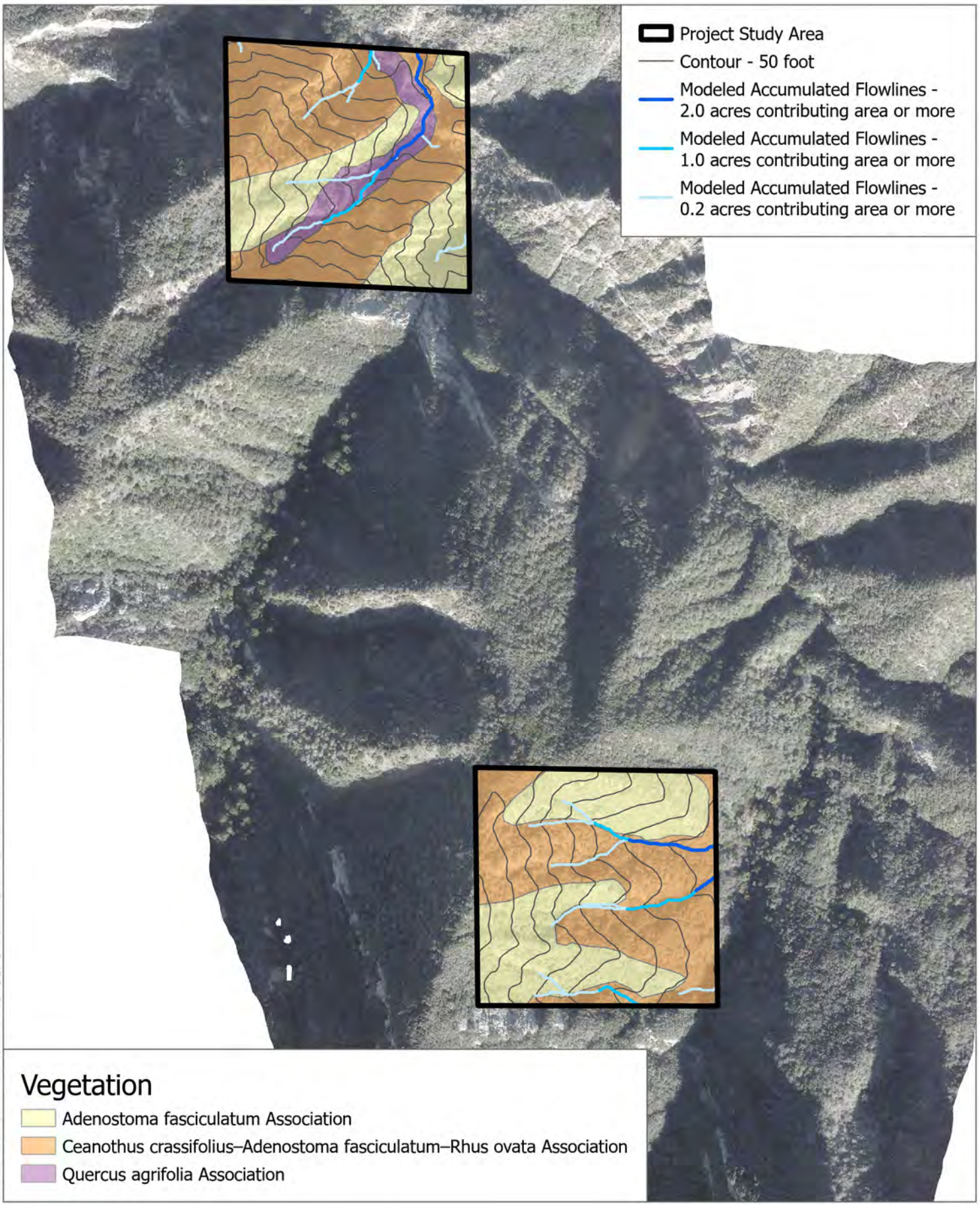
0 500 1,000 Feet

Figure 1a

Vegetation Desktop Assessment

Trails at Lyons Canyon; APN 2826-017-041, 2826-017-043, 2826-017-044, 2826-018-034

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SOURCE: Dudek

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0 250 500 Feet

Figure 1b

Vegetation Desktop Assessment

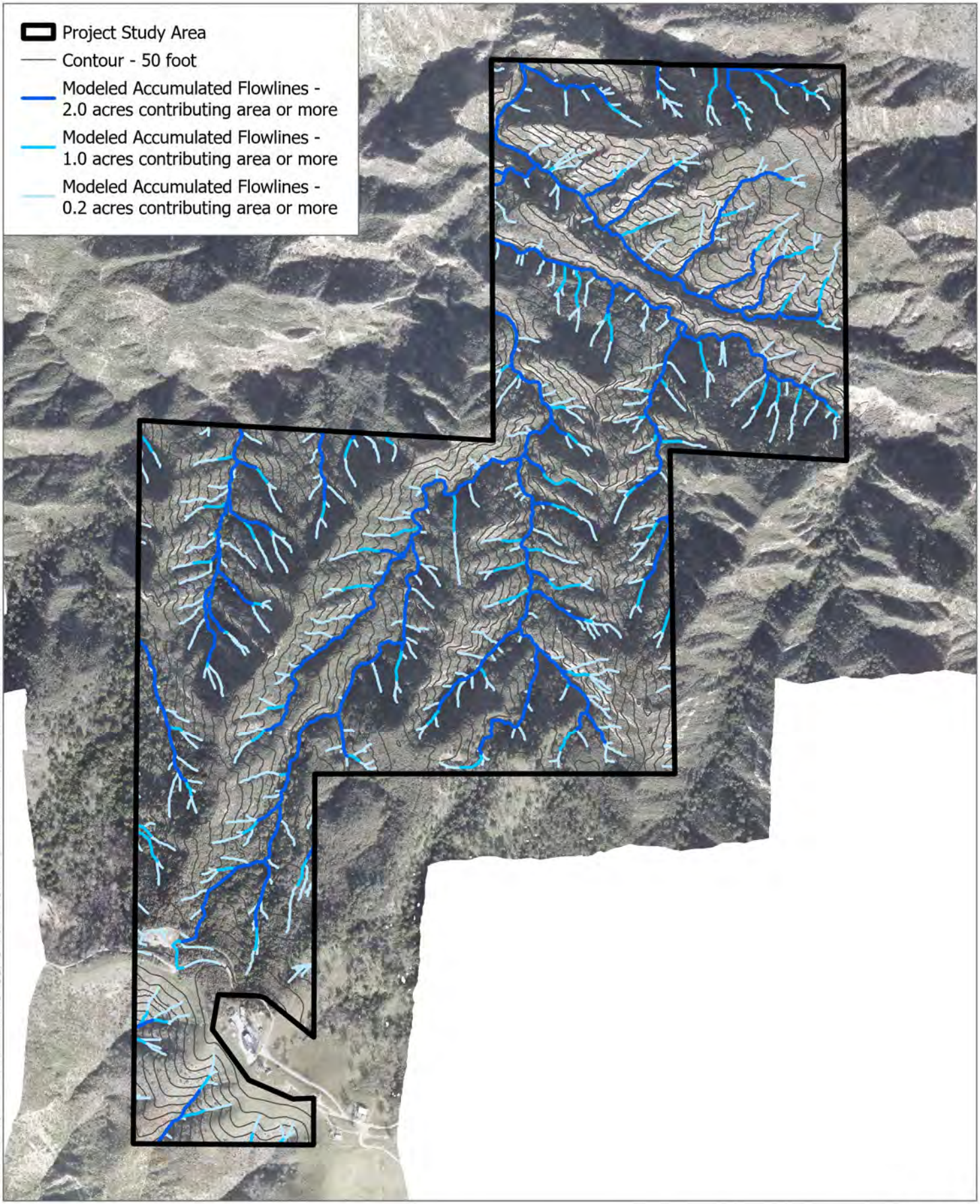
Trails at Lyons Canyon; APN 2826-014-057, 2826-014-067

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Attachment B

Aquatic Resources Desktop Assessment

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SOURCE: Dudek

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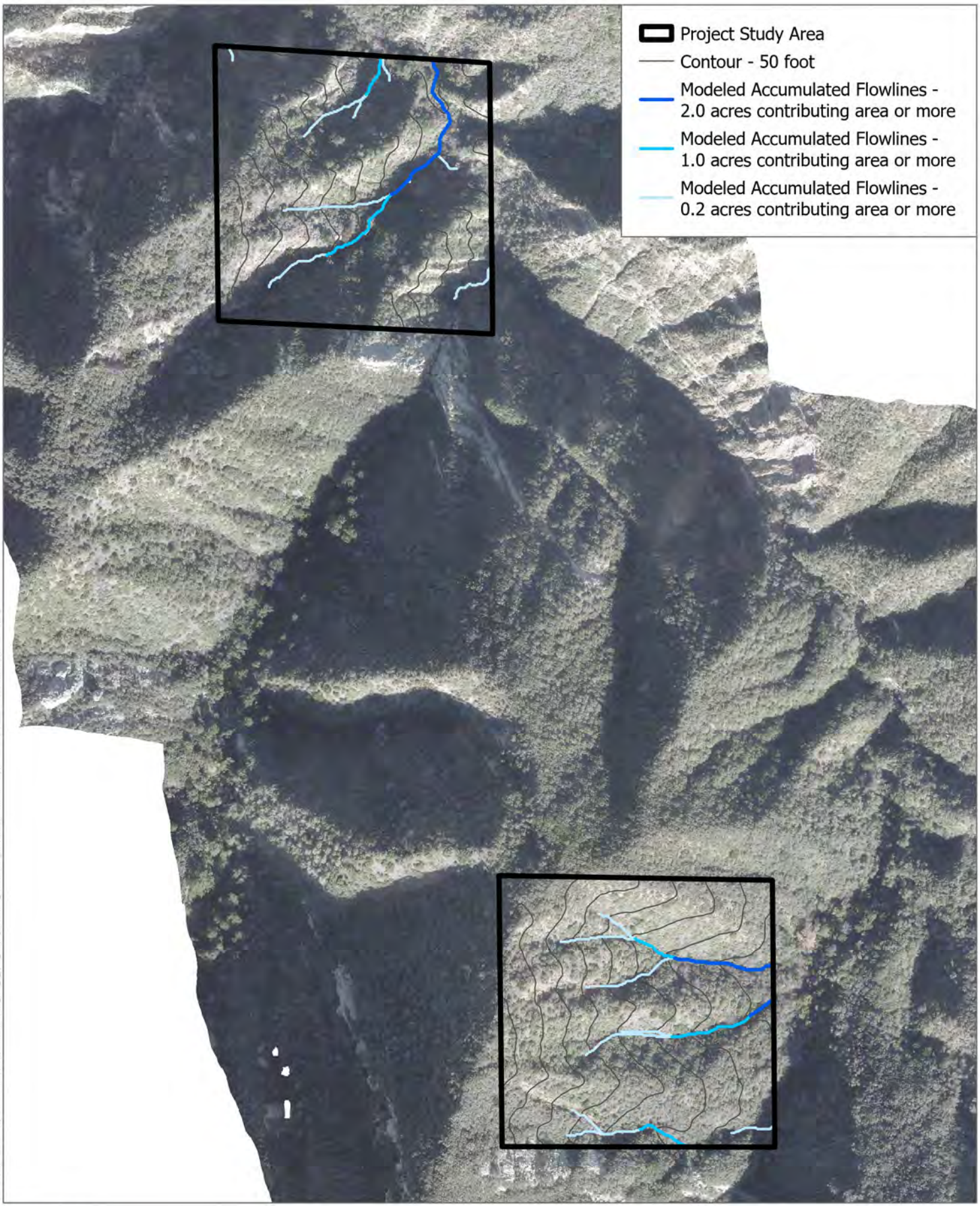
0 500 1,000 Feet

Figure 2a

Aquatic Resources Desktop Assessment

Trails at Lyons Canyon; APN 2826-017-041, 2826-017-043, 2826-017-044, 2826-018-034

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SOURCE: Dudek

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0 250 500 Feet

Figure 2b

Aquatic Resources Desktop Assessment

Trails at Lyons Canyon; APN 2826-014-057, 2826-014-067

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Appendix J

SEA Ordinance Implementation Guide Invasive Plant List

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APPENDIX C: INVASIVE PLANT LIST

Planting of the following plant species is prohibited within Significant Ecological Areas (SEAs) due to their aggressive growth and potential to degrade native habitats. Any species not listed here that is listed as invasive by the California Invasive Plant Council is also prohibited within SEAs.

PROHIBITED TREES AND SHRUBS

Family	Scientific Name	Common Name
Anacardiaceae	*Schinus molle*	Peruvian pepper
	Schinus polygamus	borocoi, Hardee/Chilean pepper tree
	Schinus terebinthifolius	Brazilian pepper
	Searsia lancea	African sumac
Apocynaceae	*Nerium oleander*	oleander
Aquifoliaceae	*Ilex aquifolium*	English holly
Arecaceae	*Phoenix canariensis*	Canary Island date palm
	Washingtonia robusta	Mexican fan palm
Bignoniaceae	*Jacaranda mimosifolia*	Jacaranda
Boraginaceae	*Echium candicans*	pride of Madeira
Chenopodiaceae	*Atriplex nummularia*	bluegreen saltbush, old man saltbush
Cistaceae	*Cistus incanus*	hairy rockrose, pink rockrose
	Cistus ladanifer	crimson-spot rockrose, gum rockrose
	Cistus monspeliensis	Montpelier rockrose
	Cistus salviifolius	sageleaf rockrose
Elaeagnaceae	*Elaeagnus angustifolia*	Russian olive
Euphorbiaceae	*Euphorbia dendroides*	tree-spurge
	Ricinus communis	castor bean
	Triadica sebifera	Chinese tallowtree
Fabaceae	*Acacia baileyana*	Bailey acacia
	Acacia cyclops	red-eyed wattle
	Acacia dealbata	silver wattle
	Acacia longifolia	Sydney golden wattle
	Acacia melanoxylon	blackwood acacia
	Acacia redolens	trailing acacia, bank catclaw
	Acacia retinodes	water wattle, swamp wattle
	Albizia julibrissin	mimosa
	Albizia lophantha	plume albizia/acacia
	Caesalpinia gilliesii	yellow bird of paradise
	Caesalpinia spinosa	tara
	Colutea arborescens	bladder senna
	Cytisus multiflorus	white Spanish broom
	Cytisus proliferus	white-flowered tree-lucerne, Canary Island false broom
	Cytisus scoparius	Scotch broom
	Cytisus striatus	Portuguese broom, striated broom
	Genista canariensis	Canary Island broom
	Genista linifolia	flax broom, Mediterranean broom

	Genista monosperma	bridal veil broom
	Genista monspessulana	French broom
	Parkinsonia aculeata	Jerusalem thorn, Mexican Palo Verde
	Robinia pseudoacacia	black locust
	Sesbania punicea	scarlet wisteria tree, rattlebox
	Senna artemisioides	feathery cassia, silver senna
	Senna didymobotrya	African senna, popcorn cassia
	Senna multiglandulosa	wooly senna, buttercup bush
	Spartium junceum	Spanish broom, gorse
	Ulex europaeus	common gorse
Fagaceae	*Quercus ilex*	Holm oak, holly oak
Geraniaceae	*Pelargonium panduriforme*	balsam scented geranium
Hypericaceae	*Hypericum canariense*	Canary Island St. John's wort
Meliaceae	*Melia azedarach*	china berry, Persian lilac
Moraceae	*Ficus carica*	fig, edible fig
Myrtaceae	*Eucalyptus camaldulensis*	red gum
	Eucalyptus citriodora	lemon-scented gum
	Eucalyptus cladocalyx	sugar gum
	Eucalyptus globulus	blue gum, Tasmanian blue gum
	Eucalyptus polyanthemos	silver-dollar gum
	Eucalyptus sideroxylon	red ironbark
	Eucalyptus tereticornis	forest red gum
	Eucalyptus viminalis	manna gum, ribbon gum
	Leptospermum laevigatum	Australian tea tree
Oleaceae	*Ligustrum japonicum*	Japanese privet
	Ligustrum lucidum	glossy privet
	Olea europaea	olive
Pittosporaceae	*Pittosporum crassifolium*	karo
	Pittosporum tobira	tobira, mock orange, Japanese cheeseweed
Platanaceae	*Platanus acerifolia*	London plane tree
Proteaceae	*Grevillea robusta*	silk oak
Rosaceae	*Cotoneaster lacteus*	milkflower/Parney's cotoneaster
	Cotoneaster pannosus	cotoneaster
	Malus pumila	paradise apple
	Prunus cerasifera	cherry plum
	Pyracantha angustifolia	pyracantha
	Rubus armeniacus	Himalayan blackberry
Salicaceae	*Populus alba*	white poplar
	Salix babylonica	weeping willow
Sapindaceae	*Acer saccharinum*	silver maple
Scrophulariaceae	*Buddleja saligna*	false olive
	Myoporum laetum	ngaio tree, lollypop tree, myoporum
Simaroubaceae	*Ailanthus altissima*	tree of Heaven
Solanaceae	*Cestrum nocturnum*	night jessamine, Night Blooming Jasmine

	Solanum aviculare	kangaroo apple, New Zealand nightshade
	Solanum lanceolatum	orangeberry nightshade, lance leaf nightshade
	Nicotiana glauca	tree-tobacco
Tamaricaceae	*Tamarix aphylla*	athel tree
	Tamarix chinensis	salt cedar, chanise/fivestamen tamarisk
	Tamarix gallica	French tamarix
	Tamarix parviflora	small-flowered/fourstamen tamarisk
	Tamarix ramosissima	salt cedar, tamarisk
Ulmaceae	*Ulmus parvifolia*	Chinese elm
	Ulmus pumila	Siberian elm

Prohibited Vines

Family	Scientific Name	Common Name
Apocynaceae	*Araujia sericifera*	bladder vine, bladderflower
	Vinca major	periwinkle
Araliaceae	*Hedera canariensis*	Algerian ivy
	Hedera helix	English ivy
Asparagaceae	*Asparagus asparagoides*	Bridal Creeper, Smilax Asparagus, African asparagus fern
Asteraceae	*Delairea odorata*	Cape ivy, German ivy
Caprifoliaceae	*Lonicera japonica*	Japanese honeysuckle
Fabaceae	*Lathyrus latifolius*	perennial sweetpea, everlasting peavine
Polygonaceae	*Muehlenbeckia complexa*	mattress vine, maidenhair vine
Rosaceae	*Rubus ulmifolius var. ulmifolius*	elmleaf blackberry
Tropaeolaceae	*Tropaeolum majus*	garden nasturtium

Prohibited Succulents and Cactus

Family	Scientific Name	Common Name
Aizoaceae	Carpobrotus chilensis	sea fig
	Carpobrotus edulis	Hottentot fig
	Malephora crocea	coppery mesemb
	Mesembryanthemum crystallinum	crystalline Iceplant, common iceplant
	Mesembryanthemum nodiflorum	slenderleaf iceplant
Aizoaceae	*Aptenia cordifolia*	heartleaf iceplant, baby sun-rose
	Conicosia pugioniformis	narrow-leaved iceplant, roundleaf iceplant
	Delosperma litorale	ice plant, seaside deloperma
	Drosanthemum floribundum	Rosy ice plant, showy dewflower
Cactaceae	*Opuntia microdasys*	bunny-ears
Crassulaceae	*Aeonium arboreum var. arboreum*	blackrose
	Aeonium haworthii	pinwheel
	Cotyledon orbiculata var. oblonga	pig's ear

Prohibited Aquatic Plants

Family	Scientific Name	Common Name
Amaranthaceae	*Alternanthera philoxeroides*	alligatorweed

Haloragaceae	*Myriophyllum aquaticum*	parrot feather watermilfoil, Parrot's feather
	Myriophyllum spicatum	Eurasian/America milfoil, spike watermilfoil
Hydrocharitaceae	*Egeria densa*	Brazilian waterweed
	Hydrilla verticillata	hydrilla
Pontederiaceae	*Eichhornia crassipes*	water hyacinth
Salviniaceae	*Salvinia molesta*	giant waterfern, giant salvinia

Prohibited Ferns

Family	Scientific Name	Common Name
Dryopteridaceae	*Cyrtomium falcatum*	Hollyfern, Japanese netvein hollyfern
Pteridaceae	*Pteris cretica*	Cretan brake ferm, ribbon fern, table fern
	Pteris vittata	ladder brake

Prohibited Annual and Perennial Herbs

Family	Scientific Name	Common Name
Alliaceae	*Ipheion uniflorum*	spring star flower
	Allium vineale	wild garlic
Amaranthaceae	*Amaranthus hybridus*	prince's feather
Amaryllidaceae	*Amaryllis belladonna*	belladonna lily, naked ladies
	Narcissus tazetta	narcissus, paper white
	Pancratium maritimum	sea daffodil
Apiaceae	*Ammi majus*	Queen Anne's lace
Apocynaceae	*Asclepias curassavica*	Mexican butterfly weed, bloodflower milkweed
Araceae	*Zantedeschia aethiopica*	common calla, calla lily
Asphodelaceae	*Asphodelus fistulosus*	onionweed, asphodel
Asteraceae	*Ageratina adenophora*	eupatorium, eupatory, sticky snakeroot, thoroughwort, croftonweed
	Arctotheca calendula	Cape weed
	Arctotis venusta	bue-eyed African daisy
	Argyranthemum foeniculaceum	Canary Island margeurite, dill daisy
	Bellis perennis	English daisy
	Calendula officinalis	pot marigold
	Centaurea cineraria	dusty miller
	Centaurea cyanus	bachelor's button
	Coreopsis tinctoria	calliopsis, golden tickseed
	Cosmos bipinnatus	garden cosmos
	Cynara cardunculus	artichoke thistle
	Dimorphotheca ecklonis	Cape marguerite, African daisy
	Dimorphotheca fruticosa	trailing African daisy, shrubby daisybush
	Dimorphotheca sinuata	African daisy
	Gazania linearis	treasureflower, gazania
	Glebionis coronaria	annual chrysanthemum, garland/crown daisy
	Helianthus tuberosus	Jerusalem artichoke
	Leucanthemum vulgare	ox-eye daisy
	Oncosiphon piluliferum	globe chamomile
	Ratibida columnifera	Mexican hat
	Tanacetum parthenium	feverfew
	Tanacetum vulgare	tansy, common tansy

Boraginaceae	*Heliotropium amplexicaule*	clasping heliotrope
Brassicaceae	*Brassica nigra*	black mustard
	Brassica rapa	field mustard; turnip
	Brassica tournefortii	Sahara/Moroccan/Asian mustard
	Erysimum cheiri	English wallflower
	Hirschfeldia incana	short-pod mustard
	Lobularia maritima	sweet alyssum
	Lunaria annua	money plant
	Matthiola incana	hoary stock
	Sinapis arvensis	wild/charlock/common/field mustard
Caryophyllaceae	*Gypsophila elegans*	annual baby's breath
	Lychnis coronaria	dusty miller, rose campion
	Silene vulgaris	bladder campion
	Saponaria officinalis	bouncing bet, bouncing betty, soapwort, goodbye summer
Chenopodiaceae	*Atriplex semibaccata*	Australian saltbush
	Kochia scoparia ssp. scoparia	summer cypress, red sage, Mexican fireweed
Commelinaceae	*Tradescantia fluminensis*	wandering Jew
Convolvulaceae	*Dichondra micrantha*	Asian ponysfoot
	Ipomoea indica	blue dawn flower, blue morningglory
Crassulaceae	*Sedum album*	white stonecrop
Cyperaceae	*Carex texensis*	Texas sedge
	Cyperus difformis	variable flatsedge, umbrella sedge
	Cyperus involucratus	umbrella plant
Dipsacaceae	*Dipsacus fullonum*	Fulleris teasel, wild teasel
Euphorbiaceae	*Euphorbia lathyris*	gopher spurge
Fabaceae	*Coronilla valentina ssp. glauca*	Mediterranean crownvetch
	Lathyrus odoratus	annual sweetpea
	Lotus corniculatus	bird's foot trefoil
	Trifolium repens	white clover
Geraniaceae	*Geranium robertianum*	herb Robert
	Pelargonium grossularioides	gooseberry geranium
Hypericaceae	*Hypericum perforatum*	klamathweed, St. John's wort
Iridaceae	*Chasmanthe floribunda*	African flag
	Crocosmia x crocosmiiflora	montbretia, crocosmia
	Iris germanica	German iris
	Iris pseudacorus	yellow flag, yellow water iris
Lamiaceae	*Melissa officinalis*	lemon balm
	Mentha spicata	spearmint
	Mentha suaveolens	apple mint, pineapple mint
	Nepeta cataria	catnip
Linaceae	*Linum grandiflorum*	flowering flax, garden flax
Lythraceae	*Lythrum salicaria*	purple loosestrife
Malvaceae	*Abutilon theophrasti*	velvetleaf
	Alcea rosea	hollyhock
Martyniaceae	*Proboscidea louisianica ssp. louisianica*	ram's horn, common devil's claw
	Proboscidea lutea	devil's claw
Myrsinaceae	*Anagallis arvensis*	scarlet pimpernel, birds-eye
Nyctaginaceae	*Mirabilis jalapa var. jalapa*	four o'clock, wishbone bush
Onagraceae	*Oenothera sinuosa*	wavy-leaf gaura
	Oenothera speciosa	Mexican evening-primrose, pink ladies
	Oenothera xenogaura	scented gaura, Drummond's gaura, Drummond's bee blossom

Oxalidaceae	*Oxalis articulata ssp. rubra*	windowbox woodsorrel
	Oxalis corniculata	creeping wood-sorel
	Oxalis pes-caprae	buttercup oxalis, Bermuda buttercup, yellow oxalis
Papaveraceae	*Papaver somniferum*	opium poppy
Plantaginaceae	*Digitalis purpurea*	foxglove
	Linaria bipartita	clovenlip toadflax
	Linaria dalmatica ssp. dalmatica	Dalmatian toadflax
	Linaria maroccana	baby snapdragon
	Linaria pinifolia	pine needle toadflax
Plumbaginaceae	*Limonium perezii*	Perez's sea lavender
	Limonium ramosissimum	Algerian sea lavender
	Limonium sinuatum	wavyleaf sea lavender
Polygonaceae	*Persicaria capitata*	pink knotweed, Himalayan smartweed
	Rumex conglomeratus	clustered dock, creek dock
Portulacaceae	*Portulaca oleracea*	purslane
Ranunculaceae	*Consolida ajacis*	rocket larkspur
Resedaceae	*Reseda alba*	white mignonette
Rosaceae	*Duchesnea indica var. indica*	Indian mock-strawberry
Rutaceae	*Ruta chalepensis*	fringed rue
Scrophulariaceae	*Scrophularia peregrina*	Mediterranean figwort
	Verbascum blattaria	moth mullein
Solanaceae	*Salpichroa origanifolia*	Pampas lily of the valley
	Solanum elaeagnifolium	silverleaf nightshade
Valerianaceae	*Centranthus ruber*	red valerian, Jupiter's beard
Verbenaceae	*Verbena bonariensis*	purpletop vervain, tall vervain
	Verbena pulchella	moss verbena
Violaceae	*Viola odorata*	sweet violet

PROHIBITED GRASSES

Family	Scientific Name	Common Name
Poaceae	*Agropyron cristatum ssp. pectinatum*	crested wheatgrass
	Agrostis gigantea	redtop, giant redtop bentgrass
	Agrostis stolonifera	creeping bent
	Aira caryophyllea	silver hairgrass
	Alopecurus pratensis	yellow foxtail grass, meadow foxtail
	Arundo donax	giant reed
	Briza maxima	rattlesnake grass
	Cortaderia jubata	jubata grass
	Cortaderia selloana	Pampas grass
	Cynodon dactylon	Bermuda grass
	Festuca arundinacea	tall fescue, alta fescue, reed fescue
	Festuca myuros	mouse-tail fescue, rattail sixweeks grass
	Festuca perennis	Italian ryegrass
	Festuca pratensis	meadow fescue
	Festuca trachyphylla	hard fescue, rough leaved fescue
	Holcus lanatus	velvet grass
	Hordeum marinum ssp. gussoneanum	sea barley
	Melinis repens ssp. repens	natal grass, ruby grass
	Pennisetum clandestinum	kikuyu grass
	Pennisetum setaceum	African/Crimson fountain grass
	Pennisetum villosum	feathertop
	Poa annua	annual bluegrass

	Poa pratensis ssp. pratensis	Kentucky bluegrass
	Poa trivialis	rough blue grass
	Polypogon monspeliensis	rabbitsfoot grass
	Stenotaphrum secundatum	Saint Augustine grass
	Stipa tenuissima	Mexican feathergrass

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Appendix K

California Invasive Plant Council
Cal-IPC Inventory List

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The Cal-IPC Inventory

The Inventory categorizes plants that threaten California's natural areas. The Inventory includes plants that currently cause damage in California (invasive plants) as well as "Watch" plants that are a high risk of becoming invasive in the future. For information about the Inventory, see "Inventory Details" below.

INVENTORY DETAILS

The Inventory represents the best available knowledge of invasive plant experts in California. Categorization is based on an assessment of ecological impacts, conducted with transparent science-based criteria and expert review. The Inventory has no regulatory authority, and should be used with full understanding of the limitations described here.

Background

Explanation of Cal-IPC ratings

About the Inventory assessment process

History of Inventory Updates (2018-present)

Download the Inventory (CSV)

Assessed, Not on Inventory

Plants are not listed on the Inventory when our assessment finds insignificant current impact and/or insufficient risk of becoming invasive in the future to qualify as a Watch plant. See the list of plants that have been assessed and not added to the Inventory

Privacy - Terms

Pending Assessment

We maintain a list of plants that need to be assessed for current invasiveness or risk of future invasiveness. We draw from this list for periodic updates to the Inventory. See the list of plants pending assessment

Problematic Natives

A handful of native species cause ecological problems where they have been moved outside their historic range in California.
See list of problematic native plants

Using the Inventory table:

- Click a plant's **Scientific Name** to see its Plant Profile page. For the plant's assessment, click the icon in the far right column, **PAF/PRE**.
- The **CDFA** column lists California Dept. of Food and Agriculture weed ratings (see CDFA definitions here). A checkmark in the **Hort** column denotes plants that are known from horticulture; the icon in the **CWM** column links to the CalWeedMapper page for the plant; the icon in the **ID card** links to a species identification card for the plant, if available (complete listing of Species ID Cards).
- To sort the table by any column heading (except ID Card), simply click on the column heading. To list only plants from certain Jepson Regions or Habitat Types, use the filters below.
- "Watch" species are not currently invasive in California. Assessment has found them to be a high risk for becoming invasive in the future.

Use the buttons below to choose plants to display by region, habitat, and whether the plant is designated an invasive plant or a watch plant.

Clear Filters

Jepson Regions

Habitat Types

Invasive or Watch

Scientific name	Rating	CDFA	PAF/ PRE
Acacia baileyana	Watch		
Acacia cyclops	Watch		
Acacia dealbata	Moderate		
Acacia longifolia	Watch		
Acacia melanoxylon	Limited		
Acacia paradoxa	Watch	-*	
Acacia pycnantha	Watch		
Acacia saligna	Watch		
Acaena novae-zelandiae	Watch	-*	
Aegilops cylindrica	Watch	-*	
Aegilops triuncialis	High	-*	
Ageratina adenophora	Moderate	B	
Agrostis avenacea	Limited		
Agrostis stolonifera	Limited		
Ailanthus altissima	Moderate	C*	
Alhagi maurorum	Moderate	-*	
Alopecurus pratensis	Watch		
Alternanthera philoxeroides	High	A*	
Alyssum corsicum	Watch		
Alyssum murale	Watch		
Ambrosia trifida	Watch	B*	
Ammophila arenaria	High		
Anthoxanthum odoratum	Limited		
Araujia sericifera	Watch	-*	
Arctotheca calendula	Moderate	A*	
Arctotheca prostrata	Moderate		
Arum italicum	Watch		
Arundo donax	High	-*	
Asparagus aethiopicus	Watch		
Asparagus asparagoides	Moderate		
Asphodelus fistulosus	Moderate	-*	

Scientific name	Rating	CDFA	PAF/ PRE
Atriplex semibaccata	Moderate		
Avena barbata	Moderate		
Avena fatua	Moderate		
Bassia hyssopifolia	Limited		
Bellardia trixago	Limited		
Berberis darwinii	Watch		
Berteroa incana	Watch	-*	
Brachypodium distachyon	Moderate		
Brachypodium sylvaticum	Moderate	-*	
Brassica nigra	Moderate		
Brassica rapa	Limited		
Brassica tournefortii	High	C	
Briza maxima	Limited		
Bromus diandrus	Moderate		
Bromus hordeaceus	Limited		
Bromus japonicus	Limited		
Bromus madritensis ssp. rubens	High		
Bromus tectorum	High	C	
Buddleja davidii	Watch		
Cakile maritima	Limited		
Carduus acanthoides	Limited	-*	
Carduus nutans	Moderate	-*	
Carduus pycnocephalus	Moderate	-*	
Carduus tenuiflorus	Limited	-*	
Carex pendula	Watch		
Carpobrotus chilensis	Moderate		
Carpobrotus edulis	High		
Carrichtera annua	Moderate	A	
Carthamus lanatus	High	-*	
Casuarina equisetifolia	Watch		
Catharanthus roseus	Watch		

Scientific name	Rating	CDFA	PAF/ PRE
Cenchrus echinatus	Watch	B*	
Cenchrus longispinus	Watch	B*	
Centaurea calcitrapa	Moderate	-*	
Centaurea diffusa	Moderate	-*	
Centaurea diluta	Watch		
Centaurea jacea ssp. pratensis	Moderate	-*	
Centaurea melitensis	Moderate	-*	
Centaurea solstitialis	High	-*	
Centaurea stoebe ssp. micranthos	High	-*	
Centaurea virgata var. squarrosa	Moderate	-*	
Cestrum parqui	Watch		
Chasmanthe floribunda	Watch		
Chondrilla juncea	Moderate	-*	
Chrysanthemoides monilifera ssp. monilifera	Moderate	A	
Cirsium arvense	Moderate	-*	
Cirsium vulgare	Moderate	-*	
Clematis vitalba	Moderate	A	
Colocasia esculenta	Moderate		
Conicosia pugioniformis	Limited		
Conium maculatum	Moderate		
Cortaderia jubata	High	-*	
Cortaderia selloana	High		
Cotoneaster franchetii	Moderate		
Cotoneaster lacteus	Moderate		
Cotoneaster pannosus	Moderate		
Cotula coronopifolia	Limited		
Crataegus monogyna	Limited		
Crocosmia x crocosmiiflora	Limited		
Crupina vulgaris	Limited	A*	
Cynara cardunculus	Moderate	-*	

Scientific name	Rating	CDFA	PAF/ PRE
Cynodon dactylon	Moderate		
Cynoglossum officinale	Moderate		
Cynosurus echinatus	Moderate		
Cytisus multiflorus	Watch		
Cytisus proliferus	Watch		
Cytisus scoparius	High	-*	
Cytisus striatus	Moderate	B	
Dactylis glomerata	Limited		
Datura inoxia	Watch		
Delairea odorata	High	-*	
Descurainia sophia	Limited		
Digitalis purpurea	Limited		
Dipogon lignosus	Watch		
Dipsacus fullonum	Moderate		
Dipsacus laciniatus	Watch		
Dipsacus sativus	Moderate		
Dittrichia graveolens	Moderate	-*	
Dittrichia viscosa	Watch	A	
Echium candicans	Limited		
Echium plantagineum	Watch	A	
Egeria densa	High		
Ehrharta calycina	High		
Ehrharta erecta	Moderate		
Ehrharta longiflora	Limited		
Eichhornia crassipes	High		
Elaeagnus angustifolia	Moderate		
Elymus caput-medusae	High	-*	
Emex spinosa	Moderate		
Erica lusitanica	Limited	B	
Erodium cicutarium	Limited		
Eucalyptus camaldulensis	Limited		

Scientific name	Rating	CDFA	PAF/ PRE
Eucalyptus cladocalyx	Watch		
Eucalyptus globulus	Limited		
Euphorbia lathyris	Watch		
Euphorbia myrsinites	Watch	A	
Euphorbia oblongata	Limited	-*	
Euphorbia terracina	Limited	-*	
Euphorbia virgata	High	-*	
Fallopia ×bohemica	Watch	A	
Fallopia japonica	Moderate	A*	
Fallopia sachalinensis	Moderate	A*	
Festuca arundinacea	Moderate		
Festuca myuros	Moderate		
Festuca perennis	Moderate		
Ficus carica	Moderate		
Foeniculum vulgare	Moderate		
Galega officinalis	Watch	A*	
Gazania linearis	Moderate		
Genista linifolia	Watch		
Genista monosperma	Moderate	-*	
Genista monspessulana	High	C*	
Geranium dissectum	Limited		
Geranium lucidum	Watch	A	
Geranium purpureum	Limited		
Glebionis coronaria	Limited		
Glyceria declinata	Moderate		
Grevillea robusta	Watch		
Gunnera tinctoria	Watch		
Gypsophila paniculata	Watch	B	
Halogeton glomeratus	Moderate	B*	
Hedera canariensis	High		
Hedera helix	High		

Scientific name	Rating	CDFA	PAF/ PRE
Helianthus tuberosus	Watch		
Helichrysum petiolare	Limited		
Heliotropium amplexicaule	Watch		
Helminthotheca echioides	Limited		
Heracleum mantegazzianum	Watch	A	
Hieracium aurantiacum	Watch	B	
Hirschfeldia incana	Moderate		
Holcus lanatus	Moderate		
Hordeum marinum	Moderate		
Hordeum murinum	Moderate		
Hydrilla verticillata	High	A*	
Hyparrhenia hirta	Watch		
Hypericum androsaemum	Watch		
Hypericum canariense	Moderate	B*	
Hypericum grandifolium	Watch		
Hypericum perforatum	Limited	C*	
Hypochaeris glabra	Limited		
Hypochaeris radicata	Moderate		
Ilex aquifolium	Limited		
Ipomoea indica	Watch		
Iris pseudacorus	Limited	B	
Isatis tinctoria	Moderate	-*	
Kniphofia uvaria	Watch		
Kochia scoparia	Limited		
Lantana camara	Watch		
Lathyrus latifolius	Watch		
Lepidium chalepense	Moderate	-*	
Lepidium draba	Moderate	-*	
Lepidium latifolium	High	-*	
Leptospermum laevigatum	Watch		
Leucanthemum vulgare	Moderate		
Ligustrum lucidum	Limited		

Scientific name	Rating	CDFA	PAF/ PRE
Limnobium spongia	High	-*	
Limonium duriusculum	Moderate	B	
Limonium ramosissimum	Limited	B	
Linaria dalmatica ssp. dalmatica	Moderate	-*	
Linaria vulgaris	Moderate		
Lobularia maritima	Limited		
Ludwigia hexapetala	High	C*	
Ludwigia peploides	High		
Lythrum hyssopifolia	Moderate		
Lythrum junceum	Watch		
Lythrum salicaria	High	-*	
Malephora crocea	Watch		
Marrubium vulgare	Limited		
Maytenus boaria	Watch		
Medicago polymorpha	Limited		
Melinis repens	Watch		
Mentha pulegium	Moderate		
Mesembryanthemum crystallinum	Moderate		
Mesembryanthemum nodiflorum	Limited		
Myoporum laetum	Moderate		
Myosotis latifolia	Limited		
Myriophyllum aquaticum	High	C	
Myriophyllum spicatum	High		
Nardus stricta	Watch		
Nicotiana glauca	Moderate		
Nothoscordum gracile	Watch	-*	
Olea europaea	Limited		
Oncosiphon pilulifer	High	Q	
Ononis alopecuroides	Limited	-*	
Onopordum acanthium	High	-*	

Scientific name	Rating	CDFA	PAF/ PRE
Onopordum illyricum	Watch	-*	
Orobanche aegyptiaca	Watch	A	
Oxalis pes-caprae	Moderate		
Paraserianthes lophantha	Watch		
Parentucellia viscosa	Limited		
Parthenium hysterophorus	Watch	A*	
Paspalum urvillei	Watch		
Paspalum vaginatum	Watch		
Passiflora tarminiana	Watch		
Peganum harmala	Watch	-*	
Pennisetum clandestinum	Limited	C*	
Pennisetum setaceum	Moderate		
Pennisetum villosum	Watch		
Persicaria wallichii	Watch	-*	
Phalaris aquatica	Moderate		
Phoenix canariensis	Limited		
Phytolacca americana	Limited		
Pittosporum undulatum	Watch		
Plantago lanceolata	Limited		
Plecostachys serpyllifolia	Watch		
Poa pratensis	Limited		
Polygala myrtifolia	Watch		
Polypogon monspeliensis	Limited		
Potamogeton crispus	Moderate		
Potentilla recta	Watch	-*	
Prunus cerasifera	Limited		
Pyracantha angustifolia	Limited		
Pyracantha coccinea	Limited		
Pyracantha crenulata	Limited		
Pyrus calleryana	Watch		
Ranunculus repens	Limited		
Raphanus sativus	Limited		

Scientific name	Rating	CDFA	PAF/ PRE
Rhamnus alaternus	Watch		
Rhaponticum repens	Moderate	B*	
Ricinus communis	Limited		
Robinia pseudoacacia	Limited		
Romulea rosea var. australis	Watch		
Rubus armeniacus	High		
Rumex acetosella	Moderate		
Rumex crispus	Limited		
Rytidosperma caespitosum	Watch		
Rytidosperma penicillatum	Limited		
Saccharum ravennae	Moderate	B*	
Salpichroa origanifolia	Watch	C	
Salsola paulsenii	Limited	-*	
Salsola ryanii	Watch		
Salsola soda	Moderate		
Salsola tragus	Limited	C*	
Salvia aethiopis	Limited	-*	
Salvinia molesta	High	-*	
Saponaria officinalis	Limited		
Scabiosa atropurpurea	Watch		
Schinus molle	Limited		
Schinus terebinthifolius	Moderate		
Schismus arabicus	Limited		
Schismus barbatus	Limited		
Scolymus hispanicus	Watch	-*	
Senecio elegans	Watch		
Senecio glomeratus	Moderate		
Senecio jacobaea	Limited	-*	
Senecio linearifolius	Watch	-*	
Sesbania punicea	High	-*	
Silybum marianum	Limited		
Sinapis arvensis	Limited		

Scientific name	Rating	CDFA	PAF/ PRE
Sisymbrium irio	Limited		
Solanum aviculare	Watch		
Solanum carolinense	Watch	-*	
Spartina alterniflora x S. foliosa	High	-*	
Spartina anglica	Moderate	-*	
Spartina densiflora	High	-*	
Spartina patens	Limited	-*	
Spartium junceum	High	-*	
Sphaerophysa salsula	Watch	-*	
Stipa brachychaeta	Watch	-*	
Stipa capensis	Moderate		
Stipa manicata	Limited		
Stipa miliacea var. miliacea	Limited		
Stipa tenuissima	Watch		
Tamarix aphylla	Limited	B	
Tamarix chinensis	High	-*	
Tamarix gallica	High	-*	
Tamarix parviflora	High	-*	
Tamarix ramosissima	High	-*	
Tanacetum vulgare	Moderate		
Tetragonia tetragonioides	Limited		
Thinopyrum junceiforme	Watch		
Torilis arvensis	Moderate		
Triadica sebifera	Moderate		
Tribulus terrestris	Limited	-*	
Trifolium hirtum	Limited		
Ulex europaeus	High	-*	
Undaria pinnatifida	Limited		
Ventenata dubia	Watch		
Verbascum thapsus	Limited		
Verbena bonariensis	Watch		

Scientific name	Rating	CDFA	PAF/ PRE
Vinca major	Moderate		
Volutaria tubuliflora	Limited	A*	
Washingtonia robusta	Moderate		
Watsonia meriana	Limited		
Zantedeschia aethiopica	Limited		
Zostera japonica	Moderate	-*	
Zygophyllum fabago	Watch	-*	

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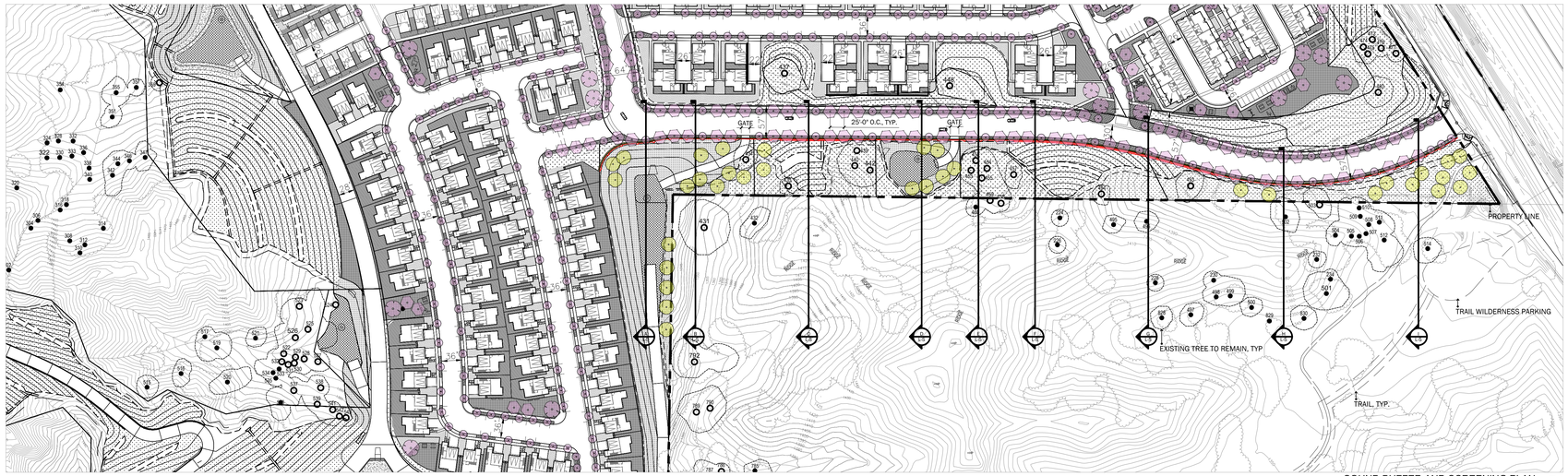
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Appendix L
Screening Study

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SOUND BUFFER AND SCREENING PLAN
1" = 100' - 0" (2)

LEGEND: SOUTH OF "B" STREET

PLAN SYMBOL	ELEVATION SYMBOL	VEGETATION TYPE	QUANTITY	SPACING	SIZE
		STREET TREE MEDIUM TREE SEE L2.00	41	25' O.C.	24" BOX
		STREET TREE SMALL TREE SEE L2.00	17	25' O.C.	24" BOX
		SCREENING SHRUB SPECIES MIX: ZONE B *CEANOTHUS SP.*, WILD LILAC: LOW WATER, CA NATIVE ZONE B *ECHIUM CANDICANS*, PRIDE OF MADEIRA: LOW WATER ZONE B *FICUS MICROCARPA + CVS*, INDIAN LAUREL: MED WATER ZONE B *FRANGULA CALIFORNICA*, COFFEEBERRY: LOW WATER, CA NATIVE ZONE B *FREMONTODENDRON CALIFORNICUM*, FLANNEL BUSH: LOW WATER, CA NATIVE ZONE B *LAURUS NOBILIS*, SWEET BAY: LOW WATER ZONE B *MORELLA CALIFORNICA*, PACIFIC WAX MYRTLE: MED WATER, CA NATIVE ZONE B-40 *RHUS LAURINA + CVS*, LAUREL SUMAC: LOW WATER, CA NATIVE	508	3-5' O.C.	15 GALLON
		SCREENING TREE SPECIES: ZONE B-30 *QUERCUS AGRIFOLIA*, COAST LIVE OAK: LOW WATER, CA NATIVE	35	25'-30' O.C.	24" BOX

STREETSCAPE PLANTING
SEE L2.00
5200 SF
SOUTH OF "B STREET"

PROPOSED RETAINING WALL
AND 42"H TUBULAR STEEL GUARDRAIL, TYP.
SEE CIVIL SHEET 12 OF 12

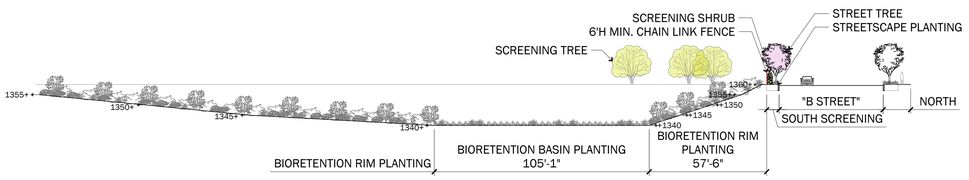
PROPOSED BLACK VINYL COATED CHAIN
LINK FENCE, TYP.
SEE CIVIL SHEET 12 OF 12

SLOPE PLANTING
SEE L2.00

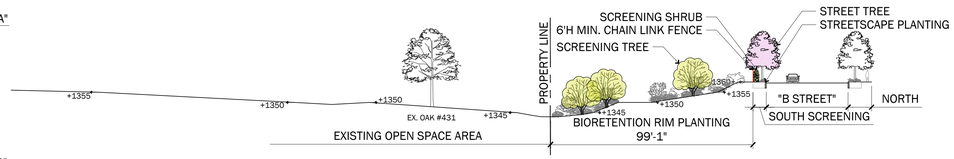
BIORETENTION RIM PLANTING
SEE L2.00

BIORETENTION BASIN PLANTING
SEE L2.00

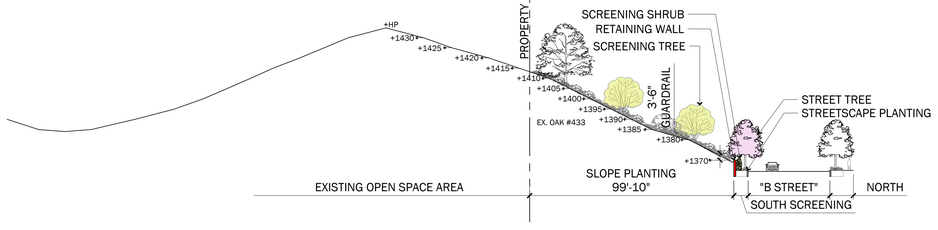
NATIVE HABITAT PLANTING
SEE L2.00



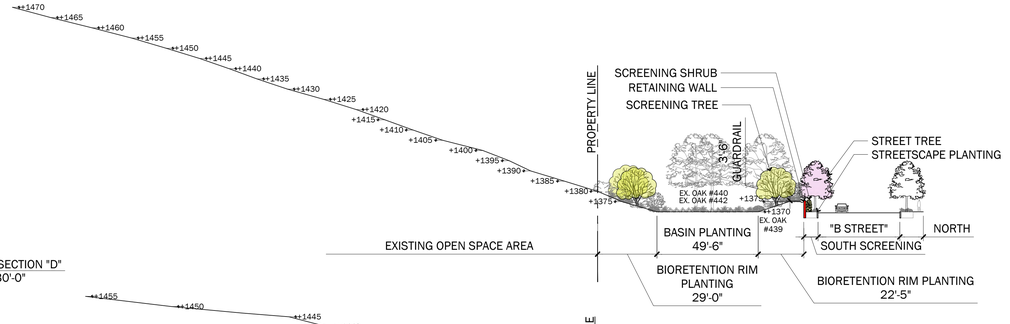
A SITE SECTION "A"
1" = 30'-0"



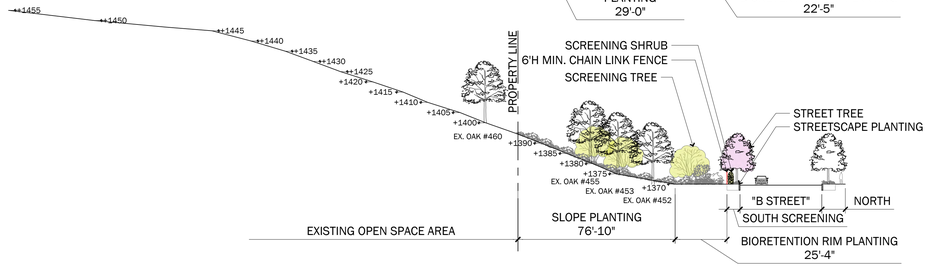
B SITE SECTION "B"
1" = 30'-0"



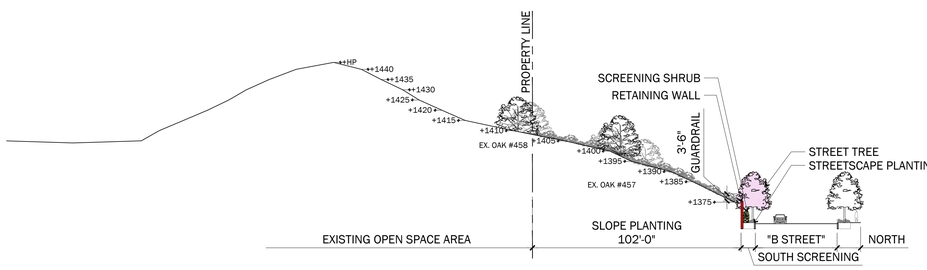
C SITE SECTION "C"
1" = 30'-0"



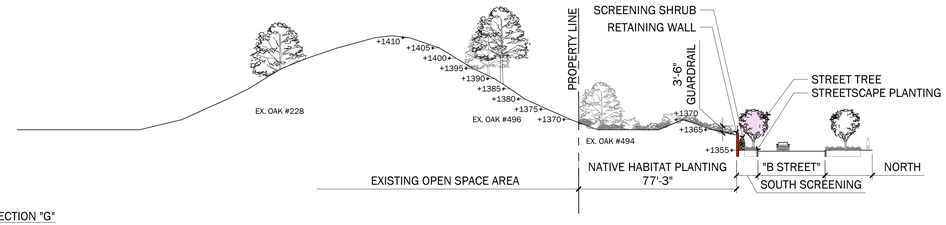
D SITE SECTION "D"
1" = 30'-0"



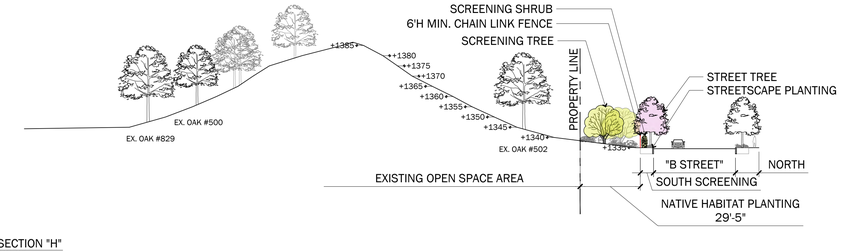
E SITE SECTION "E"
1" = 30'-0"



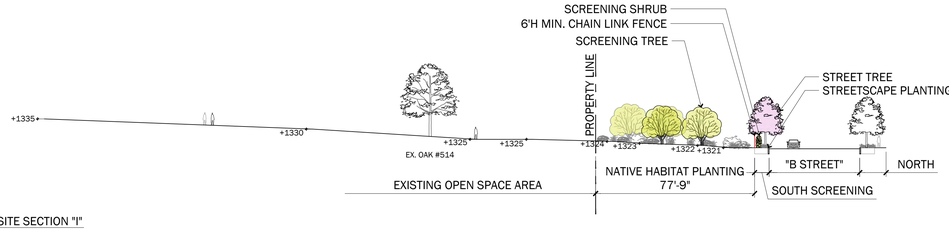
F SITE SECTION "F"
1" = 30'-0"



G SITE SECTION "G"
1" = 30'-0"



H SITE SECTION "H"
1" = 30'-0"



I SITE SECTION "I"
1" = 30'-0"

SITE SECTIONS
1" = 30' - 0" (1)

SUPERNATURAL
1494 Kenmore Road
Pasadena, CA 91106
www.studio-supernatural.com
510 910 5662

SCREENING STUDY

PROJECT
THE TRAILS AT LYONS CANYON
STEVENSON RANCH, CA 91321

REVISIONS

DATE	SYMBOL	DESCRIPTION
12/01/2023		STUDY
02/09/2024		STUDY

DATE	02/09/2024
PROJECT NO.	212107
DRAWN BY	KF
CHK BY	

SCREENING STUDY

L-S

INTENTIONALLY LEFT BLANK