

## **Appendix D**

Biological Technical Report for the Santa Barbara County Reliability Project

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**BIOLOGICAL TECHNICAL REPORT FOR THE  
SANTA BARBARA COUNTY RELIABILITY PROJECT  
VENTURA AND SANTA BARBARA COUNTIES, CALIFORNIA**

Prepared for:  
Southern California Edison  
1218 South 5<sup>th</sup> Avenue  
Monrovia, California 91016

Submitted by:  
BioResource Consultants, Inc.  
310 E Matilija Street  
Ojai, California 93023

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## 1.0 INTRODUCTION

This report documents and describes the existing conditions and biological resources in the area of the Santa Barbara County Reliability Project (hereafter referred to as the “Project”), and identifies potential impacts to biological resources that may result from implementation and construction of the Project.

### 1.1 Project Description

In 1998, the Southern California Edison Company (SCE) initiated the Project to increase reliability by reinforcing its existing 66 kilovolt (kV) sub-transmission system in northwestern Ventura County and southeastern Santa Barbara County to meet the electrical demands of the south coast of Santa Barbara County during emergency conditions while also enhancing operational flexibility.

The Project has been divided into six geographically-defined Segments (Segments 1, 2, 3A, 3B, and 4, and the Getty Tap) and at three substations (Carpinteria Substation, Casitas Substation, and Santa Clara Substation) (Figure 1).

Segment 1 begins at Santa Clara Substation off Foothill Road in unincorporated Ventura County. From that origin, it heads north along western Long Canyon; turns northwest at Harmon Canyon in the Ventura Hills; traverses Lake, Sexton, and Hall Canyons; then runs west along northern Cañada Seca and crosses Cañada Larga to Casitas Substation, which lies between SR-33 and the Ventura River. Segment 2 extends west from Casitas Substation along the south side of Lake Casitas, to the ‘Y’ near East Casitas Pass. Segment 3B heads west from the ‘Y’ through Casitas Valley along the south side of SR-150, crossing over Madranio Canyon, along Rincon Mountain, and through Rincon Valley. At the Santa Barbara/Ventura County line near the intersection of SR-150 and SR-192, Segment 3B becomes Segment 3A and continues to the west into the Shepard Mesa and Gobernador rural residential areas, then west along SR-192 to Carpinteria Substation. Segment 4 heads west from the ‘Y’ along the north side of SR-150, runs northwest along the ridgetop of Sutton Canyon, and then turns south to Carpinteria Substation. The ‘Getty Tap,’ is located approximately in the middle of Segment 1.

The Project includes the following physical elements:

- Reconstruct existing 66 kilovolt (kV) subtransmission facilities within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Install marker balls on overhead wire where determined to be necessary.
- Modify utility equipment within the existing Carpinteria Substation, Casitas Substation, Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Santa Clara Substation.
- Install telecommunications facilities to connect the Project to SCE’s existing telecommunications system for the protection, monitoring and control of subtransmission and substation equipment. Install new telecommunications facilities along Segments 1, 2, and 4

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and at Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation<sup>1</sup>.

- Transfer distribution lines (and third-party infrastructure as necessary) to subtransmission structures along Segment 3A.
- Remove subtransmission infrastructure in Segments 1 and 2.

## 1.2 Environmental Setting

The Project lies north and west of US-101, between one and six miles from the coastline. Elevations vary through the Project Area from 31 feet above sea level (ASL) near the Carpinteria Substation, which lies in the coastal plain, to 1,500 feet ASL along Segment 4 in the foothills of the western Transverse Ranges, to more than 1,800 feet ASL along portions of Segment 3B near Rincon Peak.

The Project crosses the headwaters of multiple small streams and creeks that flow through agricultural and urban areas before reaching the ocean, and is located in lower gradient reaches of the Santa Clara River and Ventura River watersheds, including Cañada Larga, which is tributary to the Ventura River. While groundwater and surface water sources have been extensively developed for domestic and agricultural uses throughout the area, these riparian corridors contrast sharply with an otherwise dry landscape. Landslides are prone to occur in areas of steep, unstable terrain, and the area has a history of large and sometimes devastating wildland fire events, with “Sundowner” and “Santa Ana” winds contributing to fast-moving and destructive fires (USFS 2005).

The majority of the Project is located on private lands, while three tower sites and associated access and spur roads in Segment 4 are located within the Santa Barbara Front, a geographical unit of lands under the jurisdiction of the Los Padres National Forest owned by the U.S. Forest Service (USFS). Land uses in the immediate vicinity of the Project Area are dominated by agriculture (cattle grazing and orchards) and “open-space” areas covered by native vegetation communities, with low-density residential development and commercial areas (nurseries and row crops) scattered through Segments 3A, 3B, and 4.

Temperatures in the area average 50 to 71° F, with an average annual temperature of 60° F. Average rainfall ranges from 15.4 to 17.7 inches. The east-west orientation of the mountains, combined with the distinct Mediterranean/marine climate, results in a unique botanic zone and mix of species. Predominately north- or south-facing slopes are dominated by alternating bands of sedimentary rock formations, with oak woodlands at lower elevations. Conifers exist in small patches along ridgetops and on north-facing slopes. Noxious weed infestations, including black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), Cape ivy (*Delairea odorata*), and ruderal species and escaped cultivars occur throughout the vicinity of the Project, especially along road and trail corridors.

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<sup>1</sup> The Project also includes additional telecommunications-related work at Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substations, and Ventura Substation; this work would be conducted exclusively within the MEERs or on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this Section.

**Figure 1. Project Location**





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## **1.3 Regulatory Setting**

### **1.3.1 Federal Regulations**

#### ***Endangered Species Act (16 United States Code [U.S.C.] § 1531 et seq.)***

The Endangered Species Act of 1973 (ESA) provides for the protection of plant and animal species listed by the federal government as “Endangered” or “Threatened”, and “the ecosystems upon which they depend.” An “Endangered” species is one that is “in danger of extinction” throughout all or a significant portion of its range. A “Threatened” species is one that is “likely to become endangered” within the foreseeable future. Pursuant to Section 9 of the ESA, it is unlawful for any person to “take” a federally listed species. “Take,” as defined by the ESA, “means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” This can also include the modification of a species’ habitat. For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land, and removing, cutting, digging up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16 U.S.C. § 1538(c)).

When non-federal entities such as states, counties, local governments, and private landowners wish to conduct an otherwise lawful activity that might incidentally, but not intentionally, “take” a listed species, an incidental take permit (ESA § 10(a)(1)(B)) must first be obtained following formal consultation with the USFWS, through the development of a habitat conservation plan (HCP).

#### ***Migratory Bird Treaty Act (16 U.S.C. §§ 703 - 712)***

The Migratory Bird Treaty Act of 1918 (MBTA) protects species of native, non-game, migratory birds. Specific provisions in the statute include a federal prohibition, except as allowed under specific conditions, to

“pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird.” (16 U.S.C. § 703).

#### ***Bald and Golden Eagle Protection Act (16 U.S.C. § 668)***

The Bald and Golden Eagle Protection Act of 1940 (BGEPA) provides for the protection of bald and golden eagles. The BGEPA establishes criminal penalties for persons who “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof.” The BGEPA defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.”

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***National Forest Management Act (16 U.S.C. § 1600)***

The National Forest Management Act of 1976 requires National Forests to maintain viable populations of “native and desired non-native vertebrate species . . . well distributed in the planning area.”

***U.S. Department of Agriculture Environmental Compliance Fish and Wildlife Policy (Departmental Regulation 9500-4)***

The Secretary of Agriculture’s Policy on Fish and Wildlife directs the Forest Service to “manage habitats for all native and desired nonnative plants, fish and wildlife species to maintain viable populations of each species; identify and recover threatened and endangered plant and animal species” and to avoid actions “which may cause species to become threatened or endangered.”

***Forest Service Manual***

The Forest Service Manual (FSM) contains legal authorities, objectives, policies, responsibilities, instructions, and guidance for the planning and execution of programs and activities within and related to National Forests. FSM Chapter 2670 directs the USFS to “develop/implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions,” and to “avoid or minimize impacts to species whose viability has been identified as a concern.” If impacts cannot be avoided, the USFS “can allow or disallow the impact, but the decision must not result in loss of species viability or create a significant trend towards federal listing.” FSM Chapter 2672.4 specifies that a Biological Evaluation (BE) be prepared to determine if a project may affect any USFS or USFWS listed species. In addition to protections to federally listed species, FSM Chapter 2672.11 delegates to each Regional Forester the authority to designate “Sensitive” species, which are defined as

“Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by: a. Significant current or predicted downward trends in population numbers or density, or b. Significant current or predicted downward trends in habitat capability that would reduce a species’ existing distribution.”

***Land Management Plan: Southern California National Forests***

The Land and Resource Management Plans (Plans) established by USFS for the southern California national forests describe the strategic direction at the broad program-level for managing the land and its resources over the next 10 to 15 years.

As stated in the Los Padres National Forest Strategy, the objective of USFS threatened, endangered, proposed, candidate and sensitive species management is to, “manage habitat to move listed species toward recovery and de-listing” and to, “prevent listing of proposed and sensitive species.” For management of species of concern, the primary objective is to, “maintain and improve habitat for fish, wildlife, and plants, including those with the following designations: game species, harvest species, management indicator species and watch list species.”

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The Los Padres National Forest Strategy includes specific measures to meet the six goals of the USFS National Strategic Plan. These goals include: Goal 1- Reduce the risk from catastrophic wildland fire, Goal 2 - Reduce the impacts from invasive species, Goal 3 - Provide outdoor recreation opportunities, Goal 4 - Help meet energy resource needs, Goal 5 - Improve watershed conditions, and Goal 6 - Mission related work in addition to that which supports the agency's goals.

### ***Clean Water Act of 1972***

Enacted in 1972, the federal Clean Water Act (CWA) and subsequent amendments outline the basic protocol for regulating discharges of pollutants to waters of the U.S. It is the primary federal law applicable to water quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. Enforced by the U.S. Environmental Protection Agency (USEPA), it was enacted "... to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA authorizes states to adopt water quality standards and includes programs addressing both point and non-point pollution sources. The CWA also established the established the National Pollutant Discharge Elimination System (NPDES), and provides the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry and water quality standards for surface waters (see below for a discussion of the NPDES program).

In California, programs and regulatory authority under the CWA have been delegated by USEPA to the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs). Under Section 402 of the CWA, a discharge of pollutants to navigable waters is prohibited unless the discharge complies with an NPDES permit.

The SWRCB and RWQCBs have also developed numeric and narrative water quality criteria to protect beneficial uses of State waters and waterways. Beneficial uses in the Project area include water supply, groundwater recharge, aquatic habitat, wildlife habitat, and recreation.

### ***Section 401 – Water Quality Certification***

Section 401 of the CWA specifies that, for any activity that may result in a discharge into waters of the U.S., the SWRCB or applicable RWQCB must certify that the discharge will comply with State water quality standards, including beneficial uses (23 CCR 3830, et seq.). Under California's policy of no net loss of wetlands, the SWRCB and RWQCBs require mitigation for dredge and fill impacts to wetlands and waterways (see Section 4.4, Biological Resources). Dredge and fill activities in wetlands and waterways that impact waters of the U.S. will require a federal Section 404 permit from the U.S. Army Corps of Engineers (USACE). These permits trigger the requirement to obtain a Section 401 certification, which must be obtained prior to issuance of a Section 404 permit.

### ***Section 404 – Permitting for Dredge and Fill Activities in Wetlands and Waters of the U.S.***

The USACE is responsible for issuing permits under CWA Section 404 for placement of fill or dredged material in waters of the U.S. and jurisdictional wetlands. Waters of the U.S. refers to oceans, bays, rivers, streams (including non-perennial streams with a defined bed and bank), lakes, ponds, and seasonal and perennial wetlands.

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Project proponents must obtain a permit from the USACE for all discharges of fill or dredged material before proceeding with a proposed activity. The USACE may issue either an individual permit or a general permit. General permits are preauthorized at the regional or national level and are issued to cover activities expected to result in only minimal adverse environmental effects (i.e., LA District Regional General Permit No. 63 for Repair and Protection Activities in Emergency Situations). Nationwide Permits (NWP) are a type of general permit issued to cover activities that the USACE has determined to have minimal adverse effects, such as routine maintenance (i.e., Nationwide Permit 3) or utility line activities (i.e., Nationwide Permit 12). Each NWP specifies particular conditions that must be implemented by the permittee.

### **1.3.2 State Regulations**

#### ***California Coastal Act of 1976 (California Public Resources Code § 30000 et seq.)***

The California Coastal Act establishes public access requirements and development restrictions within the coastal zone, an area that extends off the California coast to the state's outer limit of jurisdiction, and inland generally 1,000 yards from the mean high tide or to the first major ridgeline paralleling the sea, whichever is less (with certain exceptions). In Ventura and Santa Barbara Counties, the coastal zone generally follows the 1,000-yard limit with several exceptions. Most of the Carpinteria Valley is included within the coastal zone due to "important habitat, recreational, and agricultural resources" (Coastal Land Use Plan, Santa Barbara County 2009). Portions of Segments 3A and 4 are located within the expanded coastal zone of the Carpinteria Valley.

Sections 30231, 30233, and 30236 of the Act limit impacts to streams, wetlands, and their biological resources, through providing for minimization of wastewater discharges and runoff, minimization of alteration of natural streams, and maintaining the actual vegetation buffer areas, among other things. Upland habitats in the coastal zone are protected under Section 30240, which limits impacts to designated Environmentally Sensitive Habitat Areas (ESHAs). The California Coastal Act specifically calls for protection of "environmentally sensitive habitat areas" or ESHAs, which includes wetlands and riparian areas.

#### ***California Fish and Game Code Sections 1600-1616, Lake and Streambed Alteration Program***

If a project includes alteration of the bed, banks or channel of a stream, or the adjacent riparian vegetation, then a Streambed Alteration Agreement (SAA) may be required from CDFG. California Fish and Game Code (CFG) Sections 1600-1616, regulate activities that could alter the flow, bed, banks, channel or associated riparian areas of a river, stream or lake—all considered "waters of the state." The law requires any person, state or local governmental agency or public utility to notify CDFG before beginning an activity that will substantially modify a river, stream or lake.

#### ***California Endangered Species Act (California Fish and Game Code § 2050, et seq.)***

The California Endangered Species Act (CESA) generally parallels the provisions of the federal ESA, and states that "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation,

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will be protected or preserved.” The California Department of Fish Game (CDFG) administers the CESA and has committed itself to work with all interested persons, agencies and organizations to protect and preserve such sensitive resources and their habitats.

Under the CESA, “Endangered” is defined 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;” and “Threatened” is defined 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.” “Take” is defined as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” an individual of a species, but the definition does not include “harm” or “harass,” as the federal ESA does. As a result, the threshold for a take under the CESA is higher than that under the federal ESA.

Consistent with the CESA, CDFG has established lists of endangered, threatened, and candidate species that may or may not also be included on a federal ESA list. Pursuant to CFG Section 2081, CESA allows for incidental take permits to otherwise lawful development projects that could result in the take of a state-listed Threatened or Endangered species. The application for an incidental take permit under Section 2081(b) has a number of requirements including the preparation of a conservation plan, generally referred to as a Habitat Conservation Plan. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species.

***Native Plant Protection Act (California Fish and Game Code §§ 1900 - 1913, § 2062 and § 2067)***

The Native Plant Protection Act (NPPA) identifies the types of plant species eligible for State listing. Eligible species include those identified on California Native Plant Society (CNPS) Rare Plant Ranks (RPR) 1A, 1B, and 2 meet the definitions of Sections 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (CESA) of the CFG Code. Plants with CNPS listings 3 and 4 do not explicitly qualify for legal protection, but can be addressed in CEQA documents depending on the circumstances and opinion of the biologist conducting the assessment. RPR definitions are as follows:

**1A:** Plants presumed to be extinct because they have not been seen or collected in the wild in California for many years. This rank includes plants that are both presumed extinct in California, as well as those plants that are presumed extirpated in California. A plant is extinct in California if it no longer occurs in or outside of California. A plant that is extirpated from California has been eliminated from California, but may still occur elsewhere in its range.

**1B:** Plants that are rare throughout their range with the majority of them endemic to California. Most of the plants of RPR 1B have declined significantly over the last century.

**2:** Plants that are rare throughout their range in California, but are common beyond the boundaries of California. RPR 2 recognizes the importance of protecting the geographic range of widespread species (CNPS 2010).

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**3:** A review list for plants for which there is inadequate information to assign them to one of the other lists or to reject them.

**4:** A watch list for plants that are of limited distribution or infrequent throughout a broader area in California and their vulnerability or susceptibility to threat appears relatively low at this time.

***California Fish and Game Code Sections 3500-3516, and 3800***

CFG Code 3513 furthers the intent of the MBTA by prohibiting any take or possession of birds in California that are designated by the MBTA as migratory nongame birds, except as allowed by Federal rules and regulations promulgated pursuant to the MBTA. In addition, CFG Code Sections 3503, 3503.5, 3511, and 3800 further protect nesting birds and their parts, including passerine birds, raptors, and state “fully protected” birds. These regulations protect almost all native nesting birds, not just special status birds.

***California Fish and Game Code Sections 3511, 4700, 5050, and 5515***

CFG Code Sections 3511, 4700, 5050, and 5515 for the protection of bird, mammal, reptile, amphibian, and fish species that are identified as “fully protected.” Fully protected animals may not be harmed, taken, or possessed. The classification of “Fully Protected” was the State’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts; white-tailed kite, golden eagle, trumpeter swan, northern elephant seal and ring-tailed cat are the exceptions. The white-tailed kite and the golden eagle are tracked in the CNDDDB; the trumpeter swan, northern elephant seal and ring-tailed cat are not.

***California Department of Fish and Game Staff Report on Burrowing Owl Mitigation (2012)***

This document provides CDFG’s comprehensive conservation and mitigation strategy for burrowing owls. CDFG determined that reversing declining population and range trends for burrowing owls will require implementation of more effective conservation actions, including developing more rigorous burrowing owl survey methods; working to improve the adequacy of impacts assessments; developing clear and effective avoidance and minimization measures; and developing mitigation measures to ensure impacts to the species are effectively addressed at the project, local, and/or regional level. The 2012 Staff Report takes into account the California Burrowing Owl Consortium’s Survey Protocol and Mitigation Guidelines (CBOC 1993, 1997) and supersedes the survey, avoidance, minimization and mitigation recommendations in the earlier 1995 Staff Report.

***California Public Resources Code Sections 4292 and 4293***

Section 4292 directs the owner, controller, operator, or maintainer of electrical transmission lines in mountainous land, or forest-covered land, brush-covered land, or grass-covered land to maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or

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tower, and to maintain a clearance of 4 feet from any line which is operating at 2,400 or more volts, but less than 72,000 volts.

***California Public Utilities Commission, General Order 95, Rule 35, Vegetation Management***

Rule 35 mandates that certain vegetation management activities be performed in order to establish necessary and reasonable clearances, and establishes minimum clearances between line conductors and vegetation that under normal conditions shall be maintained. These requirements apply to all overhead electrical supply and communication facilities that are covered by this General Order, including facilities on lands owned and maintained by California state and local agencies.

**1.3.3 Local Regulations**

***Santa Barbara County Coastal Land Use Plan***

The purposes of the Santa Barbara County Coastal Land Use Plan (CLUP) include protection of coastal resources and providing greater access and recreational opportunities for the public's enjoyment while allowing for orderly and well-planned urban development and the siting of coastal-dependent and coastal-related industry. The CLUP incorporates, to the maximum possible extent, local plans and policies that are consistent with the California Coastal Act. All electric transmission lines proposed for the Coastal Zone are "developments" under the Coastal Act, thus the County of Santa Barbara has permit review over them.

The CLUP additionally identifies Native Plants as one of 13 Environmentally Sensitive Habitat Areas. Policies 9-35 and 9-36 encourage native oak preservation and require developments to preserve areas of significant amounts of native vegetation, respectively. The CLUP also identifies Streams and identifies Policies 9-37 to 9-43 to preserve riparian vegetation and habitat for dependent species, as well as measures to protect water quality.

***County of Santa Barbara Deciduous Oak Tree Protection and Regeneration Ordinance (Santa Barbara County Code, Chapter 35, § 35-901 et seq.)***

The County of Santa Barbara Deciduous Oak Tree Protection and Regeneration Ordinance protects deciduous oak trees four inches or greater in diameter at breast height outside of the Coastal Zone and urban boundaries. The regulations contained in this ordinance apply to all property in the County unincorporated area located outside the coastal zone and urban boundary lines. The ordinance generally provides that a public utility may remove protected oak trees within a utility or other public easement if it obtains a permit, and such removal shall not count against thresholds set forth in the ordinance regarding protected oak tree removals. The ordinance also establishes standards for mitigation that may accompany the issuance of a permit.

***County of Santa Barbara Coastal Zoning Ordinance (Santa Barbara County Code, Chapter 35, §140 et seq.)***

This ordinance requires a Coastal Development Permit for the removal of any tree within the Coastal Zone that is six inches or more in diameter measured four feet above the ground and six feet or more in height that meet the following criteria:

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- trees located in a County street right-of-way
  - trees located within 50 feet of any major or minor stream except when such trees are removed for agricultural purposes
  - oak trees; or
  - trees used as a habitat by monarch butterflies.

***Ventura County Tree Protection Regulations (Ventura County Non-Coastal Zoning Ordinance §8107-25)***

Ventura County has stated that trees contribute significantly to the County's unique aesthetic, biological, cultural, and historical environment as well as its air quality. The County has expressed the intent to encourage the responsible management of these resources by employing public education and recognized conservation techniques to achieve an optimal cover of healthy trees of diverse ages and species while practically reconciling conflicting demands for alternative uses. Protected trees include all oaks and sycamores 9.5" in circumference or larger (measured 4.5' above ground), trees of any species with a historical designation, trees of any species 90" in circumference or larger, and most native trees in the Scenic Resources Protection Zone with a circumference greater than 9.5". If pruning (beyond specified limits), removal, trenching, excavation, or other encroachment into the protected zone (5' outside the canopy's edge and a minimum of 15' from the trunk), tree alteration, felling, or removal is part of a project that is not exempt per the regulations, the Project would obtain the applicable permit, and must adhere to the detailed mitigation measures contained therein.

## **2.0 METHODOLOGY**

Prior to conducting surveys, standard database searches were conducted and previous surveys in the area were reviewed to obtain a list of federal and state listed resources, including sensitive plants and animals in the region. The results of these preliminary database searches provided a basis for addressing the appropriate special-status resources in the footprint of existing infrastructure (i.e., substations, access roads, and crane pads), proposed additional workspace (spur roads, temporary and permanent drill and crane pads, pulling and stringing sites), and immediate surroundings (hereafter referred to in this section as the Project Area). The biological resources assessment included general biological surveys, raptor surveys and habitat suitability assessments for special-status plant and wildlife species within the Project Area and a 500-foot buffer on either side of the alignment (hereafter referred to in this section as the Survey Area). Focused biological surveys for special-status plant and wildlife species were conducted in the spring of 2012.

### **2.1 Literature and Database Review**

Information about documented special-status plant and animal species, and habitats known to occur within the vicinity of the Project, was obtained from the California Natural Diversity Database (CNDDDB; CDFG 2003). The CNDDDB search included U.S. Geological Survey (USGS) 7.5-minute quadrangles Carpinteria, Matilija, Pitas Point, Saticoy, Ventura, and White Ledge Peak as well as the eleven surrounding quadrangles: Camarillo, Hildreth Peak, Lion Canyon, Little Pine Mountain, Ojai, Old Man Mountain, Oxnard, Santa Paula, Santa Paula Peak, Santa Barbara, and Wheeler Springs.



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Additional literature and databases referenced include: California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2010); *The Jepson Manual: Higher Plants of California* (Baldwin 2012); *A Manual of California Vegetation* (Sawyer et al. 2009); *The CalFlora Database* (CalFlora 2000); *The Sibley Field Guide to Birds of Western North America* (Sibley 2003); the *eBird* website (Cornell Lab of Ornithology and National Audubon Society, Inc. 2012); the *California Fish Species* website (University of California 2012); the *California Herps: A Guide to the Amphibians and Reptiles of California* website (California Herps 2012); the *USFWS Critical Habitat Portal* website (USFWS 2012); *Fish Species of Special Concern* (Moyle et al. 1995), and *California Wildlife Habitat Relationships* software (CDFG 2005).

Based on the results of searches of the CNDDDB and the USFWS Critical Habitat Portal website, the following species recovery plans, 5-year reviews, and other pertinent recovery status sources were reviewed to better understand the current species population trends within the Project vicinity:

- Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California (NMFS 2005)
- Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Least Bell's Vireo (USFWS 1994)
- Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (USFWS 2007)
- Coastal California gnatcatcher (*Polioptila californica californica*) 5-year Review: Summary and Evaluation (USFWS 2010)

In addition, SCE previously conducted a preliminary survey of Segments 1, 2, 3A, and 4 in May and June 1999, to identify vegetation types and to determine the potential for special-status plant and wildlife species. A follow-up survey of Segment 3A occurred in October 2005 to document any changes to the general habitat since the 1999 survey. Additional surveys of Segments 1 and 4 were conducted in September 2007 to document changes since previous surveys, and to survey additional sites not included in initial surveys. A survey of three poles on U.S. Forest Service land in Segment 4 occurred in December 2008 and January 2009 and a survey of the access route and western portions of Segment 4 occurred during a survey of an adjacent line in May and June 2009. These survey reports provided a baseline of information specific to the Project Area and guidance for the field surveys.

## 2.2 Survey Methods

Biological reconnaissance surveys in the Survey Area were conducted in February and March 2012 to describe and map the vegetation present in the Project Area and to evaluate the potential of the habitats to support special-status plant and wildlife species.

Vegetation was mapped in the field using aerial photographs to delineate the extent of each vegetation community within the Survey Area. Plant species were identified in the field or collected for subsequent identification using keys in Hickman (1993) or Baldwin (2012). Nomenclature generally follows Sawyer et al. (2009) for vegetation types and communities, and

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Calflora (2012), Baldwin (2012) and current scientific data (e.g., scientific journals) for individual plant species.

Surveys for wildlife species included searching for and identifying species' diagnostic signs including audible calls, prints, scat, nests, skeletal remains, and burrows, and habitat features (rock or debris piles, cavities, and rock outcrops) that may attract and/or support special-status species. Additionally, surveys included searching for raptors and identifying their nests. All species observed were recorded in field notes. Taxonomy and nomenclature for wildlife generally follows Collins and Taggart (2009) for amphibians and reptiles, American Ornithologists Union (AOU 1998) for birds, and Baker et al. (2003) for mammals.

Focused biological surveys for special-status plant species within the Project Area were completed in the spring of 2012. These surveys were conducted during the appropriate blooming season for target special-status plant species with a known presence, or "Moderate" or "High" potential to be present in the Project Area, and it included an area within 100 feet (a 200-foot wide corridor) of the alignment in locations that provide suitable habitat. Individuals or populations of special-status plant species were photographed and recorded using a global positioning system (GPS) unit. Results of the focused plant surveys are presented in Appendix D of this Biological Technical Report.

Focused biological surveys for burrowing owl in areas with suitable habitat were conducted in the spring of 2012 and followed the California Department of Fish and Game Staff Report on Burrowing Owl Mitigation (CDFG 2012b). Additional raptor surveys were expanded to include an area within one mile of the Project Area. These surveys were conducted during the appropriate nesting season for target species. Individuals or nests of special-status bird species were photographed and recorded using GPS. Results of the burrowing owl surveys are included in Appendix C of this Biological Technical Report.

### **Special-Status Plants and Wildlife**

Plants or wildlife may be considered to have special status due to declining populations, vulnerability to habitat change, restricted distributions, or insufficient knowledge of the species biological status. Species are considered to be special-status if they meet one or more of the criteria detailed in Section 1.3 above. Special status plant and animal species known to occur, or with the potential to occur are listed in Tables 1 and 2, and occurrences documented in CNDDDB are shown in Figure 2.

Using information from the various listed sources and floral and faunal surveys of the area, the potential for special-status species to occur within the Project Area was assessed as present, high, moderate, low, or none based on the following criteria:

- **Present:** The species was observed in the Project Area during field surveys, or documented from the site during previous surveys.
- **High:** CNDDDB or other documented occurrences have been recorded within 1.0 mile of the Project and suitable habitat is present (suitable nesting or roosting habitat for bird and bat species). Individuals were not observed during field surveys; however, the species could be present or otherwise impacted by the Project.

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- **Moderate:** CNDDDB or other documented occurrences have been recorded within 5 miles of the Project Area and suitable habitat is present (suitable nesting or roosting habitat or high quality foraging areas for bird and bat species). Individuals were not observed during field surveys; however, the species could be present or otherwise impacted by the Project.
  - **Low:** Suitable or marginal habitat may occur in the Project Area but; no CNDDDB records of the species have been recorded within recent years; records of the species within 5 miles of the Project are suspected to be now extirpated or potentially misidentified with other species; or individuals were not observed during field surveys and are not anticipated to be present. For bird and bat species, this category may be used for species that are documented, but likely to be only transient through the area during foraging or migratory movements, no suitable nesting or roosting habitat is present.
  - **None:** A number of plant and wildlife species identified in the literature review were determined to have no potential to occur within the Project Area because the Project Area does not contain suitable habitat, is located out of the species' known geographic range, or is located out of the species' known elevational range limits.

**Table 1. Special-Status Plant Species Known to Occur, or with the Potential to Occur in the Project Area.**

Common Name	Scientific Name	Habitat Preference	Blooming Period	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
<i>PLANTS</i>						
Abrams' oxytheca	<i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	Found in shale to sandy soils within chaparral communities, from 3,750 to 6,750 feet ASL.	June-August	FSS, 1B.2	None	Outside of elevational and known geographic range.
Hoover's bent grass	<i>Agrostis hooveri</i>	Found in sandy soils in chaparral, cismontane woodland, valley and foothill grassland communities from 200 to 1,970 feet ASL.	June	FSS, 1B.2	Low	Outside of known geographic range. Potential suitable habitat in Project area.
oval-leaved snapdragon	<i>Antirrhinum ovatum</i>	Found in chaparral, valley and foothill grassland communities from 650 to – 3,300 feet ASL.	May-November	4.2	Low	Outside of known geographic range. Potential suitable habitat in Project area.
aphanisma	<i>Aphanisma blitoides</i>	Found on bluffs and slopes near the ocean in sandy or clay soils in coastal bluff scrub, coastal dune, and coastal scrub communities from 1 to 1,000 feet ASL.	April-May	FSS, 1B.2	None	No habitat present. Outside of known geographic range.
Braunton's milkvetch	<i>Astragalus brauntonii</i>	Found in chaparral, coastal sage scrub, and valley and foothill grassland communities from 15 to 2,100 feet ASL.	March-July	FE, 1B.1	Low	Outside of known geographic range. Potential suitable habitat in Project area.
Miles' milk-vetch	<i>Astragalus didymocarpus</i> var. <i>milesianus</i>	Found in clay soils in coastal scrub from 65 to 300 feet ASL.	March-June	FSS, 1B.2	Low	Outside of known geographic range. Potential suitable habitat in Project area.
Ventura marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	Found within reach of high tide or protected by barrier beaches, more rarely near seeps on sandy bluffs in coastal salt marsh communities from 1 to 115 feet ASL.	July-October	FE, SE, 1B.1	None	No habitat present. Outside of known geographic range.
Coulter's saltbush	<i>Atriplex coulteri</i>	Found on ocean bluffs, ridgetops, as well as alkaline low places within coastal bluff scrub, coastal dune, coastal scrub, and valley and foothill grassland communities from 35 to 1,450 feet ASL.	March-October	1B.2	Low	Potential suitable habitat in Project Area. No known occurrences within 10 miles of Project Area.
Davidson's saltscale	<i>Atriplex serenana</i> var. <i>davidsonii</i>	Found in alkaline soils in coastal bluff scrub, coastal scrub, and wetland and riparian communities from 20 to 820 feet ASL.	April-October	1B.2	Moderate	Within known species range. Potential suitable habitat in coastal scrub communities of Project Area.

Common Name	Scientific Name	Habitat Preference	Blooming Period	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
Plummer's baccharis	<i>Baccharis plummerae plummerae</i>	Found in open shrub-grassland associations in coastal scrub or oak woodlands from 300 to 1,250 feet ASL.	August-October	FSS, 1B.2	<b>Present</b>	Documented from Sutton Canyon north of the Carpinteria Substation, at sites between Construction 79-102 and 124-126 in Segment 4, between Construction 59-64 in 3B, and at sites in Segments 1 and 2.
Brewer's calandrinia	<i>Calandrinia breweri</i>	Found in burned or disturbed areas of chaparral, and coastal sage scrub communities from 35 to 4,000 feet ASL.	March-June	4.2	<b>Moderate</b>	Within known species range. Potential suitable habitat in chaparral and coastal sage scrub communities.
Catalina mariposa lily	<i>Calochortus catalinae</i>	Found in coastal sage scrub, chaparral, and valley and foothill grassland communities from 50 to 2,300 feet ASL.	February-May	4.2	<b>Present</b>	Documented from Sutton Canyon north of the Carpinteria Substation, between Construction 124 and 140 in Segment 4, and sites along Segments 1, 2, and 3B.
late-flowered mariposa lily	<i>Calochortus fimbriatus</i>	Found in dry, open coastal woodlands, and chaparral on serpentine soils from 885 to 6,275 feet ASL.	June-August	FSS, 1B.2	<b>High</b>	Documented in Segment 4 (CNDDDB Occ# 8), exact location unknown. Suitable habitat in woodland and chaparral communities
Palmer's mariposa lily	<i>Calochortus palmeri var. palmeri</i>	Found in vernal moist places, meadows and seeps in chaparral, coniferous and yellow-pine forest from 1,975 to 7,365 feet ASL.	May-July	1B.2	Low	On edge of elevational and geographic range, but some potentially suitable habitat exists in Segments 3B and 4.
Plummer's mariposa lily	<i>Calochortus plummerae</i>	Occurs on rocky and sandy sites, usually of granitic or alluvial material in coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, and lower montane coniferous forest communities from 300 to 5,300 feet ASL. Can be very common after fire.	May-August	FSS, 1B.2	<b>Moderate</b>	On edge of geographical range. Suitable habitat exists in coastal scrub, chaparral, and grassland communities of the Project Area.
Santa Barbara morning glory	<i>Calystegia sepium binghamiae</i>	Found in chaparral, and cismontane woodland communities from 200 to 1,650 feet ASL.	April-June	1B.1	<b>Moderate</b>	Within species range, suitable habitat in chaparral communities of the Project Area.

Common Name	Scientific Name	Habitat Preference	Blooming Period	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
southern tarplant	<i>Centromadia parryi australis</i>	Found in disturbed sites near the coast at marsh edges, or alkaline soils of valley and foothill grassland.	June-November	1B.1	Low	Suitable habitat exists within grasslands of the Project Area. No occurrences are known from the Project vicinity.
Orcutt's pincushion	<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Found on sandy sites in coastal bluff scrub, and coastal dunes from sea level to 350 feet ASL.	January-August	1B.1	None	No suitable habitat.
salt marsh bird's beak	<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	Limited to the higher zones of salt marsh habitat and coastal dunes from sea level to 100 feet ASL.	May-October	FE, SE, 1B.2	None	No suitable habitat.
Blakley's spineflower	<i>Chorizanthe blakleyi</i>	Found in chaparral communities from 2,000 to 5,250 feet ASL.	April-June	FSS, 1B.3	None	Outside of known geographic range, and on edge of elevational range.
small-flowered morning glory	<i>Convolvulus simulans</i>	Found in serpentine soils of chaparral, coastal sage scrub, and grassland communities from 100 to 2,500 feet ASL.	March-June	4.2	Moderate	Suitable habitat within scrub and grassland communities. Recorded north of Lake Casitas, ~4 miles from Project Area.
dune larkspur	<i>Delphinium parryi blochmaniae</i>	Found on rocky areas or dunes within chaparral, or coastal dunes from 100 to 1,250 feet ASL.	April-May	1B.2	Low	Potentially suitable habitat in chaparral communities. Not known from the Project vicinity.
Mt. Pinos larkspur	<i>Delphinium parryi purpureum</i>	Found within chaparral, Mojavean Desert scrub, pinyon and juniper woodland communities from 3,300 to 8,500 feet ASL.	May-June	FSS, 4.3	None	Outside of elevational range.
umbrella larkspur	<i>Delphinium umbracolorum</i>	Found in mesic sites of cismontane woodlands from 1,300 to 5,250 feet ASL.	May-June	FSS, 1B.3	Low	Potential habitat in woodland communities. Not known from the Project vicinity.
western dichondra	<i>Dichondra occidentalis</i>	Found in coastal sage scrub, chaparral, or live oak woodland communities from 150 to 1,650 feet ASL.	March-May	4.2	Moderate	Suitable habitat in sage scrub and woodland communities. Not known from the Project vicinity.
Blochman's dudleya	<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Found on open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil; in coastal scrub, coastal bluff scrub, and valley and foothill grasslands from sea level to 150 feet ASL.	April-June	1B.1	None	Outside of elevational and geographical range.

Common Name	Scientific Name	Habitat Preference	Blooming Period	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
Verity's dudleya	<i>Dudleya verity</i>	Found on volcanic rock outcrops in the Santa Monica Mountains from 200 to 400 feet ASL.	May-June	1B.2	None	Outside of elevational and geographical range.
Conejo buckwheat	<i>Eriogonum crocatum</i>	Found on Conejo volcanic outcrops and rocky sites in chaparral, coastal scrub, and valley and foothill grassland communities from 150 to 1,900 feet ASL.	April-July	SR, 1B.2	None	Outside of geographic range.
Ojai fritillary	<i>Fritillaria ojaiensis</i>	Found on rocky sites, or shale talus in broadleaved upland forest (mesic), chaparral, and lower montane coniferous forest communities from 1,000 to 2,200 feet ASL.	March-May	FSS, 1B.2	Low	Little potential habitat in project area. Documented ~2.2 miles north of Segment 4.
mesa horkelia	<i>Horkelia cuneata puberula</i>	Found on sandy or gravelly sites in chaparral, cismontane woodland, and coastal scrub communities from 230 to 2,650 feet ASL.	February-September	FSS, 1B.1	<b>Moderate</b>	Suitable habitat in chaparral, and scrub communities.
California satintail	<i>Imperata brevifolia</i>	Found on mesic sites, alkali seeps and riparian areas in coastal scrub, chaparral, riparian scrub, and Mojavean scrub communities from sea level to 1,650 feet ASL.	September-May	2.1	Low	Little potential suitable habitat present in Project Area. Not documented in Project vicinity.
California black walnut	<i>Juglans californica var. californica</i>	Found in riparian forest, and coast live oak woodland communities from 150 to 3,000 feet ASL.	March-August	4.2	<b>Present</b>	Found in riparian and upland communities in all segments.
Coulter's goldfields	<i>Lasthenia glabrata ssp. coulteri</i>	Found on alkaline soils in playas, and sinks in coastal salt marshes, valley and foothill grassland, and vernal pools communities from sea level to 4,600 feet ASL.	February-June	1B.1	Low	Known from project vicinity, but little potential suitable habitat present in Project Area.
pale-yellow layia	<i>Layia heterotricha</i>	Found in alkaline or clay soils in open areas of cismontane woodland, pinyon-juniper woodland, and valley and foothill grassland communities from 890 to 4,500 feet ASL.	March-June	FSS, 1B.1	Low	Outside of known geographic range, suitable habitat may be present in woodland or grassland communities.
ocellated Humboldt lily	<i>Lilium humboldtii ssp. ocellatum</i>	Found in chaparral, coastal sage scrub, and riparian woodland communities from 100 to 5,900 feet ASL.	March-August	4.2	<b>Present</b>	Documented within Sutton Canyon. Potential habitat within moist drainages throughout chaparral, woodland and scrub communities.

Common Name	Scientific Name	Habitat Preference	Blooming Period	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
Santa Barbara honeysuckle	<i>Lonicera subspicata</i> var. <i>subspicata</i>	Found in chaparral, cismontane woodland, and coastal scrub communities from 115 to 3,300 feet ASL.	May-February	1B.2, FSS	<b>Present</b>	Documented along the access road in Sutton Canyon, between Construction 124 and 126 in Segment 4.
Carmel Valley malacothrix	<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Found on rock outcrops or steep rocky road cuts in chaparral and coastal scrub from 80 to 4,000 feet ASL.	March-December	1B.2	<b>Moderate</b>	Suitable habitat in chaparral communities. Documented in Project vicinity.
Gambel's water cress	<i>Nasturtium gambelii</i>	Found in freshwater and brackish marshes, swamps, margins of lakes, and along streams; in or just above the water level from sea level to 4,300 feet ASL.	April-October	<b>FE, ST,</b> 1B.1	None	No suitable habitat. Not known from Project vicinity.
Ojai navarretia	<i>Navarretia ojaiensis</i>	Found in openings in chaparral, coastal scrub, and valley and foothill grassland communities from 900 to 2,050 feet ASL.	May-July	1B.1	<b>Moderate</b>	Suitable habitat in chaparral, scrub and grassland communities. Documented in Project vicinity.
chaparral nolina	<i>Nolina cismontana</i>	Found primarily on sandstone and shale substrates, also known from gabbro, in chaparral, and coastal scrub communities from 450 to 4,200 feet ASL.	May-July	FSS, 1B.2	Low	Little suitable habitat within Project Area. Documented in Project vicinity.
California Orcutt grass	<i>Orcuttia californica</i>	Found in association with vernal pools.	April-August	<b>FE, SE,</b> 1B.1	None	No suitable habitat.
adobe yampah	<i>Perideridia pringlei</i>	Found in coastal sage scrub, foothill woodland, and chaparral communities from 1,000 to 3,500 feet ASL.	April-July	4.3	Low	On edge of geographic range, little suitable habitat present in Project Area.
Fish's milkwort	<i>Polygala cornuta</i> var. <i>fishiae</i>	Usually occurs in wetland, but occasionally found in non-wetland within chaparral, foothill woodland, and riparian forest communities from 300 to 3,500 feet ASL.	May-August	4.3	<b>Present</b>	Documented near 12 tower sites in Segments 1 and 2, between Construction 59-64 in Segment 3, and at Construction 101 in Segment 4.
Nuttall's scrub oak	<i>Quercus dumosa</i>	Generally found on sandy soils, or clay loam in closed-cone coniferous forest, chaparral, and coastal scrub, in coastal areas from 50 to 1,300 feet ASL.	February-August	FSS, 1B.1	<b>Present</b>	Documented near Construction 121, 122, 123, 124, 125, 126, 127, 128, 139, and 140 in Segment 4.
Hoffmann's bitter gooseberry	<i>Ribes amarum</i> var. <i>hoffmannii</i>	Found in chaparral, and riparian woodland communities from 500 to 3,900 feet ASL.	March-April	3	<b>Present</b>	Documented near Construction 124 and 125, and may occur elsewhere in Segment 4.



Common Name	Scientific Name	Habitat Preference	Blooming Period	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	Found in standing or slow-moving freshwater ponds, marshes, and ditches from sea level to 2,000 feet ASL.	May-October	1B.2	None	No suitable habitat.
Hoffman's sanicle	<i>Sanicula hoffmannii</i>	Generally found in clay or serpentine soils of chaparral and pine woodland habitats below 1650 feet elevation.	March-May	4.3	<b>Present</b>	Documented between Construction 64-66 on Segment 3B and between Construction 131 and 132 on Segment 4 and may occur in other roadside locations on Segments 3B and 4.
chaparral ragwort	<i>Senecio aphanactis</i>	Found on drying alkaline flats in cismontane woodland, and coastal scrub communities from 65 to 1,900 feet ASL.	January-April	2.2	Low	Little suitable habitat within Project Area. No occurrences documented in Project vicinity.
Cuesta Pass checkerbloom	<i>Sidalcea hickmanii anomala</i>	Found in rocky, serpentine soils of chaparral and closed-cone coniferous forest communities from 2,000 to 2,600 feet ASL.	May-June	FSS, 1B.2	None	Outside of geographical and elevational range.
salt spring checkerbloom	<i>Sidalcea neomexicana</i>	Found in alkali springs, playas, and brackish marshes in chaparral, coastal scrub, lower montane coniferous forest, and Mojavean desert scrub from sea level to 5,000 feet ASL.	March-June	2.2	None	No suitable habitat, not documented in Project vicinity.
southern jewel-flower	<i>Streptanthus campestris</i>	Found in open, and rocky areas in chaparral, lower montane coniferous forest, and pinyon-juniper woodland communities from sea level to 9,000 feet ASL.	April-July	1B.3	None	No suitable habitat.
Sonoran maiden fern	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Found along streams, meadows and seepage areas from 150 to 1,800 feet ASL.	January-September	FSS, 2.2	Low	Little suitable habitat. Documented from Project vicinity.
Santa Ynez false lupine	<i>Thermopsis macrophylla</i>	Found in open areas such as fuel breaks, after burns, and on sandstone within chaparral and woodland communities from 1,370 to 6,890 feet ASL.	April-June	FSS, SR, 1B.3	<b>Moderate</b>	Potential habitat in chaparral communities, known from Project vicinity.

**Key:**

FE = Federally listed as Endangered

FSS = Forest Service Sensitive

SE = State-listed as Endangered

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ST = State-listed as Threatened

SR = State Rare

California Native Plant Society System:

1A = Presumed extinct in California

1B = Rare or Endangered in California and elsewhere

2 = Rare or Endangered in California, more common elsewhere

3 = Plants for which we need more information - Review list

4 = Plants of limited distribution - Watch list

.1 = Seriously endangered in California (over 80% of occurrences threatened)

.2 = Fairly endangered in California (20-80% occurrences threatened)

.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

**Table 2. Special-Status Animal Species Known to Occur or with the Potential to Occur Within the Project Area.**

Common Name	Scientific Name	Habitat Preference	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
<b>INVERTEBRATES</b>					
monarch butterfly	<i>Danaus plexippus</i>	Winter roosts found in wind-protected groves of eucalyptus, Monterrey pine, and cypress with sources of water and nectar nearby. Winter roosts are protected by CDFG.	CDFG	<i>Species Present</i> <i>Roosts Low Potential</i>	Found throughout the project site, no winter roost sites were observed or documented from the Project Area.
<b>FISH</b>					
Santa Ana sucker	<i>Catostomus santaanae</i>	Habitat generalists but prefer gravel/ rubble/ boulder river bottoms, with cool, clear flowing water, and algae.	FT, CSC	None	Outside of geographic range.
tidewater goby	<i>Eucyclogobius newberryi</i>	Brackish water of shallow lagoons and lower stream reaches. They need fairly still but not stagnant water and high oxygen levels.	FE, CSC	None	No suitable habitat.
unarmored threespine stickleback	<i>Gasterosteus aculeatus williamsoni</i>	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small southern California streams.	FE, SE, CFP	None	No suitable habitat.
arroyo chub	<i>Gila orcuttii</i>	Slow-water stream sections with mud or sand bottoms. They feed heavily on aquatic vegetation and associated invertebrates.	FSS, CSC	<b>Present</b>	Documented in Cañada Larga. Suitable habitat within Los Sauces Creek.
southern California steelhead DPS	<i>Oncorhynchus mykiss irideus</i>	Streams with cool, clear running water, often with a developed canopy, bank vegetation or undercut banks. Spawning gravels and low levels of siltation are essential for reproduction.	FE, CSC	Low	Within range and Critical Habitat, poor quality habitat in Cañada Larga.
<b>AMPHIBIANS</b>					
arroyo toad	<i>Anaxyrus californicus</i>	Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	FE, FSS, CSC	None	Outside of known geographic range.
foothill yellow-legged frog	<i>Rana boylei</i>	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	FSS, CSC	None	Outside of known geographic range.
California red-legged frog	<i>Rana draytonii</i>	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	FT, FSS, CSC	Low	No suitable habitat. CNDDDB Occurrence 811 ~1 mile to the northwest.

Common Name	Scientific Name	Habitat Preference	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
western spadefoot	<i>Spea hammondi</i>	Occurs primarily in grassland, scrub, and chaparral habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	CSC	None	No vernal pools in Project Area.
Coast Range newt	<i>Taricha torosa</i>	Lives in terrestrial habitats and riparian woodlands, and will migrate to breed in ponds, reservoirs, vernal pools, and slow moving streams.	CSC	Low	Minimal suitable habitat in Project Area. Documented ~3 miles northeast of Project.
<b>REPTILES</b>					
California legless lizard	<i>Aniella pulchra pulchra</i>	Sandy or loose loamy soils with moisture content under sparse vegetation in live oak woodland.	FSS, CSC	<b>Moderate</b>	Suitable habitat in woodland areas.
western pond turtle	<i>Emys marmorata</i>	A thoroughly aquatic turtle of ponds marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation. Suitable upland habitat and basking areas are needed.	FSS, CSC	Low	Low quality habitat in Cañada Larga, and Los Sauces Creek, but documented in Ventura River.
coast horned lizard	<i>Phrynosoma blainvillii</i>	Uses a wide variety of habitats, including coastal sage scrub. Most common along sandy washes with friable soils and scattered low bushes.	FSS, CSC	<b>Moderate</b>	Suitable habitat throughout project area.
coastal patch-nosed snake	<i>Salvadora hexalepis virgulata</i>	Brushy or shrubby vegetation in coastal southern California. Require small mammal burrows for refuge and overwintering sites.	CSC	Low	Low quality habitat. Not documented in Project vicinity.
two-striped garter snake	<i>Thamnophis hammondi</i>	Highly aquatic, found in or near permanent fresh water, often along streams with rocky beds and riparian growth.	FSS, CSC	<b>Moderate</b>	Potential habitat in Cañada Larga, and Los Sauces Creek.
south coast garter snake	<i>Thamnophis sirtalis ssp.</i>	Marsh and upland habitats near permanent water with good strips of riparian vegetation in the southern California coastal plain, from sea level to about 2,800 feet ASL.	CSC	<b>Moderate</b>	Potential habitat in Cañada Larga, and Los Sauces Creek.

Common Name	Scientific Name	Habitat Preference	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
<b>BIRDS</b>					
Cooper's hawk	<i>Accipiter cooperii</i>	Nest sites mainly in riparian growths of deciduous trees in oak woodlands and riparian communities, in canyon bottoms and on river flood-plains.	MBTA, CWL	<b>Present</b>	Observed in Cañada Larga, and along SR 150 in Project Area.
northern goshawk	<i>Accipiter gentilis</i>	Within coniferous forests, usually nests on north slopes, near water. Red fir, lodgepole pine, and aspens are typical nest trees.	FSS, MBTA, CSC	None	Outside of geographic range.
sharp-shinned hawk	<i>Accipiter striatus</i>	Ponderosa pine, black oak, riparian deciduous, Mixed Conifer Forrest and Jeffrey pine habitats. Prefers riparian areas.	MBTA, CWL	<b>Moderate</b>	Suitable habitat in riparian woodlands. Documented winter visitor in Project vicinity.
tri-colored blackbird	<i>Agelaius tricolor</i>	Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	MBTA, CSC	Low	No suitable nesting habitat, potential presence during foraging. Documented in Cañada Larga.
golden eagle	<i>Aquila chrysaetos</i>	Uses rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops.	BGEPA, MBTA, CFP, CWL	<b>Present</b>	Observed in Segment 4, documented in Cañada Larga. No nesting habitat in Project Area.
burrowing owl	<i>Athene cucularia</i>	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	MBTA, CSC	<b>Moderate</b>	Suitable breeding and foraging habitat in Cañada Larga, and near Segment 3B/4 split. Documented winter visitor in Cañada Larga..
Swainson's hawk	<i>Buteo swainsoni</i>	Breeds in grasslands with scattered trees, Juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with fields that support suitable rodent populations.	FT, FSS, MBTA	Low	Potential habitat. Not documented in Project vicinity.
coastal cactus wren	<i>Campylorhynchus brunneicapillus</i>	Southern California coastal sage scrub with large <i>Opuntia sp.</i> cactus for nesting.	MBTA, CSC	Low	Low quality habitat, on edge of documented range.
western snowy plover	<i>Charadrius alexandrinus nivosus</i>	Sandy beaches, salt pond levees and shores of large alkali lakes.	FT, MBTA, CSC	None	No suitable habitat.
northern harrier	<i>Circus cyaneus</i>	Coastal salt and fresh-water marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienegas.	MBTA, CSC	<b>Present</b>	Observed in Cañada Larga. Suitable foraging habitat in open grasslands.

Common Name	Scientific Name	Habitat Preference	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	FC, SE, MBTA	None	No suitable habitat.
white-tailed kite	<i>Elanus leucurus</i>	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	MBTA, CSC	<b>Present</b>	Observed south of Shephard's Mesa, and is documented in Cañada Larga and the Project vicinity.
peregrine falcon	<i>Falco peregrinus anatum</i>	Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	FSS, MBTA, CFP,	<b>Moderate</b>	Suitable foraging habitat in Project Area. Documented in Cañada Larga and the Project vicinity.
California condor	<i>Gymnogyps californianus</i>	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude.	FE, MBTA, SE	None	No suitable habitat.
yellow-breasted chat	<i>Icteria virens</i>	Inhabits low, dense riparian thickets of willow, blackberry, wild grape, and nests within 10 feet of the ground.	MBTA, CSC	Low	No suitable nesting habitat in Project Area. Documented from Cañada Larga.
loggerhead shrike	<i>Lanius ludovicianus ludovicianus</i>	Broken woodlands, savannah, Pinyon Juniper, Joshua tree, and riparian woodlands, desert oases scrub and washes.	MBTA, CSC	<b>Present</b>	Observed on Segment 1 and near Construction 133.
song sparrow	<i>Melospiza melodia</i>	Require a source of water, moderately dense vegetation, plenty of light, and exposed ground or leaf litter for foraging.	MIS, MBTA	<b>Moderate</b>	Suitable habitat, and documented in Cañada Larga and Rincon Creek.
Belding's savannah sparrow	<i>Passerculus sandwichensis beldingi</i>	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in <i>Salicornia</i> on and about margins of tidal flats.	MBTA, SE	None	No suitable habitat.
California gnatcatcher	<i>Poliptila californica californica</i>	Obligate, permanent resident of coastal sage scrub in arid washes, on mesas and slopes below 2,500 feet ASL in Southern California.	FT, MBTA, CSC	Low	Potentially suitable habitat in sage scrub. Outside of current species range.
bank swallow	<i>Riparia riparia</i>	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	MBTA, ST	None	No suitable habitat.

Common Name	Scientific Name	Habitat Preference	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
yellow warbler	<i>Setophaga petechia</i>	Riparian forests with riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging.	MBTA, CSC	Low	Low quality nesting habitat. Potential foraging habitat in riparian areas. Documented from Project vicinity.
California least tern	<i>Sternula antillarum brownii</i>	Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	FE, SE, MBTA	None	No suitable habitat.
California spotted owl	<i>Strix occidentalis occidentalis</i>	Mixed conifer forest, often with an understory of black oaks and other deciduous hardwoods, with a canopy closure > 40%.	FSS, CSC, MBTA	None	No suitable habitat.
least Bell's vireo	<i>Vireo belli pusillus</i>	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 feet ASL.	FE, SE, MBTA	Low	No quality breeding habitat, poor quality foraging habitat in Project Area. Documented in Cañada Larga.
<b>MAMMALS</b>					
pallid bat	<i>Antrozous pallidus</i>	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Breeds in caves, crevices, and structures.	FSS, CSC	Moderate	Foraging habitat in Project Area.
ringtail	<i>Bassariscus astutus</i>	Rocky desert and riparian areas.	FP	High	Known from Project vicinity. Suitable habitat in riparian areas.
Dulzura pocket mouse	<i>Chaetodipus californicus femoralis</i>	Variety of habitats including coastal scrub, chaparral, and grassland.	CSC	None	Outside of known species range.
Mexican long-tongued bat	<i>Choeronycteris mexicana</i>	Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves, and in and around buildings.	CSC	None	No suitable habitat.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Breeds in caves, crevices, and man-made structures.	FSS, CSC	Low	Foraging habitat in Project Area.

Common Name	Scientific Name	Habitat Preference	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
Western mastiff bat	<i>Eumops perotis californicus</i>	Many open, semi-arid to arid habitats, including Mixed Conifer and deciduous Woodlands, Coastal Scrub, Grasslands, Chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	CSC	Low	Foraging habitat in Project Area.
western red bat	<i>Lasiurus blossevillii</i>	Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	FSS, CSC	Low	Foraging habitat in Project Area.
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	Cactus patches in coastal sage scrub and chaparral. They are particularly abundant in rock outcrops and rocky cliffs and slopes.	CSC	<b>Moderate</b>	Suitable habitat present. Known from Project vicinity.
big free-tailed bat	<i>Nyctinomops macrotis</i>	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	CSC	None	No suitable habitat.
mule deer	<i>Odocoileus hemionus</i>	Various shrubs in summer and winter. Prefer tender new growth. Forbs and grasses are important in spring, brushy areas and tree thickets. Moderately dense shrublands and forests, dense herbaceous stands.	MIS	<b>Present</b>	Found throughout the project area.
mountain lion	<i>Puma concolor</i>	Dense thickets in brush or trees. Caves and other natural cavities within thickets are used for denning. Male home ranges are generally at least 15 square miles, with females utilizing smaller areas about 3 to 12 square miles.	MIS	<b>Present</b>	Documented from Segment 1.
American badger	<i>Taxidea taxus</i>	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food and open, uncultivated ground. Grasslands, and scrub habitats.	CSC	<b>High</b>	Documented from Segment 1 vicinity. Suitable habitat in in Cañada Larga, and near Segment 3B/4 split.

**Key:**

BGEPA = Protected under the Bald and Golden Eagle Protection Act

CDFG = Special protection by CDFG

CFP = CDFG Fully Protected

CSC = CDFG Species of Concern

CWL = CDFG Watch List

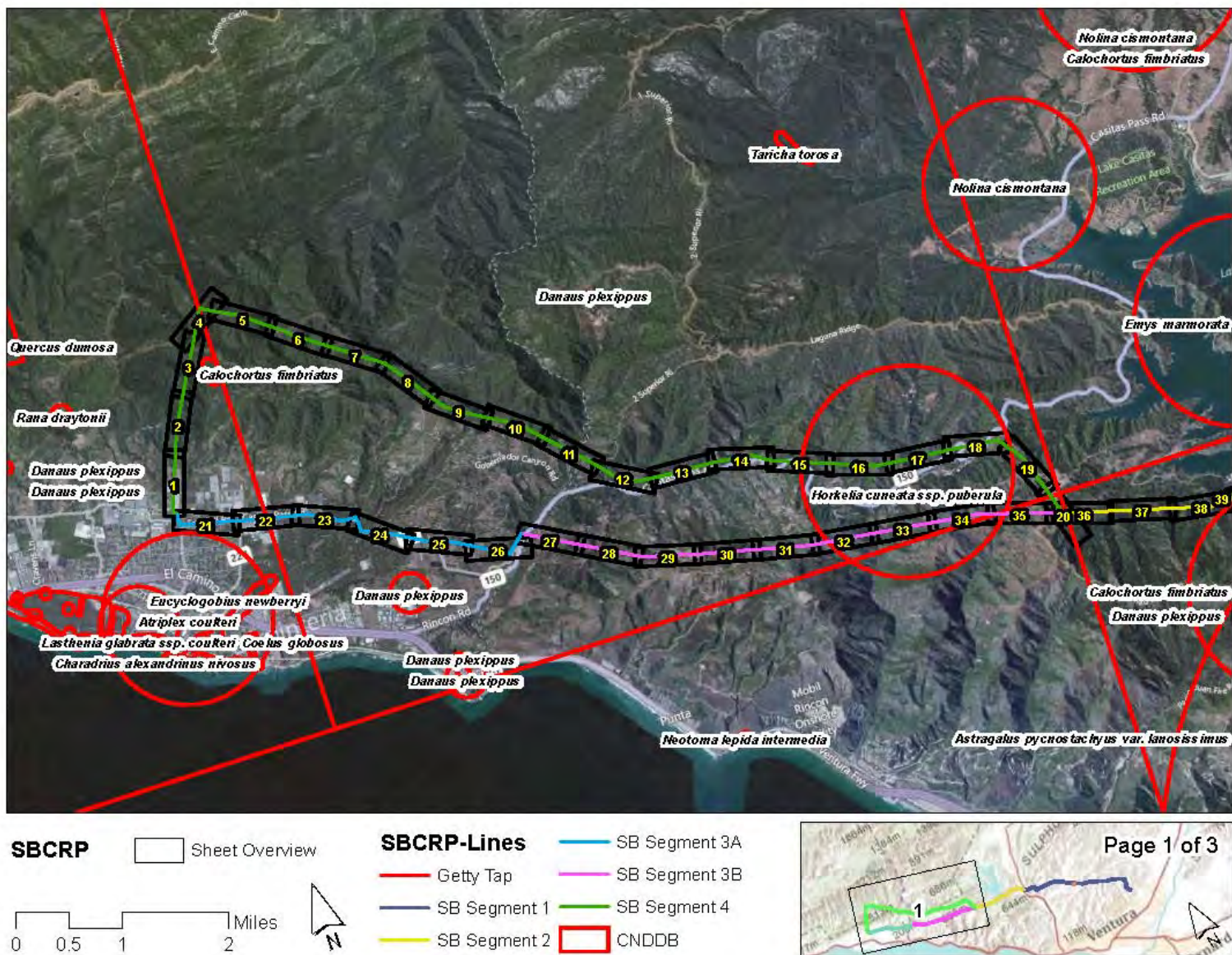
FC = Federal Candidate for listing



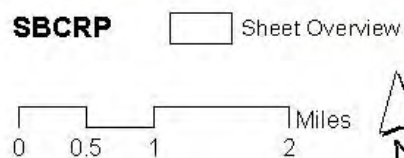
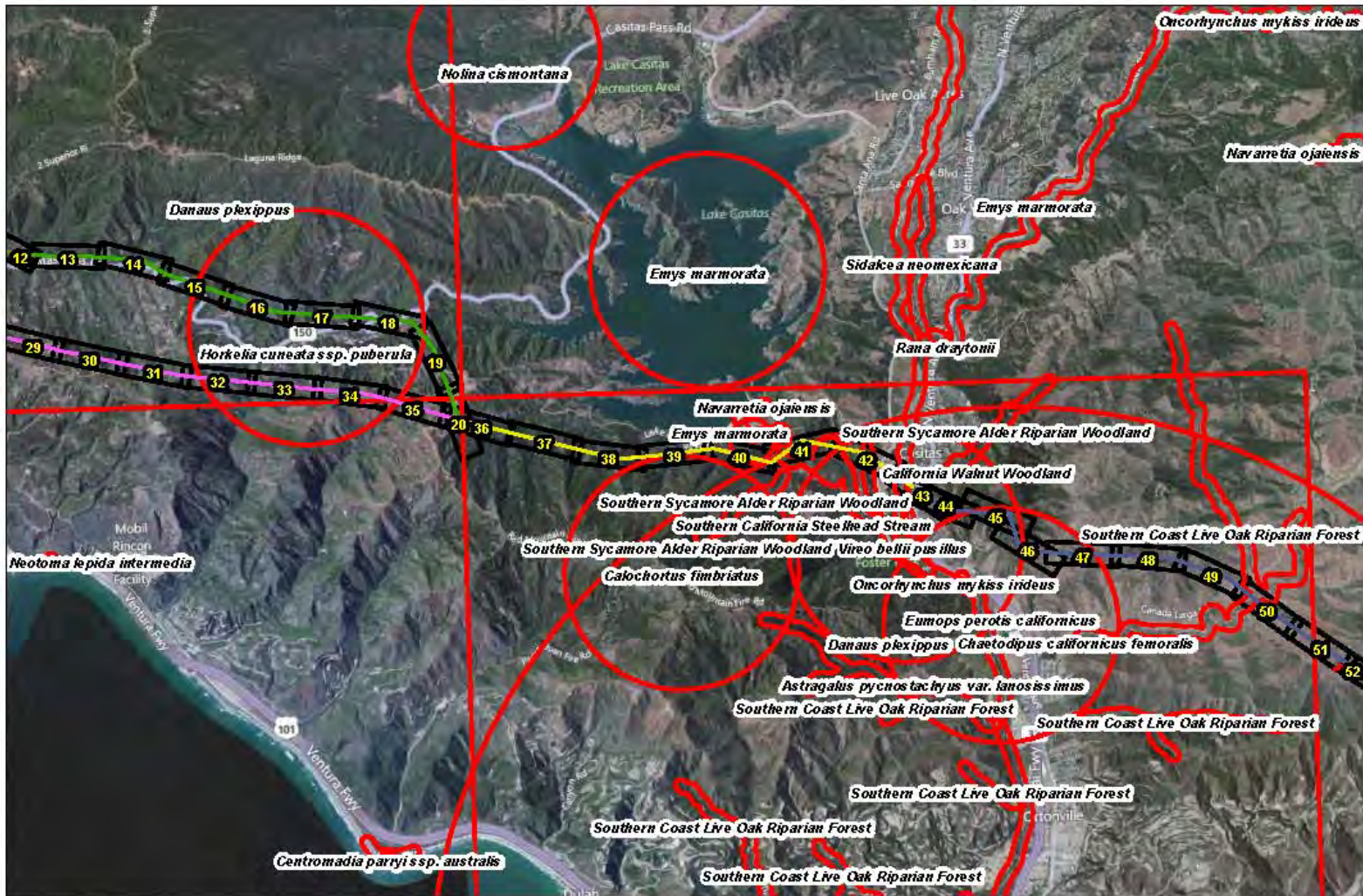
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FE = Federal Endangered  
FSS = Forest Service Sensitive Species  
FT = Federal Threatened  
MBTA = Protected under the Migratory Bird Treaty Act  
MIS = USFS Management Indicator Species  
SE = State of California Endangered

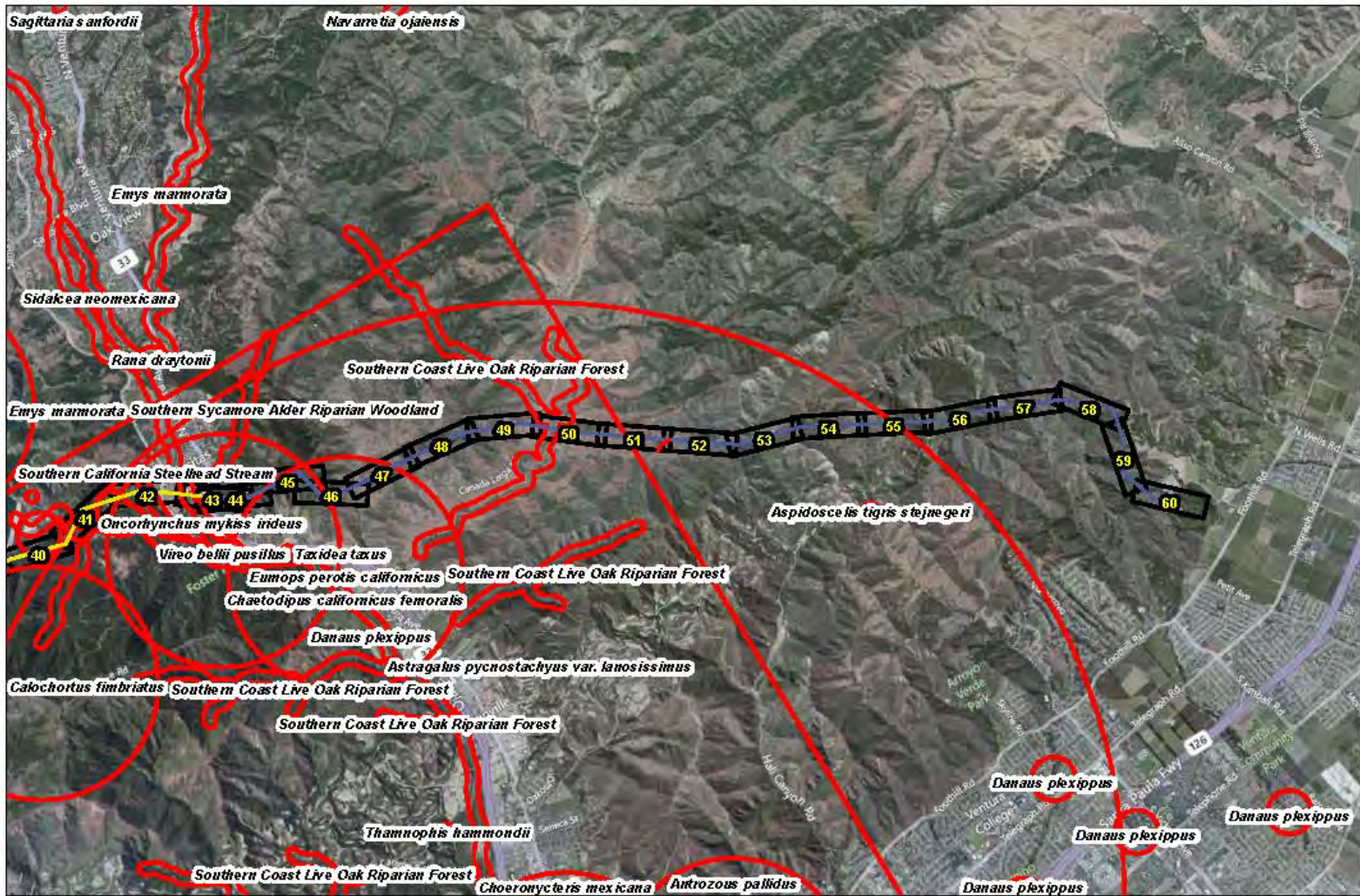
Figure 2. CNDDDB Documented Listed Plant and Animal Species in the Project Vicinity (3 pages).





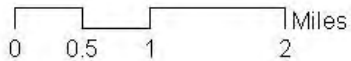






**SBCRP**

Sheet Overview



**SBCRP-Lines**

- Getty Tap
- SB Segment 1
- SB Segment 2
- SB Segment 3A
- SB Segment 3B
- SB Segment 4
- CNDDB



## 3.0 RESULTS

### 3.1 Vegetation Communities

Based on the reconnaissance-level survey of the entire Project Area, 19 plant communities, characterized and named according to the vegetation's dominant species, were identified within the Chaparral, Grassland, Coastal Sage Scrub, Woodland, and Non-Native vegetation types (Table 3, Appendix A). Characteristics and composition of dominant species within each Type and Community are described below. A full list of plant species observed in the Project Area is provided in Appendix B.

**Table 3. Vegetation Types and Communities Found Within the Project Area.**

Plant Community Name	Class Code	Segment (s) of Occurrence	Acreage within Survey Area
<b>Chaparral Types</b>	<b>C</b>		<b>1305</b>
Greenbark Ceanothus Chaparral	CGC	3B	50
Toyon Chaparral	CT	2, 3A, 3B, 4	123
Lemonadeberry Chaparral	CL	2, 4	236
Mixed Ceanothus Chaparral	CMC	3B, 4	896
<b>Grassland Types</b>	<b>G</b>		<b>1235</b>
California Annual Grassland	GCA	4, 3A, 3B	1229
Ruderal Grassland	GR	All	6
<b>Coastal Sage Scrub Types</b>	<b>S</b>		<b>2790</b>
California Sagebrush Scrub	SCS	2, 3A, 4	221
Chaparral Mallow Scrub	SCM	4	110
Coyote Brush Scrub	SCB	3A, 3B, 4	97
Purple Sage Scrub	SPS	2, 3A, 3B, 4	2284
Mulefat Scrub	SMF	2, 3A	78
<b>Woodland Types</b>	<b>W</b>		<b>849</b>
Coast Live Oak Woodland	WLO	2, 3B, 3A, 4	808
Arroyo Willow Woodland	WAW	2, 3A, 3B, 4	27
Southern California Black Walnut Woodland	WCBW	3B, 4	5
Scrub Oak Woodland	WSO	4	9
<b>Non-Native Types</b>	<b>N</b>		<b>2450</b>
Agriculture	NAG	All	2211
Ruderal/Disturbed	NRD	All	103
Cape Ivy Infestation	NCI	4	40
Developed	ND	3A, 4	96

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### 3.1.1 Chaparral Types

Chaparral is a type of shrubland dominated by evergreen shrubs. Many shrubs typical of Coastal Sage Scrub also grow intermixed as associates with chaparral species. Chaparral typically occurs on moderate to steep south-facing slopes with dry, rocky, shallow soils. It is more abundant at higher elevations where temperatures are lower and moisture supplies are more ample. Chaparral within the Project Area consists of four different plant communities: Greenbark Ceanothus Chaparral, Mixed Ceanothus Chaparral, Toyon Chaparral, and Lemonadeberry Chaparral.

#### *Greenbark Ceanothus Chaparral*

Greenbark ceanothus (*Ceanothus spinosus*) occurs in the coastal mountains of California from San Luis Obispo County south to Baja California, including the Santa Ana, Sierra Nevada, and Santa Monica Mountains. Greenbark Ceanothus Chaparral (CGC) stands are prominent on concave, north-facing slopes, though they may also occur on ocean-facing slopes. Soils are developed primarily from hard sandstone, and they are extensively drained. CGC communities can be found at elevation ranges from 1,000 to 3,300 feet ASL. Canopy is intermittent to continuous, while the herbaceous layer is sparse to intermittent to diverse and well developed in mature stands. Within the Project Area the dominant or co-dominant species in the shrub canopy are bigpod ceanothus (*C. megacarpus* var. *megacarpus*), toyon (*Heteromeles arbutifolia*), and sugar bush (*Rhus ovata*).

#### *Toyon Chaparral*

Toyon is one of the most widely distributed shrubs in foothills and low mountains in cismontane California. Toyon Chaparral (CT) stands occur on gradual slopes, to steep, rocky canyons, and steep, north-facing slopes. Soils are generally loams. CT communities are found at elevation ranges from 165 to 3,165 feet ASL. Plants are variable in size and growth habit, being low and dense in exposed places, becoming open and rangy, or tree like, in protected areas with long intervals between fires. Canopy ranges from open to continuous, and is often two-tiered, with an intermittent herbaceous layer. Within the Project Area, the dominant or co-dominant species in the shrub canopy include hoary-leaved ceanothus (*Ceanothus crassifolius*), greenbark ceanothus, and birch-leaf mountain mahogany (*Cercocarpus betuloides*), while southern California black walnut (*Juglans californica californica*), and coast live oak (*Quercus agrifolia*) trees may be present in areas with sparse cover.

#### *Lemonadeberry Chaparral*

Lemonadeberry (*Rhus integrifolia*) grows on north-facing slopes of canyons at elevations below 3,000 feet ASL. Lemonadeberry Chaparral (CL) communities occur on steep upland slopes, with shallow coarse soils, at elevations from near sea level to 1,300 feet ASL. Canopy is intermittent to continuous over a variety of scrub associates with a sparse, grassy ground layer. Within the Project Area, dominant or co-dominant species in the shrub canopy include coyote brush (*Baccharis pilularis*), bigpod ceanothus, giant wild rye (*Leymus condensatus*), chaparral mallow (*Malacothamnus fasciculatus*), laurel sumac (*Rhus laurina*), and blue elderberry (*Sambucus Mexicana*).

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### ***Mixed Ceanothus Chaparral***

Mixed Ceanothus Chaparral (CMC) forms a variable canopy dominated by two or three species of *Ceanothus*, with an herbaceous groundlayer in canopy openings. The species of *Ceanothus* contributing to CMC are bigpod ceanothus, hoary-leaved ceanothus, and greenbark ceanothus. Within the Project Area, dominant or co-dominant species in the shrub canopy include, toyon, Nuttall's scrub oak (*Quercus dumosa*), lemonadeberry, and purple sage (*Salvia leucophylla*), with Collie Indian paintbrush (*Castilleja affinis affinis*), and San Diego bedstraw (*Galium nuttallii nuttallii*) growing in the ground layer.

### **3.1.2 Grassland Types**

Grassland types consist predominantly of low herbaceous and grassy vegetation that forms a continuous ground cover on open hillsides, or as understory patches below emergent shrubs, shrublands, and woodlands. Many native flowering herb/bulb species (wildflowers), as well as naturalized annual forbs and invasive exotics, are important contributors to grassland. Grasslands typically grow in well-developed, deeper, fine-textured soils on gentle slopes and flats, coastal terraces, and in disturbed sandy sites. Areas dominated by grasses are often in early succession, and, over time tend to revert to shrublands, or even woodlands, if burning and disturbance frequencies are minimal. Grasslands within the Project Area consist of two different plant communities: California Annual Grassland and Ruderal Grassland.

### ***California Annual Grassland***

California Annual Grassland (GCA) is dominated by a mix of native and non-native annual grasses (genera including *Avena*, *Bromus*, *Hordeum*, *Lolium*, and *Vulpia*) and herbs. This series occurs on all topographic locations, especially gradual slopes consisting of deep soils, at elevations between sea level and 4,000 feet ASL. Species composition varies among stands, with the major factors determining composition including fall temperatures, precipitation, light intensity (which can be affected by shading from plants and litter), and micro-topography variations. Floristic richness of GCA communities is also affected to a high degree by land use activity. Therefore, the fine-scale variation in temporal and spatial structure found in this series suggests that recognition of several species-dominant series is not particularly useful.

Most of the non-native grasses found in the Project Area are Mediterranean in origin, germinate in the fall or early winter with the first rains, and are protected from unseasonal germination by a preference for cool temperatures. Although the introduced annual grass species have irreversibly invaded the once native (perennial) grass stands, they are often referred to as “naturalized”, and are often considered important GCA contributors. Common dominant plants in these associations include slender wild oat (*Avena barbata*), wild oat (*Avena fatua*), ripgut grass (*Bromus diandrus*), as well as emergent California sagebrush (*Artemisia californica*) and laurel sumac shrubs. Other characteristic grass species typical of GCA communities include: soft chess (*B. hordeaceus*), foxtail chess (*B. madritensis madritensis*), red brome (*B. madritensis rubens*), summer barley (*Hordeum murinum glaucum*), Italian ryegrass (*Lolium multiflorum*), and slender fescue (*Vulpia bromoides*). The associate ground layer includes many native herb and bulb species, as well as naturalized annual forbs, including: rancher's fire (*Amsinckia menziesii* var. *intermedia*), black mustard, summer mustard (*Hirschfeldia incana*), forget-me-nots (*Myosotis arvensis*), blue dicks (*Dichelostemma capitatum*), red-stem filaree (*Erodium cicutarium*), green



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everlasting (*Gnaphalium californicum*), lupines (*Lupinus* sp.), curly dock (*Rumex crispus*), blue-eyed grass (*Sisyrinchium bellum*), and western verbena (*Verbena lasiostachys*).

### ***Ruderal Grassland***

Ruderal Grassland (GR) is a plant community that is typically in early successional stages due to severe human disturbance, or because the land is subject to recurrent natural disturbance. This series occurs on all topographic locations, at all elevations. GR communities are dominated by annual and perennial, non-native, pioneering, herbaceous plants that readily colonize disturbed ground. Ruderal communities may provide a certain degree of erosion control for recently graded areas, but such communities are also a threat to the native plant communities because they continually distribute invasive, highly-competitive non-native propagules into otherwise native vegetation. However, if GR communities are left undisturbed, they may undergo succession towards a more stable, and less weedy, plant community such as California Annual Grassland and Coastal Sage Scrub.

Several of the ruderal grassland associations include emergent native shrubs and plants that, at one time, likely dominated the vegetation, including California sagebrush, coyote brush, cliff-aster (*Malacothrix saxatilis*), white sage (*Salvia apiana*), and purple sage. These native species compete with ruderal/invasive forbs, including: black mustard, poison hemlock (*Conium maculatum*), summer mustard, white horehound (*Marrubium vulgare*), tocalote, wild radish (*Raphanus sativus*), fennel (*Foeniculum vulgare*), and milk thistle (*Silybum marianum*).

### **3.1.3 Coastal Sage Scrub Types**

Coastal Sage Scrub is a type of shrubland that is dominated by drought-deciduous, low-growing shrubs and sub-shrubs that are often soft-leaved and grayish-green in color. Scrub plant size is relative to the water supply present and available onsite; however, these semi-woody plants are generally low-growing because high temperatures and drying winds can cause severe moisture stress. Coastal Sage Scrub is common in California generally along the coastward slopes of the Transverse, Central Coast, and Peninsular Ranges, and is adapted to the Mediterranean climate. Coastal Sage Scrub forms a continuous to open canopy; it occupies dry, gentle to steep, more or less rocky slopes with shallow or heavy soils; and, generally at lower elevations. Coastal Sage Scrub within the Project Area consists of five different plant communities: California Sagebrush Scrub, Chaparral Mallow Scrub, Coyote Brush Scrub, Purple Sage Scrub and Mulefat Scrub.

#### ***California Sagebrush Scrub***

California sagebrush is a typical shrub of Coastal Sage Scrub and chaparral types of xeric foothills, especially near the coast, at elevations below 2,625 feet ASL. California Sagebrush Scrub (SCS) associations occur on steep, south-facing slopes, and less frequently in flooded, low-gradient alluvial floodplain deposits. Within the Project Area, SCS forms a continuous to intermittent canopy, with co-dominant species in the shrub canopy that include coyote brush (*Baccharis pilularis*), purple sage, lemonadeberry, and deerweed (*Acmispon glaber*) growing over a variable ground layer. Several other canopy contributors are present within the Project Area SCS communities, including: California bush sunflower (*Encelia californica*), chaparral mallow, black sage (*Salvia mellifera*), and poison oak (*Toxicodendron diversilobum*). The ground layer generally consisted of GCA association grasses and forbs.



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### ***Chaparral Mallow Scrub***

Chaparral mallow occurs in scrub and chaparral types at elevations below 1,975 feet ASL. Chaparral Mallow Scrub (SCM) occurs primarily along road edges, existing pole pads, and other previously disturbed areas, potentially succeeding fires in the area. Within the Project Area, SCM forms an intermittent to closed canopy over a variable ground layer, with co-dominant species in the shrub canopy that include: California sagebrush, coyote brush, California bush sunflower and giant wild rye. Other species observed growing within SCM associations include: lemonadeberry, and blue elderberry.

### ***Coyote Brush Scrub***

Coyote brush occurs in scrub and oak woodland communities, on stabilized dunes of coastal bars, river mouths, coastline spits, coastal bluffs, open slopes, and ecotonal areas with grasslands from sea level to 3,300 feet ASL. Within the Project Area, Coyote Brush Scrub (SCB) forms a continuous or intermittent canopy (less than two meters tall) growing over a variable ground layer, with co-dominant species in the shrub canopy that include: purple sage, bigpod ceanothus, greenbark ceanothus, lemonadeberry and blue elderberry.

### ***Purple Sage Scrub***

Purple sage is often found in association with California sagebrush, and similarly a typical shrub of Coastal Sage Scrub and chaparral types of xeric foothills, especially near the coast, at elevations from 165 to 3,000 feet ASL. Purple Sage Scrub (SPS) is found on steep north-facing slopes in colluvial-derived, rocky soils. Within the Project Area, SPS typically forms a continuous to intermittent canopy over a variable ground layer. Communities range from being solely dominated by purple sage to being co-dominant scrub with Coyote brush. Several other canopy contributors are present within the Project Area SPS communities, including: California sagebrush, California bush sunflower, greenbark ceanothus, birchleaf mountain mahogany, toyon, lemonadeberry, and blue elderberry.

### ***Mulefat Scrub***

Mulefat (*Baccharis salicifolia*) is generally found along wetlands or streambanks between sea level and 1,500 feet ASL. Within the project area, Mulefat Scrub (SMS) occurs intermittently in flooded habitats within canyon bottoms and ephemeral and intermittent stream. Other canopy contributors within the Project Area SMS communities include: arroyo willow and blue elderberry.

## **3.1.4 Woodland Types**

Woodlands are vegetation types dominated by woody trees and tall tree-like shrubs, forming an open to closed canopy growing over a scattered variety of low-growing shrubs and a grassy ground layer. Some woodland communities may not contain a shrub stratum, and may only form a tall canopy over annual or perennial grasslands. The understory of woodland is directly related to the density of the woodland canopy and its percent canopy cover. Permanent shade created by dense woodlands typically inhibits the growth of stratified canopy layers. Woodland within the Project Area consists of four different plant communities: The Coast Live Oak Woodland, Scrub Oak Woodland, Arroyo Willow Woodland, and California Black Walnut Woodland.

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### ***Coast Live Oak Woodland***

Coast live oak is the most widely distributed of the evergreen oaks, and is capable of achieving large size and old age. Coast live oak occurs in valleys and on slopes of riparian woodland fringes, scattered in grassland or Coastal Sage Scrub communities, as an element of Mixed Evergreen Forest, or as a contributor to other oak woodlands. The Coast Live Oak Woodland (WLO) series predominantly occurs on steep slopes and on raised stream banks or terraces, where it forms a continuous to open canopy (less than 100 feet tall), with an understory of occasional or common shrubs and an absent or herbaceous ground layer. WLO requires sandstone or shale-derived soils of elevations below 4,000 feet ASL. Within the Project Area, co-dominant species in the shrub canopy include: greenbark ceanothus, toyon, and southern California black walnut, and dominant understory shrubs include: California sagebrush, bigpod ceanothus, and birchleaf mountain mahogany. Several other common understory species include: coyote brush, buckwheat (*Eriogonum cinereum*, *E. fasciculatum*), toyon, laurel sumac, hollyleaf cherry (*Prunus ilicifolia*), California wild rose (*Rosa californica*), California blackberry (*Rubus ursinus*), purple sage, blue elderberry, poison oak, annual grasses and several showy wildflowers.

### ***Scrub Oak Woodland***

Nuttall's scrub oak (*Quercus dumosa*) is an evergreen shrub growing to 10 feet in height in sandy soils. Scrub Oak Woodland (SOW) is dominated by scrub oak and coast live oak and found from sea level to 5,000 feet ASL, generally along the coast. Understory species are similar in character to the Coast Live Oak Woodland. Within the Project Area, co-dominant species in the shrub canopy include: greenbark ceanothus, toyon, bigpod ceanothus, and birchleaf mountain mahogany.

### ***Arroyo Willow Woodland***

Arroyo willow (*Salix lasiolepis*) grows on seasonally or intermittently flooded sites, at elevations from sea level to 7,100 feet ASL. Habitat includes stream banks and benches, slope seeps, and stringers along drainages. Plants are typically shrubby and multi-branched along coastal creeks, at lower and middle elevations, and in parts of the Sacramento-San Joaquin River delta. The US Fish and Wildlife Service (USFWS) Wetland Inventory (Reed 1988) recognizes arroyo willow as a facultative wetland plant, or one with a 67-99% chance of growing within a wetland. Some plants in the California stands are sufficiently tall to be trees. Within the Project Area, the Arroyo Willow Woodland (WAW) community is composed of arroyo willows forming an open to continuous canopy less than 30 feet tall, with a variable herbaceous layer. Co-dominant species in the shrub or tree canopy layer include: coyote brush, mulefat, California sycamore (*Platanus racemosa*), black cottonwood (*Populus trichocarpa*), and Fremont cottonwood (*Populus fremontii*).

### ***California Black Walnut Woodland***

California black walnut trees are typically found along riparian corridors and hillslopes, at elevations from 500 to 3,000 feet ASL. The USFWS Wetland Inventory (Reed 1998) lists California black walnut as a facultative plant, or one that is equally likely to be found within wetland or upland areas. Within the Project Area, the California Black Walnut Woodland (WCBW) community forms an open to continuous canopy less than 50 feet tall, with a sparse to

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intermittent or grassy herbaceous layer. WCBW occurs in isolated areas, with riparian vegetation co-dominated by California black walnut and coast live oak.

### **3.1.5 Non-Native Types**

Non-native type assemblages are areas that have been planted with orchards or crops, are extensively grazed by cattle, or communities dominated by non-native or ruderal species. These areas are often monocultures, or assemblages dominated with escaped cultivars and ruderal non-native species.

#### ***Agricultural***

Agricultural (AG) lands are areas that have been planted with orchard, crops, are extensively grazed by cattle, or communities dominated by non-native or ruderal species. These areas are often monocultures with a sparse understory, often with ruderal or grassland species. Species grown in the area include avocado (*Persea americana*), orange (*Citrus x sinensis*), lemon (*Citrus x limon*), walnut (*Juglans sp.*), cherimoya (*Annona cherimola*), guava (*Psidium sp.*), passion fruit (*Passiflora sp.*), and dragonfruit (*Hylocereus sp.*).

#### ***Ruderal/Disturbed***

Ruderal/Disturbed (NRD) communities within the Project Area include areas dominated by non-native weedy and invasive species, including black mustard, summer mustard, forget-me-nots, red-stem filaree, curly dock, wild oats, and brome grasses (*Bromus sp.*). The ruderal community is found primarily along road edges, around structures, edges of agriculture fields, and cleared areas including existing SCE pole or tower pads.

#### ***Cape Ivy Infestation***

Cape Ivy Infestation (NCI) includes large patches of Woodland, Coastal Sage Scrub, and Chaparral that are being overtaken by a blanket of Cape ivy. Cape ivy is a perennial vine and exists in many coastal forests the length of California. Within the Project Area it occurs primarily within the Coast Live Oak Woodland and Coastal Sage Scrub community types. In these areas, Cape ivy is forming a solid cover over native shrubs and trees. This blocks light, smothering and killing the native vegetation beneath. The weight of the ivy on weak and dying trees eventually causes them to fall. The blanket of ivy also prohibits the regeneration of most species, leaving a monoculture stand of ivy.

#### ***Developed***

Developed areas are areas that have been developed with the construction of manmade structures or cleared paved or graded surfaces, generally lacking of native plant assemblages. Vegetation that does exist is predominately landscaped with non-native, ornamental species.

## **3.2 Plant Species**

A full list of plant species observed in the Project Area is provided in Appendix B. A total of 279 species have been identified including 201 native, 78 non-native species, including 9 CNPS Ranked plant species.

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### 3.3 Wildlife Species

A full list of wildlife species observed in the Project Area is provided in Appendix B. A total of 79 species have been identified including 1 insect, 2 amphibian, 4 reptile, 58 bird, and 14 mammal species, including 7 special-status species. Additional wildlife are likely to be observed during the focused survey. A full list of species observed in the Project Area is provided in Appendix B.

Aquatic habitat in the Project Area for fish species is limited to Cañada Larga, Los Sauces Creek, and Rincon Creek. An unidentified small fish species was observed in a deeper pool within Cañada Larga. No other fish species were observed during initial surveys.

Reptile and amphibian species observed include: coastal whiptail (*Aspidoscelis tigris stejnegeri*), gopher snake (*Pituophis catenifer*), California treefrog (*Pseudacris cadaverina*), Baja California treefrog (*Pseudacris hypochondriaca hypochondriaca*), western fence lizard (*Sceloporus occidentalis occidentalis*), and side-blotched lizard (*Uta stansburiana elegans*).

Common bird species observed include: Cooper's hawk (*Accipiter cooperii*), oak titmouse (*Baeolophus inornatus*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*B. lineatus*), California quail (*Callipepla californica*), Anna's hummingbird (*Calypte anna*), lesser goldfinch (*Carduelis psaltria*), American goldfinch (*Carduelis tristis*), house finch (*Carpodacus mexicanus*), turkey vulture (*Cathartes aura*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), American kestrel (*Falco sparverius*), acorn woodpecker (*Melanerpes formicivorus*), California towhee (*Melospiza crissalis*), northern mockingbird (*Mimus polyglottos*), brown-headed cowbird (*Molothrus ater*), house sparrow (*Passer domesticus*), bushtit (*Psaltriparus minimus*), black phoebe (*Sayornis nigricans*), western meadowlark (*Sturnella neglecta*), European starling (*Sturnus vulgaris*), California thrasher (*Toxostoma redivivum*), western kingbird (*Tyrannus verticalis*), and mourning dove (*Zenaida macroura*).

Common mammals, or their sign, observed within the Project Area include: coyote (*Canis latrans*), dusky-footed woodrat (*Neotoma fuscipes*), mule deer (*Odocoileus hemionus*), California ground squirrel (*Otospermophilus beecheyi*), raccoon (*Procyon lotor*), western gray squirrel (*Sciurus griseus*), wild pig (*Sus scrofa*), desert cottontail (*Sylvilagus audubonii*), brush rabbit (*Sylvilagus bachmani*), black bear (*Ursus americanus*), and various domestic animals.

### 3.4 Wildlife Movement and Urban/Wildland Interface

The Ventura County General Plan, Santa Barbara Coastal Land Use Plan, California Coastal Act, and the USFS specifically identify wildlife migration corridors as significant biological resources. Protecting habitat connectivity is critical to the success of special-status species and other biological resource protections.

On a geographic scale, the Project is located in the Pacific Flyway, a major north-south avian migratory corridor that extends along the west coast from Alaska to Patagonia, and provides suitable foraging habitat for many resident and migratory avian species. The Pacific Flyway links breeding grounds in the north to more southerly wintering areas and is therefore utilized by many bird species during migration. As part of the Pacific Flyway, the coastal beaches, Carpinteria Salt Marsh, estuaries, and Coast Range Mountains provide high-quality resting and foraging areas for numerous bird species during the migratory seasons.

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More locally, the Ventura River system (located in the vicinity of Segments 1 and 2) and the Carpinteria Creek system (located in the vicinity of Segment 4) are known migratory corridors and spawning areas for the southern California steelhead Distinct Population Segment (DPS). Because the segments of these drainages that are directly crossed by the Project are seasonal, these reaches would only potentially be used by this species in the winter and spring when water is flowing. These river systems and associated riparian corridors also function as wildlife movement corridors and habitat for a range of bird, reptile, and mammal species.

The majority of the Project occurs within a land use matrix of primarily agricultural, open-space, and commercial/residential areas. Open-space areas dominated by native vegetation associations may serve as corridors around areas cleared for agriculture and residential uses, connecting larger contiguous areas of habitat.

### **3.5 Special-Status Biological Resources**

#### **3.5.1 Special-Status Vegetation Communities**

Resource agencies generally consider vegetation types to have special-status if they support concentrations of special-status plant or wildlife species, are of relatively limited distribution, or offer particular value to wildlife. While some special-status vegetation types are not afforded legal protection unless they support protected species, others may be protected by an ordinance, code, or regulation under which conformance typically requires a permit or other discretionary action prior to impacting the vegetation.

CDFG considers California Black Walnut Woodland a special-status plant community based upon rankings established by NatureServe. The woodland is ranked G2 and S2, implying these communities are “Imperiled” and are “at high risk of extinction or elimination due to very restricted range, very few populations, steep declines, or other factors,” making them vulnerable to extirpation on a global and local scale (NatureServe 2010). California Black Walnut Woodlands are found only in isolated areas of Segments 3B and 4, composing an area of about 5 acres, or less than 0.06% of the Survey Area (Table 1, Appendix A).

The California Coastal Act specifically calls for protection of “environmentally sensitive habitat areas” or ESHAs, which includes wetlands and riparian areas. The Project Area spans and crosses areas of Rincon and Carpinteria Creeks in Segments 3A and 4 that are within the coastal zone, however, the project will utilize existing crossings of these riparian areas, and no impacts to these ESHAs is expected.

#### **3.5.2 Protected Trees**

Ventura County tree protection regulations protect oaks, sycamores, ash, elderberry, walnut, and heritage trees that may be impacted in Segment 3B within Ventura County. Oak trees in Santa Barbara County are protected by various ordinances that cover the Coastal Zone, non-coastal rural areas, and USFS lands. Oak trees may be impacted in each of these jurisdictions within Segment 4.

### 3.5.3 Jurisdictional Areas

The Project Area utilizes multiple existing crossings of reaches of the Ventura River (Segment 1 and 2), Rincon Creek (Segments 3B and 4), and Carpinteria Creek (Segments 3A and 3B) that fall under the jurisdiction of the USACE and/or the CDFG. The Project may affect potentially jurisdictional waters in Segments 1 and 4 including Cañada Larga, Carpinteria Creek near its confluence with Sutton Canyon Creek, and three small dry drainages that are tributaries to Carpinteria Creek (Table 4, Figure 3).

### 3.5.4 Critical Habitat

Portions of the Project cross drainages that are within Southern California steelhead (*Oncorhynchus mykiss irideus*) Critical Habitat Ventura River Hydrologic Unit 4402 and South Coast Hydrologic Unit 3315 (Table 4).

**Table 4. Potentially Jurisdictional Areas Occurring in the Project Area**

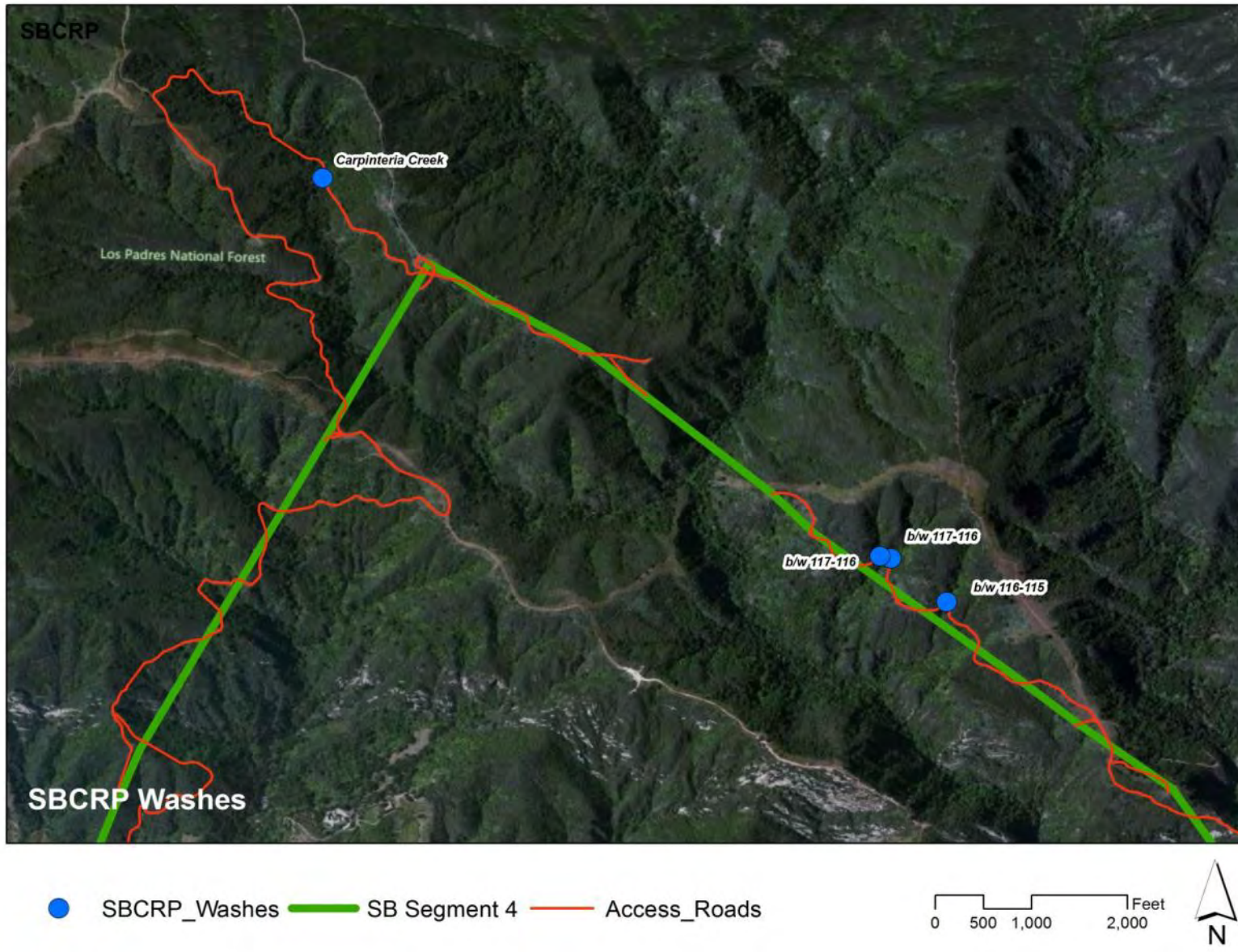
Water and Location	Areas potentially under the jurisdiction of:			Southern California Steelhead Critical Habitat
	USACE	CDFG	RWQCB	
Cañada Larga, Segment 1, access to the Getty Tap	X	X	X	Subunit 440210
Carpinteria Creek, Segment 4, near the Confluence of Sutton Canyon Creek, access to Construction 120 to 125	X	X	X	Subunit 331534
Three small, dry, unnamed drainages, Segment 4, between Construction 115 and 117		X	X	

### 3.5.5 Special-Status Plants

Special-status plant species documented to occur in the Project vicinity are listed in Table 1, along with their habitat suitability and an indication of their known presence, or assessment of their potential to occur, within the Project Area. Many special-status plant species known to occur within the Project Area were not encountered during the reconnaissance surveys because the surveys occurred outside of the window to properly identify many of the annual species. Focused plant surveys for Segments 3B and 4 are scheduled for the spring of 2012.

Based upon survey results, documented occurrences, lack of suitable habitat, and geographic and elevational ranges of species, no federal or state listed threatened or endangered plant species are documented in the Project Area, or are likely to be found in the Project Area. Three listed plant species (CNPS RPRs 1 and 2) are documented to occur in the Project Area: Plummer’s baccharis (*Baccharis plummerae plummerae*), Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*), and Nuttall’s scrub oak (*Quercus dumosa*).

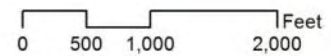
Figure 3. Potentially Jurisdictional Areas within the Project Area (2 pages).







- Getty Tap
- SB Segment 1
- SBCRP\_Washes
- Access\_Roads





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Based on geographic ranges and the presence of suitable habitat within the Project Area, eight additional RPR 1 and 2 species have a “High” or “Moderate” potential to occur in the Project Area: Davidson’s saltscale (*Atriplex serenana* var. *davidsonii*), late-flowered mariposa lily (*Calochortus fimbriatus*), Plummer’s mariposa-lily (*Calochortus plummerae*), Santa Barbara morning glory (*Calystegia sepium binghamiae*), mesa horkelia (*Horkelia cuneata puberula*), Carmel Valley malacothrix (*Malacothrix saxatilis* var. *arachnoidea*), Ojai navarretia (*Navarretia ojaiensis*), and Santa Ynez false lupine (*Thermopsis macrophylla*). Seven additional species tracked by CNPS (RPRs 3 and 4) are also documented to occur in the Project Area, while three others have potential to occur (Figure 1). Additional discussion of the special-status plant species documented to occur or potentially occurring in the Project Area, including their natural history and habitat suitability within the Project Area, are provided in Section 4.

### 3.5.6 Special-Status Wildlife

Special-status animal species with the potential to occur in the Project Area are listed in Table 2, along with their habitat suitability and an indication of their known presence, or assessment of their potential to occur, within the Project Area. Additional wildlife surveys for burrowing owl and nesting raptors in Segments 3B and 4 are scheduled for the spring of 2012.

Based upon survey results, documented occurrences, lack of suitable habitat, and geographic and elevational ranges of species, no federal or state listed threatened or endangered wildlife species are documented in the Project Area, or are likely to be found in the Project Area. Six special-status wildlife species are documented to occur in the Project Area: Arroyo chub (*Gila orcuttii*), Cooper’s hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), and loggerhead shrike (*Lanius ludovicianus ludovicianus*). Based on geographic ranges and the presence of suitable habitat within the Project Area, 11 additional special-status wildlife species have a “High” or “Moderate” potential to occur in the Project Area: American badger (*Taxidea taxus*), ringtail (*Bassariscus astutus*), California legless lizard (*Aniella pulchra pulchra*), coast horned lizard (*Phrynosoma blainvillii*), two-striped garter snake (*Thamnophis hammondi*), south coast garter snake (*Thamnophis sirtalis ssp.*), sharp-shinned hawk (*Accipiter striatus*), burrowing owl (*Athene cunicularia*), peregrine falcon (*Falco peregrinus*), pallid bat (*Antrozus pallidus*), and San Diego desert woodrat (*Neotoma lepida intermedia*).

Monarch butterfly (*Danaus plexippus*) was observed throughout the Project Area. Monarch butterflies are not listed by the USFWS or CDFG, and individual monarch butterflies are not considered a sensitive resource; however, CDFG does consider monarch butterfly winter roosting sites a sensitive resource. No protected roosting areas are documented within the Project Area, and no roosting was observed within trees during surveys of the Survey Area.

Mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), and song sparrow (*Melospiza melodia*) are Management Indicator Species (MIS) when on USFS lands. Deer were observed throughout the Project Area; a dead mountain lion was found in the area of Segment 1 in 2011; and song sparrow is documented throughout the Project Area. All three species could be present on USFS lands within the Project Area.

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Suitable bird nesting habitat is present throughout the Project Area and along the access routes. Nesting birds are protected under the Migratory Bird Treaty Act and the California Department of Fish and Game Code and could be impacted by project activities. Raptor nests were observed in existing lattice towers at Construction 60, 61, 84a (lattice tower 4-5), and 90 which will be removed, and in eucalyptus trees near Construction 62. No nesting behavior was observed during preliminary surveys, however, Segments 3B and 4 will be surveyed for nesting raptors in the spring of 2012.

Additional discussion of the special-status wildlife species potentially occurring in the Project Area including their natural history and habitat suitability are provided in Section 4.

## **4.0 DISCUSSION**

### **4.1 Special-Status Vegetation Communities**

Small areas of California Black Walnut Woodland, considered sensitive by CDFG, are found in Segments 3B and 4. No new access roads or pads are planned within the walnut woodlands, though individual walnut trees may be impacted by trimming or removal along existing access roads or pads, much of which is not expected to be greater than what normally occurs during regular maintenance of access roads. Because impacts to individual trees will be minimal or temporary, and likely mitigated by permits and ordinance, no significant impacts are expected to the woodland community.

### **4.2 Protected Trees**

Though final engineering plans for access routes and pads are still in the design phase, several species of trees protected under local tree ordinance, including oaks, walnut, and sycamore, and heritage trees can reasonably be expected to be impacted from construction activities at 15 Construction Sites, and along portions of the existing access routes in Segments 3B and 4. Several species along existing roadways will require trimming, much of which is not expected to be greater than what normally occurs during regular maintenance of access roads. Impacts to trees will be avoided when practicable; however, many trees will be significantly impacted from extensive trimming, encroachment within the drip-line during grading, or need to be removed all together for the purposes of this Project. These impacts are adverse and will require appropriate permitting and mitigation from various jurisdictions.

### **4.3 Jurisdictional Areas**

Riparian habitats that may fall under the jurisdiction of CDFG are found in Segments 1 and 4. No new roadways will be established through riparian corridors for this Project; however, SCE is proposing upgrades at several channel crossings, including Carpinteria Creek, to make them passable with larger equipment, or to reestablish existing SCE ROW access. Though plans for these sites are still in the design stage, it can reasonably be assumed that some vegetation will need to be removed at these locations. Many of these impacts are expected to be temporary as plants grow and become reestablished in disturbed areas. No formal delineation of these drainages has been performed, however, an initial assessment of these drainages indicates several sites may be considered Waters of the State, and another may additionally be considered Waters of the U.S. As such, a Streambed Alteration Agreement (SAA) will be required from CDFG for

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work in these drainages. Any native vegetation removed will be mitigated as required by the SAA.

#### **4.4 Critical Habitat**

Portions of the Project cross drainages that are within steelhead Critical Habitat. Coyote Creek (Subunit 440220) is within the Ventura River Hydrologic Unit 4402. Carpinteria Creek (Subunit 331534) is within the South Coast Hydrologic Unit 3315. No work is expected in any perennial reach of these streams that would impact Critical Habitat, though a wet-crossing of Cañada Larga (Subunit 440210) may be used.

Monitoring stations above and below the crossing of Cañada Larga indicate this section of stream to be ephemeral with high levels of turbidity and bacteria (Stream Team 2005). The seasonality of this reach, poor water quality, and the lack of suitable breeding habitat for steelhead indicate that this species not likely to be found at the site (Entrix and Woodward Clyde 1997).

#### **4.5 Wildlife Movement and Urban/Wildland Interface**

Construction activities may cause animals to be temporarily displaced from using active construction sites, and may affect wildlife movement corridors. These impacts are expected to be isolated and temporary, and therefore locally adverse, but minor.

#### **4.6 Special-Status Plants**

Three listed plant species are documented to occur in Segments 3B and 4, and eight additional species have a “High” or “Moderate” potential to occur in the Project Area. Additional RPR 3 and 4 plants are also documented to occur, or have potential to occur in the Project Area. Impacts are not expected at a population level for any species, however, some individuals of these species may be adversely impacted during grading access roads, tower pads, or other workspace. Much of the potential impacts are not expected to be greater than what normally occurs during regular maintenance of the existing access roads and pads, though some new access spur roads and tower pads will be developed. Weeds that may out-compete native species may be more likely to spread and colonize disturbed areas following construction causing indirect impacts to special-status plant populations.

##### **4.6.1 Special-Status Species Plant Descriptions and Occurrence**

Information provided in the following plant species descriptions was compiled from CalFlora (2012), CNPS (2012), Hickman et al. (1993), and Baldwin (2012).

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**Plummer's Baccharis (*Baccharis plummerae plummerae*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G3G4, S3.2	Rank 4.3: Uncommon in California

Plummer's baccharis is a small, broad-leaved winter-deciduous shrub (<2 meters tall) with fine-curved, hair-covered, wand-like stems and 20 to 45-mm, oblanceolate, toothed, 3-veined (prominent), sessile leaves. The flowers, generally blooming between August and October, are arranged in panicate heads with a bell-shaped involucre, and are not particularly showy. The flower heads are either staminate (5-6.5 mm long) or pistillate (6-8.5 mm long). Plummer's Baccharis is a member of the sunflower family (Asteraceae). Plummer's baccharis typically occurs on rocky, well-drained, north-facing slopes in coastal sage scrub and oak woodland plant communities. It ranges from southern coastal Santa Barbara County to coastal Los Angeles County, and Santa Cruz and Anacapa Islands, from 300 to 1,250 feet ASL.

Plummer's baccharis was documented during surveys along the access road in Sutton Canyon north of the Carpinteria Substation, and at Construction 79, 80, 84, and 102 in Segment 4, and sites in Segments 1 and 2, and suspected to occur in Segment 3B, pending verification during focused plant surveys.

**Catalina Mariposa Lily (*Calochortus catalinae*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G3, S3.2	Rank 4.2: Uncommon in California

Catalina mariposa lily is a perennial herb that re-sprouts annually from a small bulb. The stems are 20-40 cm long, generally branched above. The basal strap-shaped leaves are 10-30 cm long and usually wither before anthesis (flowering). The inflorescence consists of 1 to 4 bowl-shaped flowers with subtending, opposite bracts 2-10 cm long. Sepals are white with purple spots near the base (20-30 mm long). Petals are nearly glabrous, white, tinged lilac, and purple-spotted near the base (20-50 mm long). The inside of the petals have oblong and densely branched-hairy nectaries. Catalina mariposa lily blooms between March and May. The fruit (capsules) are erect, two to five cm long, and not angled as in other Mariposa lilies. *C. catalinae* is a member of the lily family (Liliaceae). Catalina mariposa lily grows in heavy soils of open grassland, chaparral, and Coastal Sage Scrub communities, at elevations below 2,300 feet ASL. It ranges from San Luis Obispo County to San Diego County, and on Santa Rosa, Santa Cruz, and Santa Catalina Islands.

Catalina mariposa lily was documented during surveys along the access road in Sutton Canyon north of the Carpinteria Substation, along access roads and pads near Construction 126, 127, 128, 139, and 140 in Segment 4, and sites along Segments 1 and 2.

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**Southern California Black Walnut (*Juglans californica californica*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G3, S3.2	Rank 4.2: Uncommon in California

Southern California Black Walnut is a small, broad-leaved, monoecious, winter-deciduous tree (15 meters tall) with one to five trunks. It has pinnately divided leaves with 11-19 lanceolate to ovate toothed leaflets (two to eight cm long). The wind pollinated, greenish flowers, blooming between March and May, have four-lobed sepals arranged in pendulous clusters before the leaves emerge. This species produces spheric, leathery-husked, strong-smelling fruit (walnuts) two to three centimeters in diameter. *J. californica californica* is listed in the NIWP with an FAC wetland indicator status (facultative species that is equally likely to occur in wetlands and non-wetlands). *Juglans californica californica* is uncommon, but can be found on slopes and canyons at elevations between 50 and 900 meters, and it is often associated with riparian habitats. It ranges from the Santa Lucia Mountains (where they were cultivated), Santa Barbara County, and along the coastal portions of the Transverse Ranges, south to the northern Peninsular Ranges in northern San Diego County. Southern California Black Walnut Forest is a much-fragmented, declining natural community, and it is threatened by urbanization and grazing, which inhibit natural reproduction.

California black walnut is found along numerous drainages and uplands in all Segments of the Project Area.

**Ocellated Humboldt Lily (*Lilium humboldtii ocellatum*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G4T3, S3.2	Rank 4.2: Uncommon in California

Ocellated Humboldt lily is a perennial bulbiferous herb (<3.1 meters). Bulb scales are often purple at the tip, obscurely two to five segmented. Flowers are perianth yellow or light orange, with spots margined in lighter red, blooming between March and August. Ocellated Humboldt lily can be found in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland at elevations between 100 and 5,900 feet ASL. It ranges among Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, and Ventura Counties. It also exists on Anacapa, Santa Cruz, and Santa Rosa Islands. *L. humboldtii ocellatum* is threatened by development and horticultural collecting on the mainland, and by feral herbivores on Santa Cruz and Santa Rosa Islands.

Ocellated Humboldt lily was documented in a drainage during surveys along the access road in Sutton Canyon north of the Carpinteria Substation.

**Santa Barbara Honeysuckle (*Lonicera subspicata* var. *subspicata*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G5T2, S2.2	Rank 1B.2: rare, threatened, or endangered in California and elsewhere

Santa Barbara Honeysuckle is perennial evergreen shrub. Stems are generally twining or reclining (9-24 dm); herbage glabrous to puberulent. Leaves are one to four centimeters, narrowly elliptic, and three times longer than wide. *L. subspicata* var. *subspicata* blooms between May and February. Habitats include chaparral, cismontane woodland, and coastal scrub. It ranges among Los Angeles County, Santa Barbara County, and Santa Catalina Island at elevations below 3,300 feet ASL. This species is threatened by development, road construction, and vehicles.

Santa Barbara honeysuckle was documented during surveys along the access road in Sutton Canyon north of the Carpinteria Substation, and along access roads and pads near Construction 124 and 125 in Segment 4.

**Fish’s Milkwort (*Polygala cornuta* var. *fishiae*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G5T4, S3.3	Rank 4.3: Uncommon in California

Fish’s milkwort is a small, broad-leaved, winter-deciduous, 25 cm-tall shrub, growing from rhizomes, that often form dense thickets up to 2 meters wide. The stems are decumbent to erect (6-25 dm long) and covered with leaves that are less than two times as long as wide. The flowers, blooming May through August, are somewhat peaflower-shaped, 7-11 mm long, and pale with dark pink buds. Fish’s milkwort can be found on exposed slopes growing in chaparral, oak woodland, and riparian woodland habitats at elevations between 300 and 3,500 feet ASL. It ranges from Santa Barbara County, in the Outer South Coast Ranges south through the Transverse Ranges to the northern Peninsular Ranges in northern San Diego County.

Fish’s milkwort was documented during surveys near 12 tower sites in Segments 1 and 2, and at Construction 101 in Segment 4, and suspected to occur in Segment 3B, pending verification during focused plant surveys.

**Nuttall’s Scrub Oak (*Quercus dumosa*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
C2	None / G2, S1.1	Rank 1B.1: Plants considered to be rare, threatened, or endangered

Nuttall’s scrub oak is a broad-leaved evergreen shrub (1-3 m tall) with sparsely short-hairy, dark reddish-brown slender twigs (becoming glabrous) and oblong/elliptic, obtuse-tipped to abruptly

pointed, and toothed-margined leaves (1-2.5 cm long). The upper leaf surface is slightly shiny-green, and the lower is finely tomentose, becoming glabrous, dull pale green. The fruit (acorn) has a cup that is 8-15 mm wide, 5-8 mm deep, and bowl-shaped with tubercled scales, and has a nut that is 15-25 mm long, slender, ovoid, tapered-tipped, and glabrous-shelled (inside). *Q. dumosa* blooms from February to August. *Q. dumosa* grows predominantly in sandy, clay-loam, and sandstone soils of chaparral and Coastal Sage Scrub habitats near the coast. It is known to occur along the South Coast in Orange, Santa Barbara, and San Diego Counties, and Baja, California at elevations below 1,300 feet ASL. Nuttall's scrub oak hybridizes with scrub oak (*Q. berberidifolia*), which is the widespread scrub type oak from much of cismontane California, previously called *Q. dumosa*, is now *Q. berberidifolia*. Nuttall's scrub oak is primarily threatened by development.

Nuttall's scrub oak was documented during surveys near Construction 121, 122, 123, 124, 125, 126, 127, 128, 139, and 140 in Segment 4.

**Hoffmann's Bitter Gooseberry (*Ribes amarum* var. *hoffmannii*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
C2	None / G4, T2T3, S2S3	Rank 1B.1: Plants considered to be rare, threatened, or endangered

Hoffmann's bitter gooseberry is a perennial deciduous scrub (<2 m tall). Stems have three nodal spines. Leaves are 2-4 cm and glandular-hairy. Inflorescences possess one to three flowers. Flowers are longer than wide with reflexed, purple sepals (2-4 mm) and white petals with margins curled inward. Fruit is 15-20 mm and purple with stiff bristles. *R. amarum* var. *hoffmannii* blooms between March and April. Hoffmann's bitter gooseberry is found in chaparral and riparian woodland at elevations between 500 to 3,900 feet ASL. Hoffmann's bitter gooseberry ranges among Santa Barbara, San Diego, and Ventura Counties. It has also been found in the Sierra Nevada Foothills, Tehachapi Mountains, and San Francisco Bay Area.

Hoffman's bitter gooseberry was documented during surveys near Construction 124 and 125 in Segment 4.

**Late-Flowered Mariposa Lily (*Calochortus fimbriatus*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G3G4, S2.2	Rank 1B.2: rare, threatened, or endangered in CA and elsewhere

Late-flowered mariposa lily is a bulbiferous herb with a fibrous coat. Stems are generally 30-90 cm long, generally branched, with no bulblets. The basal shaped leaves are 20-40 cm long, usually wither before anthesis; and are cauline reduced upward and inrolled. The inflorescence consists of one to eight perianth widely bell-shaped flowers; sepals 20-30 mm, narrowly lanceolate and long tapered. Fruit is erect, four to five cm, linear, angled, and tip acuminate. Late Flowered Mariposa Lily blooms between June and August. Late-flowered mariposa lily grows in chaparral, cismontane woodland, and coastal woodland communities, often in

serpentinite at elevations between 885 and 6,275 feet ASL. It ranges in San Luis Obispo, Santa Barbara, Ventura, Kern, and Los Angeles Counties. *C. fimbriatus* is threatened by grazing, development, road maintenance, and fire suppression.

Late-flowered mariposa has a “High” potential to occur in the Project Area. A CNDDDB occurrence for late-flowered mariposa lily is documented near Construction 126, 127, and 128 in Segment 4.

**Davidson’s Saltscale (*Atriplex serenana* var. *dauidsonii*)**

STATUS		
Federal	State / NDDDB	CNPS (CNPS 2001)
None	None / G5T2?,S2?	Rank 1B.2: rare, threatened, or endangered in CA and elsewhere

Davidson’s saltscale is an annual herb (<1 m tall). Branches are decumbent to ascending, sparsely scaly, with flexible tips. Leaves are elliptic to lanceolate and 5-50 mm long. Flowers are a spike of 1 to many panicles, bearing a round to obovate fruit 2-3.5 mm long. Davidson’s saltscale is found in sage scrub and wetland or riparian areas from 20 to 820 feet ASL. Davidson’s saltscale ranges from Santa Barbara to San Diego Counties along the coast.

Davidson’s saltscale has a “Moderate” potential to occur in scrub or riparian communities within the Project Area, and has been documented by CNPS in Ojai and Santa Barbara (CalFlora 2012).

**Brewer’s Calandria (*Calandrinia breweri*)**

STATUS		
Federal	State / NDDDB	CNPS (CNPS 2001)
None	None / G4, S3.2?	Rank 4.2: limited distribution, fairly threatened in California

Brewer’s calandrinia is an annual herb 3-45 cm tall. It has several to many stems with simple alternate leaves. Flowers are a raceme with two glabrous sepals, and generally 5 petals (3-5 mm) and 3-6 stamens. The fruit is an elliptical seed 10-15 mm long. Flowers bloom from March to June. Brewer’s calandrinia is found in burned and disturbed sites with sandy to loamy soils within chaparral, and sage scrub communities below 4,000 feet ASL. Brewer’s calandrinia ranges along most of coastal California, with some occurrences along the Sierra Nevadas.

Brewer’s calandrinia has a “Moderate” potential to occur within chaparral and sage scrub communities within the Project Area, and has been documented by CNPS at numerous locations within 4 miles north of the Project (CalFlora 2012).



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### Plummer's Mariposa Lily (*Calochortus plummerae*)

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
FSS	None / G3G3	Rank 1B.2: rare, threatened, or endangered in CA and elsewhere

Plummer's mariposa lily is a bulbiferous herb with a fibrous coat. Stems are generally 30-60 cm long, generally branched, with no bulblets. The basal shaped leaves are 20-40 cm long, usually wither before anthesis; and cauline reduced upward and inrolled. The inflorescence consists of two to six perianth widely bell-shaped flowers; sepals 30-50 mm, narrowly lanceolate and long tapered. Fruit is erect, four to eight cm, linear, angled, and tip acuminate. Plummer's mariposa lily blooms between May and August. Plummer's mariposa lily grows in coastal scrub, chaparral, valley and foothill grasslands, cismontane woodland, and lower montane coniferous forests, often in rocky and sandy sites of granitic or alluvial material at elevations between 300 and 5,300 feet ASL. It ranges in San Luis Obispo, Ventura, Los Angeles, Orange, Riverside and San Bernardino Counties. *C. plummerae* is threatened by grazing, development, road maintenance, and fire suppression.

Plummer's mariposa lily has a "Moderate" potential to be found in coastal scrub, chaparral, and grassland communities of the Project Area.

### Santa Barbara Morning Glory (*Calystegia sepium binghamiae*)

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None	Rank 1B.1: rare, threatened, or endangered in CA and elsewhere

Santa Barbara morning glory is a perennial climbing, twining or trailing sub-shrub with a glabrous to hairy stem. Leaves are lobed and spreading to entire and obscurely two-lobed. The inflorescence consists of a white corolla 44 mm long with 8-12 mm bracts, and 4-8 mm wide sepals. Santa Barbara morning glory blooms from April to June. Santa Barbara morning glory grows in coastal marshes, or riparian areas of chaparral, and cismontane woodland communities from sea level to 1,650 feet ASL. Santa Barbara morning glory was considered extinct since 1999, but a population was rediscovered in Chino in 2011.

Santa Barbara morning glory has a "Moderate" potential to occur within the low elevation riparian areas of Segments 3B and 4 in the Project Area. Historic occurrences are documented in the Project vicinity (CalFlora 2012).

### Small-Flowered Morning Glory (*Convolvulus simulans*)

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G3,S3.2	Rank 4.2: limited distribution, fairly threatened in California

Small-flowered morning glory is an annual herb with a tufted or diffusely branched stem, 10-40 cm tall. Leaves are entire and oblanceolate to 6 cm long. The inflorescence consists of a 3-4 mm

calyx with a 0.6 cm pink bell-shaped corolla. Small-flowered morning glory blooms from March to July. Small-flowered morning glory grows in clay and serpentine soils of chaparral, coastal scrub and grassland communities from 100 to 2,500 feet ASL. It ranges from the Sierra Nevada Foothills and coastal ranges from San Francisco to southern California.

Small-flowered morning glory has a “Moderate” potential to occur within scrub and grassland communities of the Project Area, and is documented by CNPS north of Lake Casitas, ~4 miles from Project Area (CalFlora 2012).

**Western Dichondra (*Dichondra occidentalis*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G4, S3.2	Rank 4.2: limited distribution, fairly threatened in California

Western dichondra is a low, creeping perennial with dense hairs. Leaves are a petiole 2.5-6 cm and generally glabrous. The inflorescence is a 3-3.5 mm red to purple corolla, blooming from March to May. Western dichondra is found among rocks and shrubs in coastal scrub, chaparral, and oak woodlands from sea level to 1,650 feet ASL. The species ranges in coastal counties from San Luis Obispo to San Diego Counties.

Small-flowered morning glory has a “Moderate” potential to occur within scrub and woodland communities of the Project Area, but is not documented in the Project vicinity.

**Mesa Horkelia (*Horkelia cuneata puberula*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
FSS	None / G4T2, S2.1	Rank 1B.1: rare, threatened, or endangered in CA and elsewhere

Mesa horkelia is a low, matted perennial herb 20-70 cm. Leaves are stipulate or basally lobed, glabrous to hairy, and resinous smelling. The flower has five white 4-6 mm petals, 10 stamens and 30-60 pistils in the center of the flower. The hypanthium is cup-like, flat bottomed, often forming a tube. The fruit is an achene. Mesa horkelia blooms from February to September. Mesa horkelia is found in dry sandy soils of coastal chaparral, cismontane woodland, and scrub communities between 200 and 2,650 feet ASL. The species ranges from the outer southern coastal ranges and coastal areas from San Luis Obispo to San Diego Counties.

Mesa horkelia has a “Moderate” potential to occur within scrub and chaparral communities of the Project Area, but is not documented in the Project vicinity.

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**Carmel Valley Malacothrix (*Malacothrix saxatilis* var. *arachnoidea*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G5T2, S2.2	Rank 1B.2: rare, threatened, or endangered in CA and elsewhere

Carmel Valley malacothrix is a perennial growing to 2 m tall. Leaves are simple, lanceolate with entire margins. Flowers are arranged in corymbs of many-petaled white florets, blooming from March to December. The fruit is an achene. Carmel Valley malacothrix is found in rocky open areas and shale outcrops in coastal scrub and chaparral communities from 80 to 4,000 feet ASL. The species ranges from coastal areas from Monterrey to Santa Barbara Counties.

Carmel Valley malacothrix has a “Moderate” potential to occur within scrub and chaparral communities of the Project Area, and is documented by CNPS north of the Project Area (CalFlora 2012).

**Ojai Navarretia (*Navarretia ojaiensis*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
None	None / G1S1	Rank 1B.1: rare, threatened, or endangered in CA and elsewhere

Ojai navarretia is an annual 4-33 cm high, with spreading ascending branches. Leaves are 2-pinnate-lobed, many-toothed, and glandular-hairy. The inflorescence is a strap-shaped calyx with a 6-11 mm white corolla with a purple spot at the base, blooming from May to July. The fruit is a capsule. Ojai navarretia is found in clay soils in chaparral, coastal scrub, and grassland communities from 900 to 2,050 feet ASL. The species ranges in Ventura and Los Angeles Counties.

Ojai navarretia has a “Moderate” potential to occur in chaparral, coastal scrub, and grassland communities within the Project Area, and has been documented by CNPS in Ojai, north of Segment 4 (Calflora 2012).

**Santa Ynez False Lupine (*Thermopsis macrophylla*)**

STATUS		
Federal	State / NDDB	CNPS (CNPS 2001)
FSS	SR / G1, S1.3	Rank 1B.3: rare, threatened, or endangered in CA and elsewhere

Santa Ynez false lupine is an un-armed, hairy, perennial herb 120-250 cm tall. Leaves are dense hairy clusters of leaflets 4-10 cm long. The inflorescence is a raceme with persistent bracts, with a 5-lobed calyx (upper two lobes fused) 25-60 cm, blooming from April to June. The fruit is a legume. Santa Ynez false lupine is found in open areas such as fuel breaks, after burns, and on sandstone within chaparral and woodland communities from sea level to 6,890 feet ASL. The species ranges through the coastal ranges throughout the state.

Santa Ynez false lupine has a “Moderate” potential to occur in chaparral, and woodland communities within the Project Area, and has been documented by CNPS in the Project vicinity (CalFlora 2012).

#### 4.7 Special-Status Wildlife Species

Five special-status wildlife species are documented to occur in the Project Area: Cooper’s hawk, golden eagle, northern harrier, white-tailed kite, and loggerhead shrike. Thirteen additional special-status wildlife species have a “High” or “Moderate” potential to occur in the Project Area. Minimal amounts of habitat for these species may be impacted temporarily due to vegetation trimming or removal, or lost in the few areas where a new pad or access will be cleared, however, the Project would not have a substantial adverse effect either directly or through habitat modifications on any special-status animal species.

Activities such as grading, vegetation trimming or removal, and general project noise or vibration could result in construction-related impacts to nesting birds/raptors, including potential disruption of nesting activity, or destruction of active nests. Construction disturbance during the breeding season (February 1 – August 31) that results in the incidental loss of fertile eggs or nestlings, or otherwise leads to nest abandonment is considered take by USFWS under the Migratory Bird Treaty Act, as well as by CDFG under the California Fish and Game Codes 3503, 3503.5, and 3513.

##### 4.7.1 Special-Status Animal Species Descriptions and Occurrence

Information provided in the following animal species descriptions was compiled from CDFG (2012a), California Herps (2012), and UC Davis (2012).

##### Monarch Butterfly (*Danaus plexippus*)

STATUS	
Federal	State / NDDB
None	Winter roost trees are protected by CDFG

The monarch butterfly is a milkweed butterfly (subfamily Danainae), in the family Nymphalidae. It is perhaps the best known of all North American butterflies. Its wings feature an easily recognizable orange and black pattern, with a wingspan of 8.9–10.2 cm. The Viceroy butterfly has a similar size, color, and pattern, but can be distinguished by an extra black stripe across the hind wing. Female monarchs have darker veins on their wings, and the males have a spot called the "androconium" in the center of each hind wing from which pheromones are released. Males are also slightly larger. The monarch is famous for its southward migration and northward return in summer from Canada to Mexico and Baja California which spans the life of three to four generations of the butterfly.

Monarch butterflies were observed throughout the Project Area. Monarchs are not listed by the USFWS or CDFG, and individual monarch butterflies are not considered a sensitive resource; however, CDFG does consider monarch butterfly winter roosting sites a sensitive resource. A few clusters of eucalyptus (*Eucalyptus sp.*) and pine (*Pinus sp.*) that may provide suitable winter

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roosting are found in the Project vicinity, however Project activities are not expected to impact any of these tree species or any documented roosting sites.

**Cooper’s Hawk (*Accipiter cooperii*)**

STATUS	
Federal	State / NDDB
MBTA	CWL

Cooper’s hawk is a breeding resident throughout most of the wooded portion of the state. It breeds in southern Sierra Nevada foothills, New York Mountains, Owens Valley, and other local areas in southern California. Cooper’s hawk ranges from sea level to above 9,000 ft. Dense stands of live oak, riparian deciduous, or other forest habitats near water are used most frequently by the species and they are seldom found in areas without dense tree stands, or patchy woodland habitat. Cooper’s hawk catches small birds, especially young during nesting season, and small mammals, but will also take reptiles and amphibians. They breed from March through August, with peak activity May through July. A single-brood with a clutch size of 2-6, usually 4-5, is incubated by the female for 35-65 days while the male provides food.

Cooper’s hawk was observed in oak woodland adjacent to the Cañada Larga drainage in Segment 1, and in the woodlands along SR 150 in the vicinity of Segment 3B. It is well documented throughout the region (eBird 2012). Oak woodlands and riparian areas of the Project Area provide suitable foraging and nesting habitat.

**Golden Eagle (*Aquila chrysaetos*)**

STATUS	
Federal	State / NDDB
BGEPA, MBTA	CFP, CWL

Golden eagle is an uncommon permanent resident and migrant throughout California; perhaps more common in southern California than in the north. Eagles range from sea level up to 11,500 ft. Habitat typically includes rolling foothills, mountain areas, sage-juniper flats, and desert. Golden eagles eat mostly lagomorphs and rodents, but will also take other mammals, birds, reptiles, and some carrion. Secluded cliffs with overhanging ledges and large trees are used for cover and nesting. Golden eagles build large platform nest, often 10 feet across and 3 feet high, of sticks, twigs, and greenery. They breed from late January through August, with the peak in March through July. A clutch size of 1-3 eggs, usually 2, is laid early February to mid-May. Incubation lasts 43-45 days, and the nestling period usually 65-70 days.

A golden eagle was observed flying in the foothills north of the Carpinteria Substation. Other records of the species exist in Cañada Larga (eBird 2012). Portions of the Project Area provide suitable hunting and roosting habitat, but poor quality nesting habitat.

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### Northern Harrier (*Circus cyaneus*)

STATUS	
Federal	State / NDDDB
MBTA	CSC

Northern harrier occurs from coastal salt marshes and annual grassland up to lodgepole pine and alpine meadow habitats, as high as 10,000 ft., and breeds from sea level to 5,700 feet ASL in California. They frequent meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands, and are seldom found in wooded areas. Northern harrier is a permanent resident of the northeastern plateau and coastal areas, but less common resident of the Central Valley. They are a widespread winter resident and migrant in suitable habitat. The breeding population is much reduced, especially in the southern coastal district; destruction of wetland habitat, native grassland, and moist meadows, and burning and plowing of nesting areas during early stages of breeding cycle, are major reasons for the decline. Northern harrier feeds mostly on voles and other small mammals, birds, frogs, small reptiles, crustaceans, insects, and, rarely on fish. Harriers nest on the ground in shrubby vegetation, usually at marsh edges. Nests are built of a large mound of sticks on wet areas, and a smaller cup of grasses on dry sites. They breed from April to September, with the peak activity June through July. A single-brooded clutch averages 5 eggs, but can range from range from 3 to 12. The female incubates while the male provides food. The nestling period lasts about 53 days.

A northern harrier was observed flying in the fields in Cañada Larga in Segment 1. Additional records of the species are known from Cañada Larga and coastal lands of Carpinteria near Segment 3A (eBird 2012). Additional agricultural lands of the Project Area may provide suitable hunting and roosting habitat.

### White-Tailed Kite (*Elanus leucurus*)

STATUS	
Federal	State / NDDDB
MBTA	CFP

White-tailed kite is a common to uncommon, yearlong resident in coastal and valley lowlands; rarely found away from agricultural areas. Kites inhabit herbaceous and open stages of most habitats mostly in cismontane California, and forage in undisturbed, open grasslands, meadows, farmlands and emergent wetlands. They prey mostly on voles and other small, diurnal mammals, occasionally on birds, insects, reptiles, and amphibians. White-tailed kite uses trees with dense canopies for cover. Kites make a nest of loosely piled sticks and twigs lined with grass, straw, or rootlets, placed near the top of dense oak, willow, or other tree stand; usually 20 to 100 ft above ground. They breed from February to October, with the peak from May to August. An average clutch of 4-5 eggs, with a range of 3-6, is incubated by the female for about 28 days. Young fledge in 35-40 days. During the incubation and nestling period, the male feeds the female and supplies her with food to feed the young.

White-tailed kite was observed in the area south of Shephard Mesa near Segment 3A, and is commonly seen near the Carpinteria Bluffs Preserve South of Segment 3A. Multiple records for

the species are documented in Cañada Larga in Segment 1 (eBird 2012). Additional agricultural lands within the Project Area may provide suitable hunting and roosting habitat.

**Loggerhead Shrike (*Lanius ludovicianus ludovicianus*)**

STATUS	
Federal	State / NDDB
MBTA	CSC

Loggerhead shrike is a common resident and winter visitor in lowlands and foothills throughout California. They prefer open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. The highest density occurs in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats, and they occur only rarely in heavily urbanized areas. Shrikes eat mostly large insects, but will also take small birds, mammals, amphibians, reptiles, fish, carrion, and various other invertebrates. Loggerhead shrikes build nests on stable branches in densely-foliaged shrubs or trees, usually well-concealed at a height of 1.3 to 50 ft above ground, occasionally higher. In California, shrikes lay eggs from March into May, and young become independent in July or August. A monogamous, solitary nester, they lay a clutch of 4-8 eggs, and incubation lasts 14-15 days.

The species has previously been recorded on Segment 1 and near Construction 133 in Segment 4 during field surveys. Numerous records for the species are documented in Cañada Larga in Segment 1 (eBird 2012). Additional portions of the Project Area may provide suitable hunting, roosting, and nesting habitat.

**Mule Deer (*Odocoileus hemionus*)**

STATUS	
Federal	State / NDDB
USFS MIS	None

Mule deer are an MIS species when located on USFS lands. Mule deer are used by the ANF as an indicator of healthy diverse habitats. Mule deer were selected as an MIS for forest health related to vegetation management, roads and associated recreation management. The desired condition for mule deer is that habitat functions are maintained or improved, including primary feeding areas, winter ranges, breeding areas, birthing areas, rearing areas, migration corridors, and landscape linkages. Mule deer prefer edge habitat and vegetation ecotones, especially where openings and cover are interspersed with sources of water. These provide mosaics of vegetation with interspersions of dense shrub or trees (for hiding cover from disturbance and predation, and thermal cover during the winter and summer) among herbaceous and riparian areas (foraging habitat). Mule deer browse forbs, grasses, and shrubs. New shrub growth is preferred to mature shrubs, since it provides a more easily digestible nutrient source. Acorns (mast) are an important part of the fall diet. Mule deer are affected by roads, human interactions, and management activities that modify vegetation diversity and age class mosaics.

Mule deer and their sign were found throughout all Segments of the Project Area with native vegetation types. USFS lands within the Project Area may provide suitable foraging habitat, but would not provide adequate cover for hiding protection, or use as birthing areas.

**Mountain Lion (*Puma concolor*)**

STATUS	
Federal	State / NDDDB
USFS MIS	None

Mountain lion are an MIS species when located on USFS lands. Mountain lion are used by the ANF as an indicator of healthy diverse habitats. The objectives for mountain lion are that there are functional landscape linkages and that the species is well-distributed. Mountain lions have large home ranges and require extensive areas of riparian vegetation and brushy stages of various habitats, with interspersions of irregular terrain, rocky outcrops, and tree/brush edges. Deer represent approximately 60 to 80 percent of mountain lion diet, thus mountain lions can be found wherever deer are found.

A mountain lion was observed (dead) along SR 33 in 2011, within ~0.5 mile of the Project alignment. Though portions of the Project Area provide all habitat components for the life cycle of mountain lion, USFS lands within the area provide only low-quality habitat for this species.

**Arroyo Chub (*Gila orcutti*)**

STATUS	
Federal	State / NDDDB
FSS	CSC

Arroyo chub are native to the streams and rivers of the Los Angeles plain in southern California, including the Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita Rivers, and Malibu and San Juan Creeks. They have been extirpated from much of their native range, but have been introduced to streams along the coast as far north as Chorro Creek in San Luis Obispo County. Arroyo chub are not native to the Ventura River system, but are still protected by CDFG. Arroyo chub are small fish that can reach lengths of 120 mm SL but typical adult lengths are 70-100 mm. Males can be distinguished from females by their larger fins and, when breeding, by the prominent patch of tubercles on the upper surface of the pectoral fins. Both sexes have chunky bodies, fairly large eyes, and small mouths. Body color is silver or grey to olive-green dorsally, white ventrally, and there usually is a dull gray lateral band. Arroyo chubs are found in slow-moving or backwater sections of warm to cool streams with mud or sand substrates and depths typically greater than 40 cm. They feed on plants such as algae and water fern (Azolla), and on invertebrates such as insects and mollusks. Arroyo chubs breed more or less continuously from February through August, although most spawning takes place in June and July.

Arroyo chub have been documented within Cañada Larga in Segment 1; they were found in large pools upstream and downstream from the existing crossing and original crossing proposed to be re-established.



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**Ringtail (*Bassariscus astutus*)**

STATUS	
Federal	State / NDDDB
None	CFP

Ringtail is a widely distributed, common to uncommon permanent resident, occurring in various riparian habitats, and in brush stands of most forest and shrub habitats, at low to middle elevations. They are not usually found more than 0.6 mi from permanent water. Ringtail are primarily carnivorous, eating mainly rodents (woodrats and mice) and rabbits, but they will also take substantial amounts of birds and eggs, reptiles, invertebrates, fruits, nuts, and some carrion. Ringtail forage on the ground, among rocks, and in trees, and nest in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests. One litter per year, with an average of 3 young are often born in May and June. Females may drive males away 3-4 days prior to giving birth.

There is a “High” potential for ringtail to use portions of the Project Area in and around riparian areas for foraging, and potential denning. An SCE crew indicated seeing a ringtail (dead) in the vicinity of the Casitas Substation.

**American Badger (*Taxidea taxus*)**

STATUS	
Federal	State / NDDDB
None	CSC

American badger is an uncommon, permanent resident found throughout most of the state, except in the northern North Coast area. Badger is most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Badgers are carnivorous and eat fossorial rodents, rats, mice, chipmunks, and especially ground squirrels and pocket gophers. They also eat some reptiles, insects, earthworms, eggs, birds, and carrion. Young are born in burrows dug in relatively dry, often sandy, soil, usually in areas with sparse overstory cover. Badgers mate in summer and early fall, and an average litter of 2-3 is born usually in March and April.

There is a “High” potential for badger to use portions of Cañada Larga in Segment 1, and near the Segment 3B/4 split that may provide suitable foraging and denning habitat. A CNDDDB occurrence for a badger (dead) in the vicinity of the Casitas Substation was recorded in 2008.

**California Legless Lizard (*Aniella pulchra pulchra*)**

STATUS	
Federal	State / NDDDB
FSS	CSC

California legless lizard is a secretive fossorial lizard that is common in the Coast Ranges from Contra Costa Countys to the Mexican border, from near sea level to about 6,000 ft. California

legless lizard is found in coastal dune, woodland, chaparral, and coastal scrub types with friable soils and duff layers. This lizard usually forages at the base of shrubs or other vegetation either on the surface or just below it in leaf litter or sandy soil. Legless lizards eat insect larvae, small adult insects, and spiders. The reproductive season begins with mating activities in late spring or early summer. The gestation period is about 4 months. Live young are born in September, October, or even November. Litter size ranges from one to four but two is common.

There is a “Moderate” potential for California legless lizard to occur in woodland, chaparral, or scrub communities of the Project Area. A CNDDDB occurrence for legless lizard is documented five miles southwest of Segment 1 in Ventura.

**Coast Horned Lizard (*Phrynosoma blainvillii*)**

STATUS	
Federal	State / NDDDB
FSS	CSC

The coast horned lizard is uncommon to common in valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress, juniper and annual grassland habitats throughout the central and southern California coast from sea level to 6,000 ft in the mountains of southern California. Horned lizards forage on the ground in open areas, usually between shrubs and often near ant hills. Small beetles are taken in large numbers when especially abundant, and other insects are taken as food items, including wasps, grasshoppers, flies, and caterpillars. This species relies on camouflage for protection and often hesitates to move at the approach of a predator. Horned lizards often bask in the early morning on the ground or on elevated objects such as low boulders or rocks. Predators and extreme heat are avoided by horned lizards by burrowing into loose soil. Periods of inactivity and winter hibernation are spent burrowed into the soil under surface objects such as logs or rocks, in mammal burrows, or in crevices.

Little is known about habitat requirements for breeding and egg-laying. Males may use elevated "viewing platforms" such as cow dung to locate females during the reproductive season. Eggs are apparently laid in nests constructed by females in loose soil.

There is a “Moderate” potential for coast horned lizard to use more open areas of various communities throughout the Project Area. CNDDDB occurrences for coast horned lizard are documented surrounding the Project vicinity.

**Two-Striped Garter Snake (*Thamnophis hammondi*)**

STATUS	
Federal	State / NDDDB
FSS	CSC

The two-striped garter snake is distributed from the southeastern slope of the Diablo Range and the Salinas Valley south along the South Coast and Transverse ranges to the Mexican border, and on Santa Catalina Island. Historically common, it is associated with permanent or semi-permanent bodies of water in a variety of habitats from sea level to 8,000 feet ASL. Highly

aquatic, two-striped garter snakes forage primarily in and along streams taking fishes, especially trout and sculpins and their eggs, and amphibians and amphibian larvae. Small mammals and invertebrates such as leeches and earthworms are also taken. The preferred nocturnal retreats of this active diurnal snake are thought to be holes, especially mammal burrows, crevices, and surface objects. During the day this garter snake often basks on streamside rocks or on densely vegetated stream banks. When disturbed it usually retreats rapidly to water. In milder areas mammal burrows and surface objects such as rocks and rotting logs serve as winter refuges.

Courtship and mating normally occur soon after spring emergence. Young are born alive in the late summer, usually in secluded sites such as under the loose bark of rotting logs or in dense vegetation near pond or stream margins.

There is a “Moderate” potential for two-striped garter snake to occur in riparian communities throughout the Project Area.

**South Coast Garter Snake (*Thamnophis sirtalis* ssp.)**

STATUS	
Federal	State / NDDB
None	CSC

South coast garter snake is distributed along the Coast and Transverse ranges to the Mexican border. It utilizes a wide variety of habitats including forests, mixed woodlands, grassland, chaparral, and farmlands, often near ponds, marshes, or streams. Highly aquatic, south coast garter snakes forage primarily in and along streams taking fishes, birds and their eggs, amphibians and amphibian larvae. Small mammals and invertebrates such as leeches and earthworms are also taken. The preferred nocturnal retreats of this active diurnal snake are thought to be holes, especially mammal burrows, crevices, and surface objects. During the day this garter snake often basks on streamside rocks or on densely vegetated stream banks. When disturbed it usually retreats rapidly to water. In milder areas mammal burrows and surface objects such as rocks and rotting logs serve as winter refuges. Courtship and mating normally occur soon after spring emergence. Young are born alive spring to fall, usually in secluded sites such as under the loose bark of rotting logs or in dense vegetation near pond or stream margins.

There is a “Moderate” potential for south coast garter snake to occur in riparian communities throughout the Project Area.

**Burrowing Owl (*Athene cunicularia*)**

STATUS	
Federal	State / NDDB
MBTA	CSC

Burrowing owl is a yearlong resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine forests as high as 5,300 feet ASL. Burrowing owl eats mostly insects, but will also take small mammals, reptiles, birds, and

carrion. Owls hunt from a perch, hovering, and hopping after prey on ground. Burrowing owls use rodent or other burrows for roosting and nesting cover. Burrowing owl usually nests in old burrows of ground squirrel, or other small mammals, but may dig their own burrow in soft or friable soil. The nest chamber is lined with excrement, pellets, debris, grass, and feathers; though is sometimes unlined. Pipes, culverts, buildings and nest boxes are used where burrows are scarce. Breeding occurs from March through August, with the peak in April and May. Clutch size is 2-10, with an average of 5-6 eggs. Young emerge from the burrow about 2 weeks after hatching, and fly by about 4 weeks. Burrowing owls are semicolonial, and probably the most gregarious owl in North America.

There is a “Moderate” potential for burrowing owl to utilize portions of the Project Area. Suitable breeding and foraging habitat is present in ground squirrel communities in Cañada Larga in Segment 1, and near the Segment 3B/4 split. Burrowing owl is a documented winter visitor in Cañada Larga (eBird 2012).

**Peregrine Falcon (*Falco peregrinus anatum*)**

STATUS	
Federal	State / NDDB
FSS, MBTA	CFP

The peregrine falcon is a medium to large falcon with males measuring 36-49 cm and females measuring 45-58 cm in total length. Adults have bluish-grey upperparts and whitish, grayish, or buffy with a variable amount of blackish spotting and barring on underparts. Undersides of the wings and tail are barred pale gray and black. A variable-width, blackish facial stripe extends down from the eyes across the malar. This stripe is usually offset by pale auriculars or “cheek”. Peregrine falcons feed on a variety of birds and will occasionally take mammals, insects, and fish. They typically feed on highly mobile, flocking, and colonial nesting birds, such as shorebirds, waterfowl, doves, and pigeons. Many breeding pairs in California remain at or in the vicinity of the nesting grounds year-round, while others migrate locally to more favorable winter foraging habitats. Peregrine falcons nest almost exclusively on protected ledges of high cliffs, primarily in woodland, forest, and coastal habitats. Nest sites usually provide a panoramic view of open country, are near water, and are associated with a local abundance of passerine, waterfowl, or shorebird prey. The breeding season of the American peregrine falcon generally extends from early March to late August. A month or two after courtship begins, females normally lay four eggs (range of 3–5). In southern California, the first egg is usually laid mid- to late February. Both sexes incubate eggs and incubation typically takes 29-33 days. Fledging occurs in late May to early June when the young are 35-42 days old. Juveniles become independent 6-15 weeks after fledging.

There is a “Moderate” potential for peregrine to utilize portions of the Project Area. Suitable foraging habitat is present in more open areas of the Project Area, but no suitable nesting habitat is present.

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### Song Sparrow (*Melospiza melodia*)

STATUS	
Federal	State / NDDDB
MIS, MBTA	None

Song sparrow is a common resident of most of California, but avoids higher mountains and occurs only locally in southern deserts. In winter, most leave montane habitats and are more abundant and widespread than in lowlands and deserts. During all seasons, they prefer riparian, fresh or saline emergent wetland, and wet meadow habitats. Seeds are the most important foods in the annual diet, but insects, spiders, other small invertebrates, make up almost half of diet in nesting season. Berries and other small fruits are minor foods, and they regularly take crustaceans and mollusks along the coast. Song sparrow usually forages on the ground or in low vegetation, and under cover of dense thickets or wetland vegetation where they glean from the ground or low plants and often scratch in the litter. They require low, dense vegetation for protective cover, usually near water. A monogamous, solitary nester, song sparrow breeds in riparian thickets of willows, other shrubs, vines, tall herbs, and in fresh or saline emergent vegetation. They build nests on the ground, or in shrubs, thickets, emergent vegetation, and small trees, usually within 4 feet of ground, usually near water, or in other moist site. Nesting season usually begins in April, when the female lays a clutch size of 3 or 4, and are often double-brooded, sometimes triple-brooded. Incubation lasts 12 to 14 days. Altricial young are tended by both parents, and leave the nest at about 10 days and become independent about 25 days later.

There is a “Moderate” potential for song sparrow to utilize suitable nesting and foraging habitat in the riparian areas of the Project Area, and they have been documented in Cañada Larga and Rincon Creek (eBird 2012).

### Pallid Bat (*Antrozous pallidus*)

STATUS	
Federal	State / NDDDB
FSS	CSC

The pallid bat is a locally common species of low elevations in California. A yearlong resident in most of the range, it occurs throughout California except for the high Sierra Nevada and the northwestern corner of the state. They inhabit a wide variety of habitats including grasslands, shrublands, woodlands, and forests, from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. Pallid bat takes a wide variety of insects and arachnids, including beetles, orthopterans, homopterans, moths, spiders, scorpions, solpugids, and Jerusalem crickets. The stout skull and dentition of this species allows it to take large, hard-shelled prey. Pallid bat forages over open ground, in slow and maneuverable flight with frequent dips, swoops, and short glides. Many prey are taken on the ground, though gleaning is frequently used, and a few prey are taken aerially. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings, while night roosts may be in more open sites, such as porches and open buildings. Few hibernation sites are known, but they probably use rock crevices. Maternity colonies form in early April, and may have a dozen to 100

individuals. Males may roost separately or in the nursery colony. Pallid bat mates from late October to February, and fertilization is delayed. Gestation is 53 to 71 days, and young are born from April to July, mostly from May to June. The average litter is 2, but females reproducing for the first time usually have 1 young. The altricial young are weaned in 7 wk, and are observed flying in July and August. Females nurse only their own young. Females and juveniles forage together after weaning.

There is a “Moderate” potential for pallid bat to forage in more open areas of the Project Area, and they may utilize trees or other substrate for day roosts. No maternity colony habitat is present within the area.

**San Diego Desert Woodrat (*Neotoma lepida intermedia*)**

STATUS	
Federal	State / NDDDB
None	CSC

San Diego desert woodrat inhabits virtually all of southern California, with its range extending northward along the coast to Monterey County, and along the Coast Range to San Francisco Bay. In southeastern California, it is found throughout the Mojave Desert and the Tehachapi and San Bernardino Mountains. Common to abundant in rocky areas within Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats, but also found in a variety of other habitats from sea level to 8,500 feet ASL. San Diego desert woodrat eats buds, fruits, seeds, bark, leaves, and young shoots of many plant species, and in coastal scrub, it prefers live oak, chamise, and buckwheat as food plants. Houses are constructed with twigs, sticks, cactus parts, and rocks, depending on availability of building materials. Desert woodrats are particularly abundant in rock outcrops and rocky cliffs and slopes, with the "house" usually being built against a rock crevice, at the base of creosote or cactus, or in the lower branches of trees. Rock crevices appear preferred where available, but woodrats generally adapt to virtually any situation. Houses are used for nesting, food caching, and predator escape. Solitary nests of dried vegetation, usually fibrous grass parts or shredded stems, are located within the stick house. San Diego desert woodrat breeds from October to May, depending on the habitat. Gestation lasts 30-36 days for an average litter size of 2.7 (range 1-5). Weaning occurs at 27 to 40 days.

There is a “Moderate” potential for San Diego desert woodrat to utilize portions of the Project Area. Middens of dusky-footed woodrat, a closely related species, are found throughout scrub, chaparral and woodland areas of the Project Area indicating it may be suitable habitat. The species is documented 1 to 2 miles southwest of Segment 3A.

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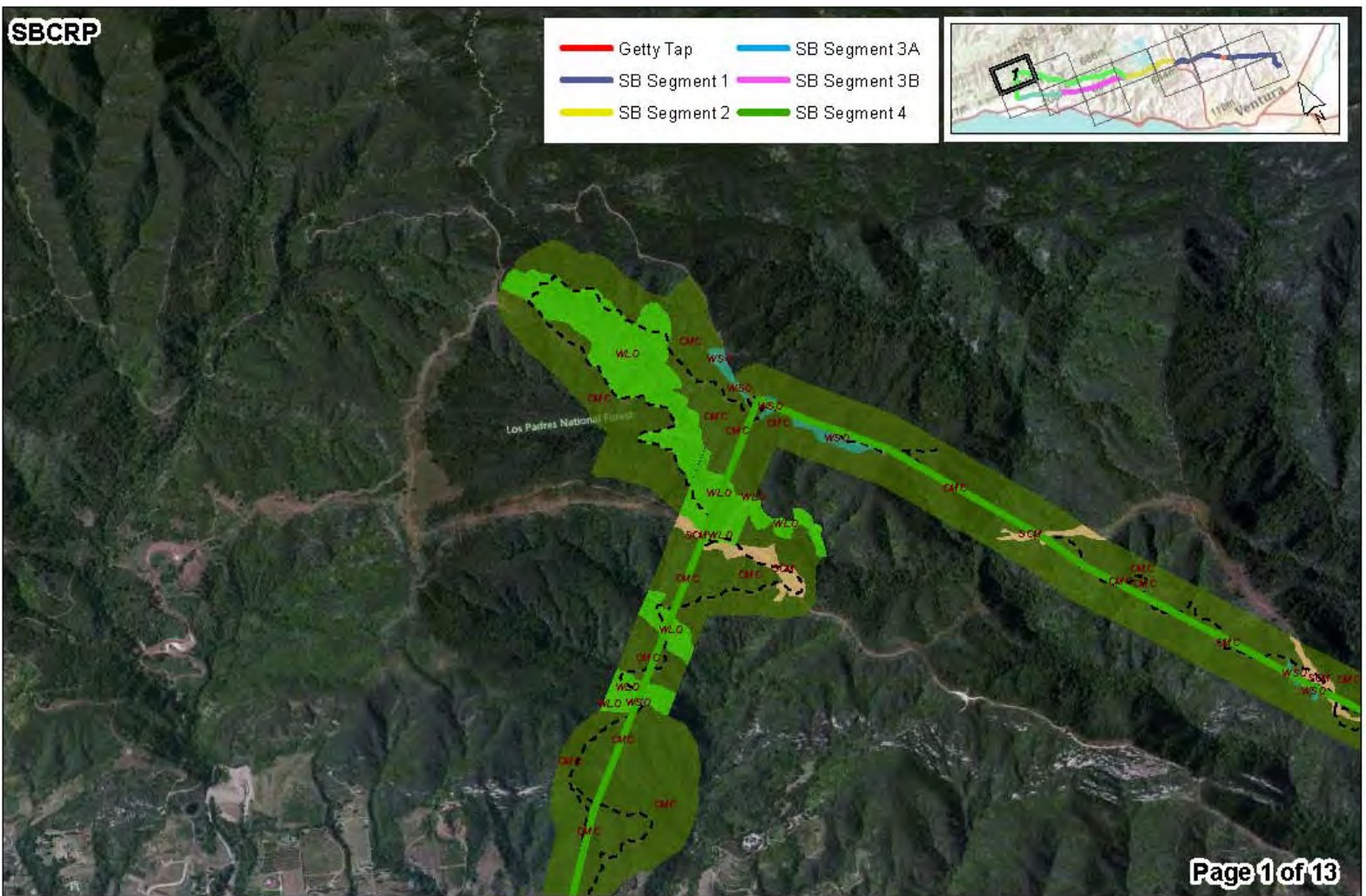
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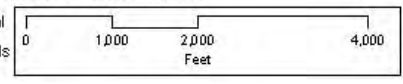
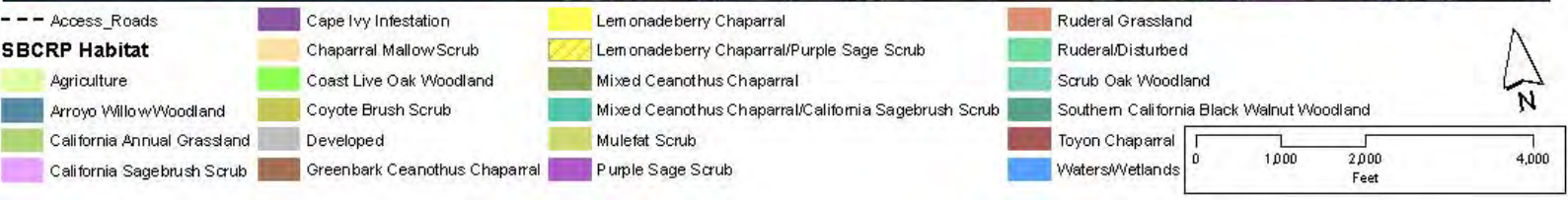
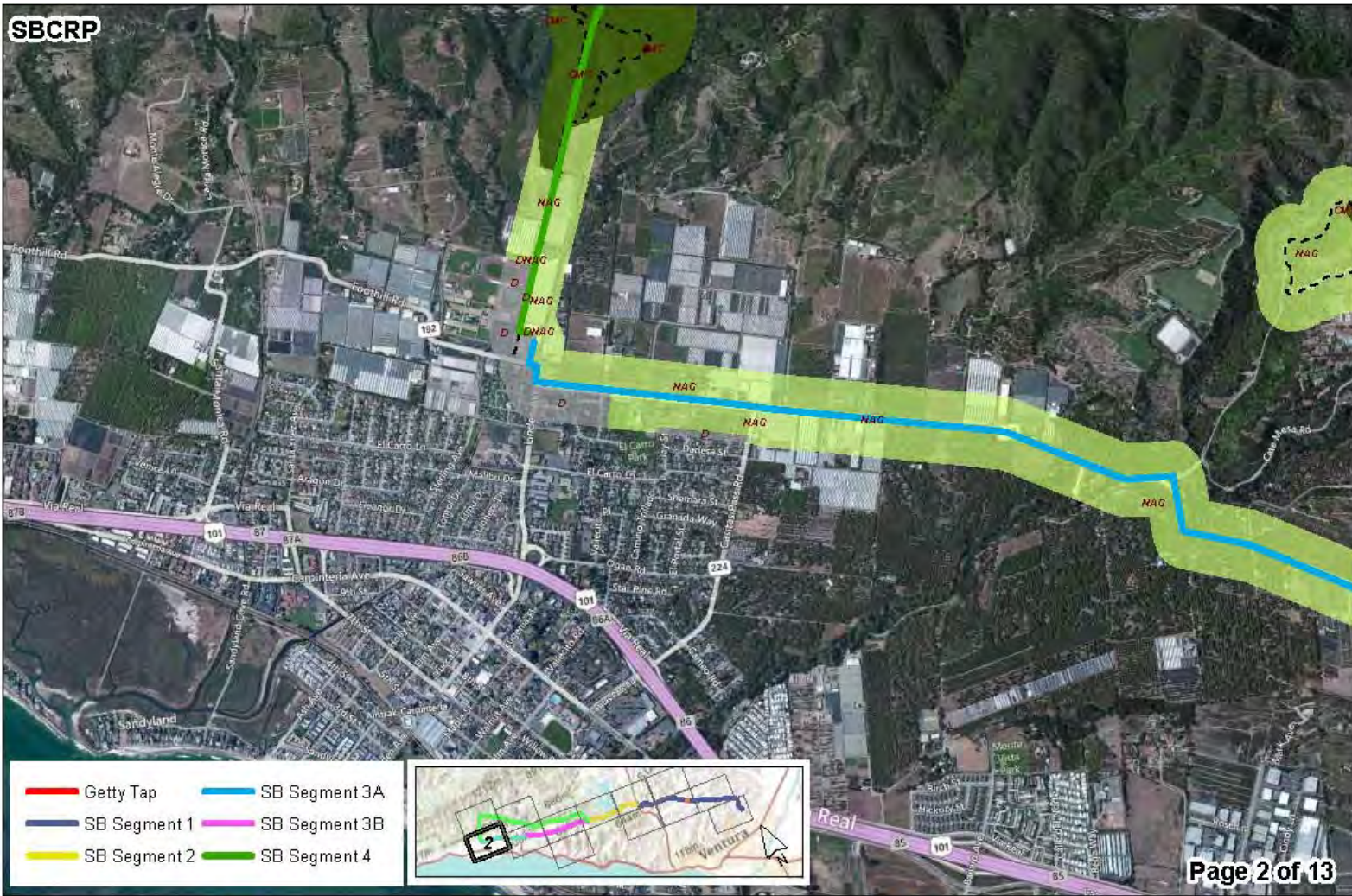
**APPENDIX A:**  
**Vegetation Community Maps**

- Getty Tap
- SB Segment 3A
- SB Segment 1
- SB Segment 3B
- SB Segment 2
- SB Segment 4



--- Access_Roads	<span style="color: purple;">■</span> Cape Ivy Infestation	<span style="color: yellow;">■</span> Lemonadeberry Chaparral	<span style="color: orange;">■</span> Ruderal Grassland
<b>SBCRP Habitat</b>	<span style="color: lightorange;">■</span> Chaparral Mallow/Scrub	<span style="color: yellow;">■</span> Lemonadeberry Chaparral/Purple Sage Scrub	<span style="color: lightgreen;">■</span> Ruderal/Disturbed
<span style="color: lightgreen;">■</span> Agriculture	<span style="color: lightgreen;">■</span> Coast Live Oak Woodland	<span style="color: olive;">■</span> Mixed Ceanothus Chaparral	<span style="color: teal;">■</span> Scrub Oak Woodland
<span style="color: blue;">■</span> Arroyo Willow/Woodland	<span style="color: olive;">■</span> Coyote Brush Scrub	<span style="color: teal;">■</span> Mixed Ceanothus Chaparral/California Sagebrush Scrub	<span style="color: darkgreen;">■</span> Southern California Black Walnut Woodland
<span style="color: lightgreen;">■</span> California Annual Grassland	<span style="color: grey;">■</span> Developed	<span style="color: lightgreen;">■</span> Mulefat Scrub	<span style="color: brown;">■</span> Toyon Chaparral
<span style="color: magenta;">■</span> California Sagebrush Scrub	<span style="color: brown;">■</span> Greenbark Ceanothus Chaparral	<span style="color: purple;">■</span> Purple Sage Scrub	<span style="color: blue;">■</span> Waters/Wetlands

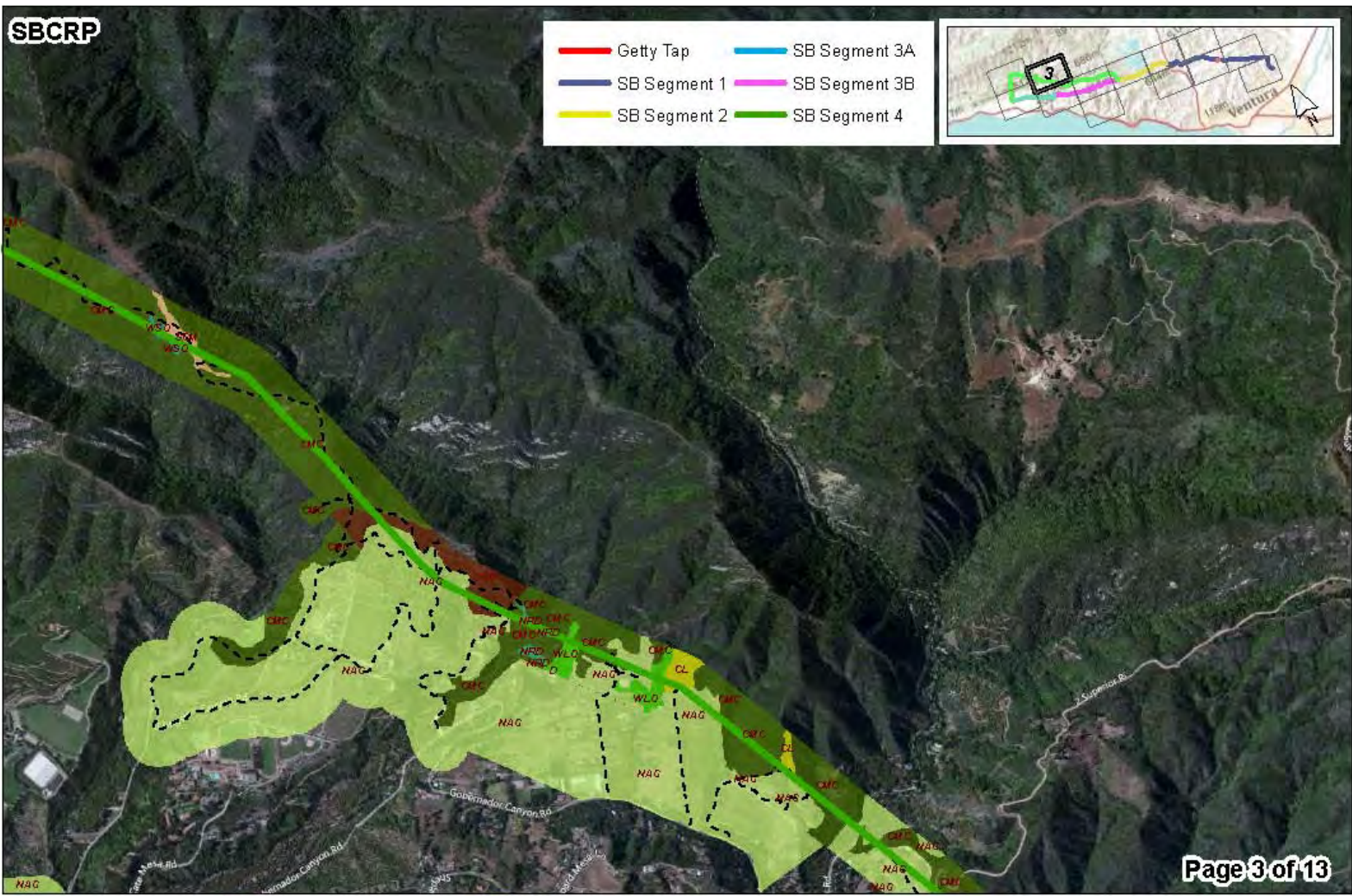






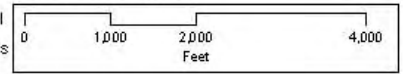
SBCRP

- Getty Tap
- SB Segment 1
- SB Segment 2
- SB Segment 3A
- SB Segment 3B
- SB Segment 4

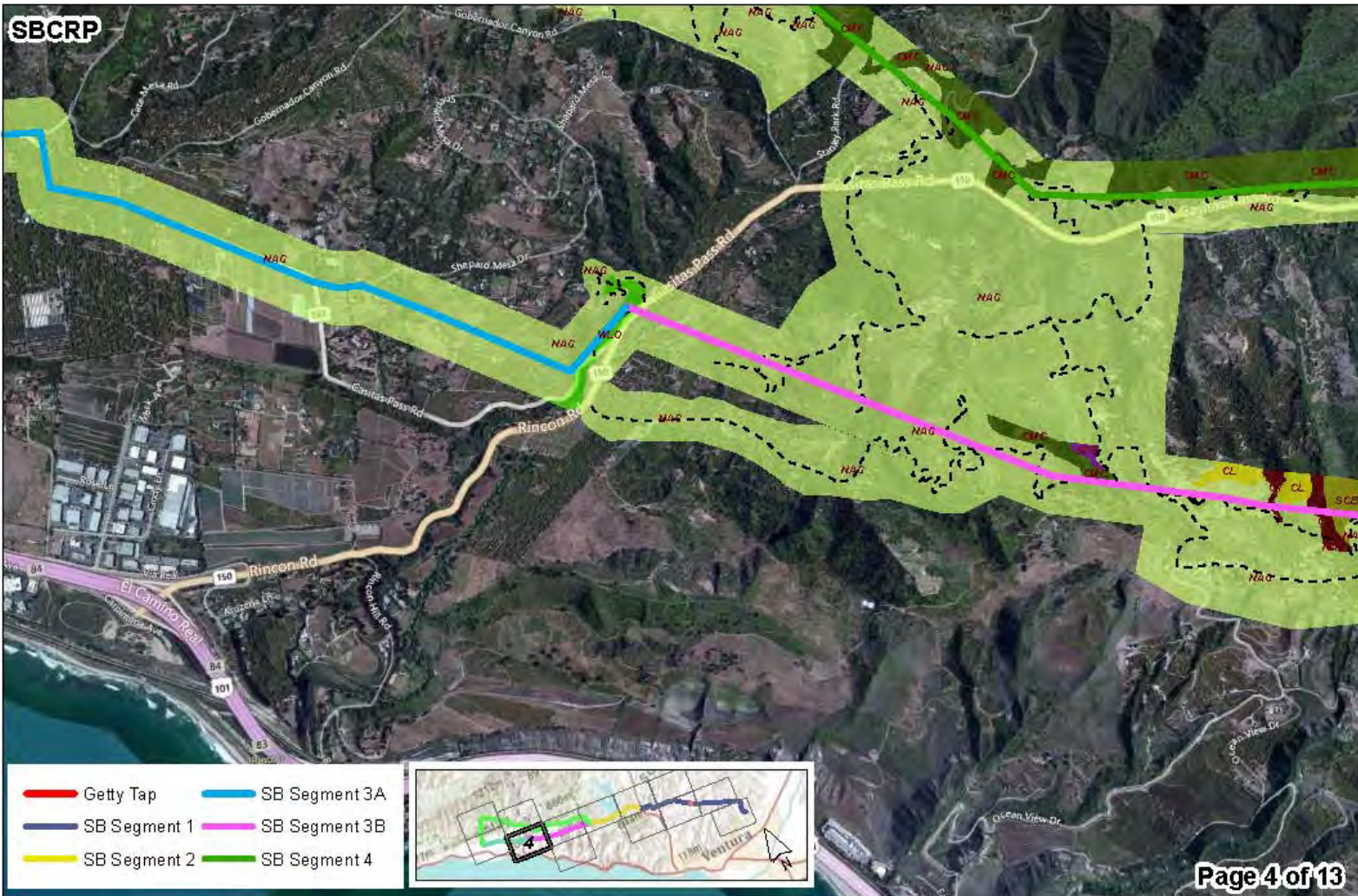


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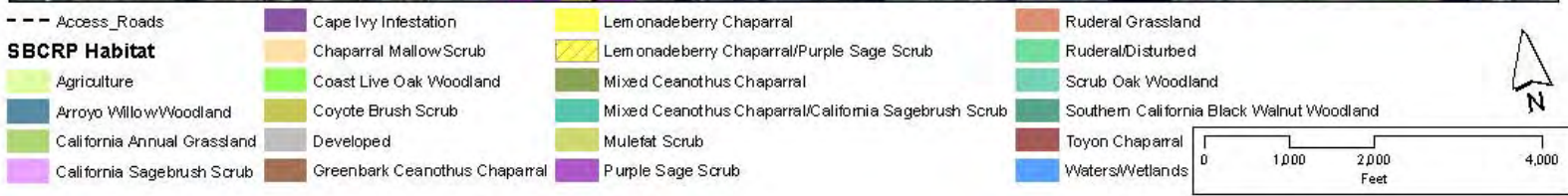
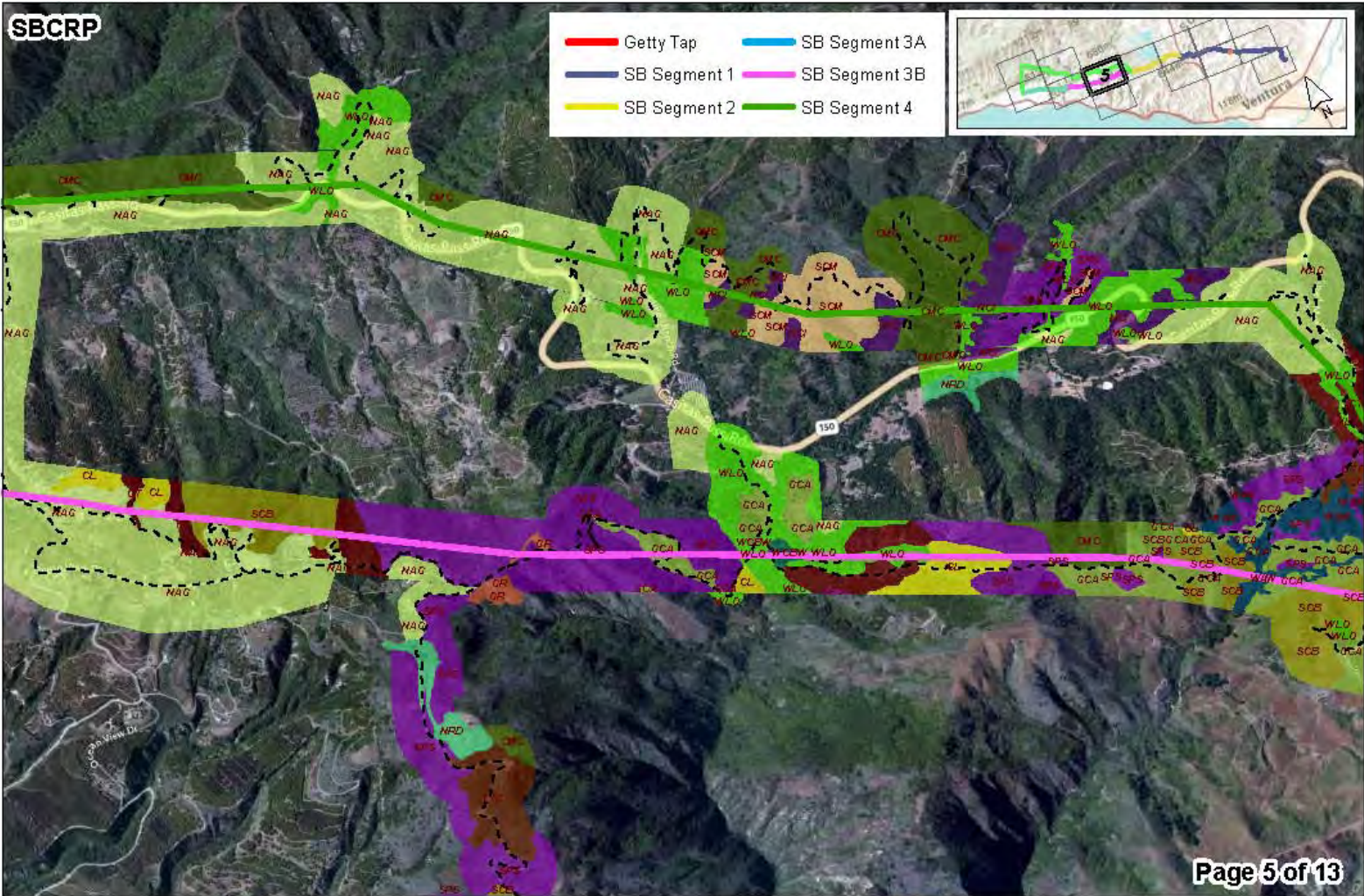
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<b>SBCRP Habitat</b>	<span style="color: orange;">■</span> Chaparral Mallow Scrub	<span style="color: yellow;">■</span> Lemonadeberry Chaparral/Purple Sage Scrub	<span style="color: lightgreen;">■</span> Ruderal/Disturbed
<span style="color: lightgreen;">■</span> Agriculture	<span style="color: green;">■</span> Coast Live Oak Woodland	<span style="color: olive;">■</span> Mixed Ceanothus Chaparral	<span style="color: teal;">■</span> Scrub Oak Woodland
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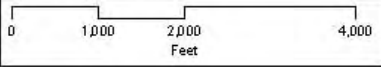
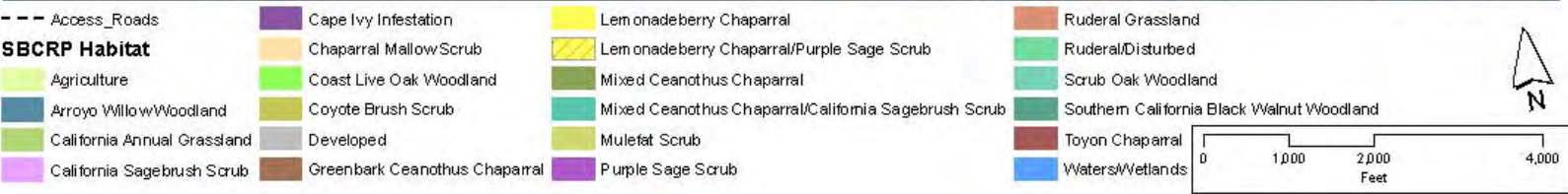
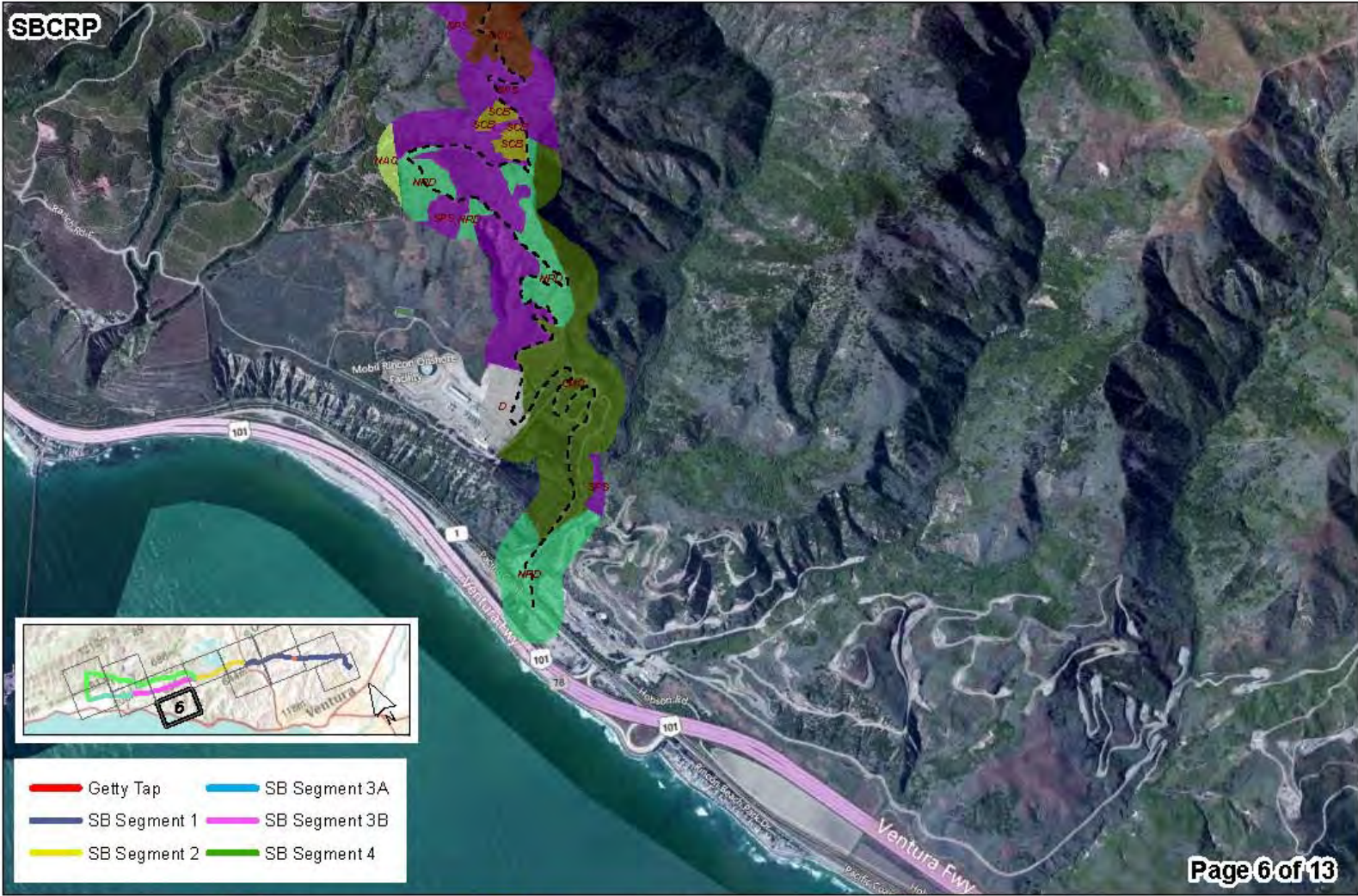








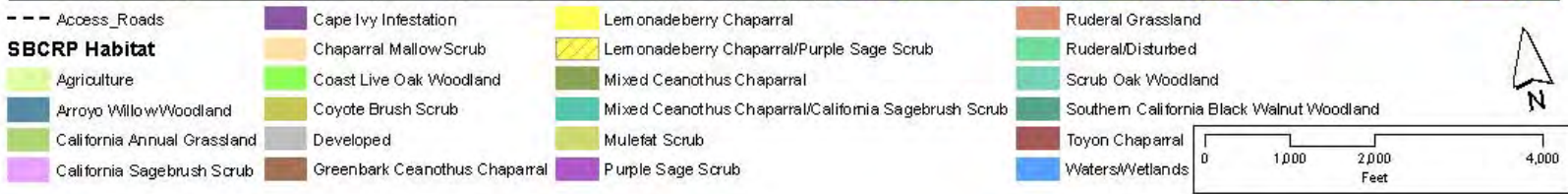
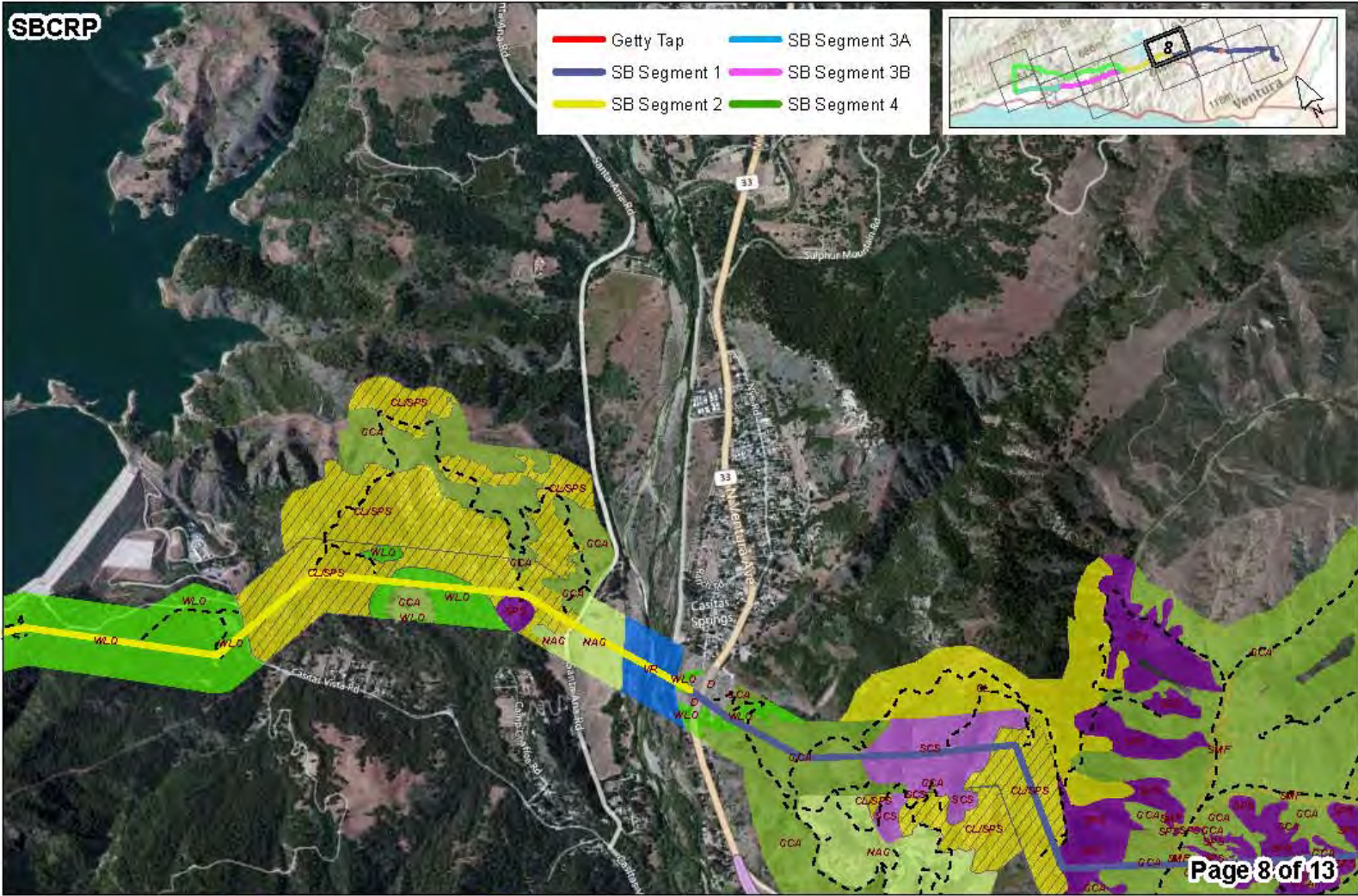




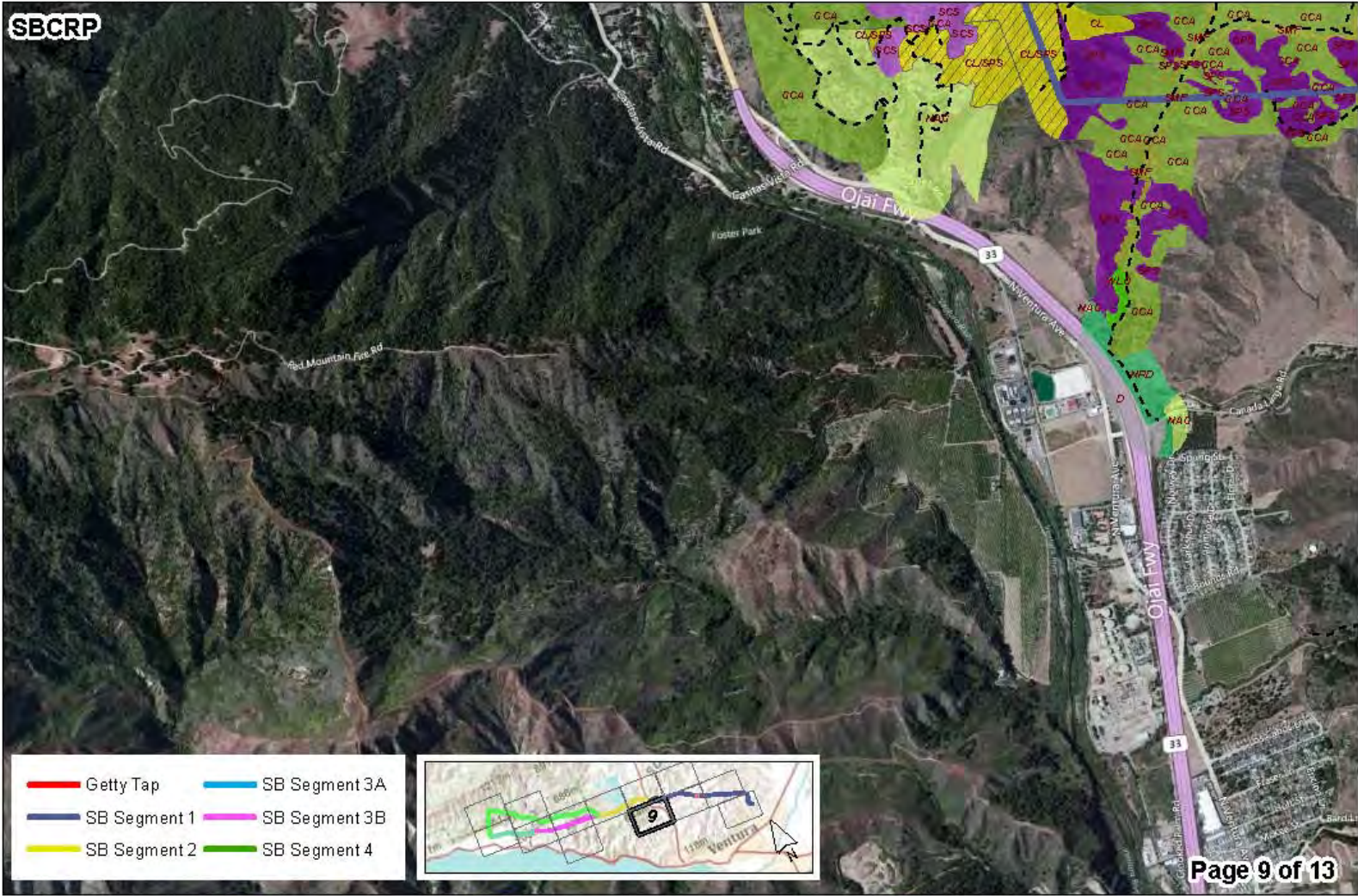








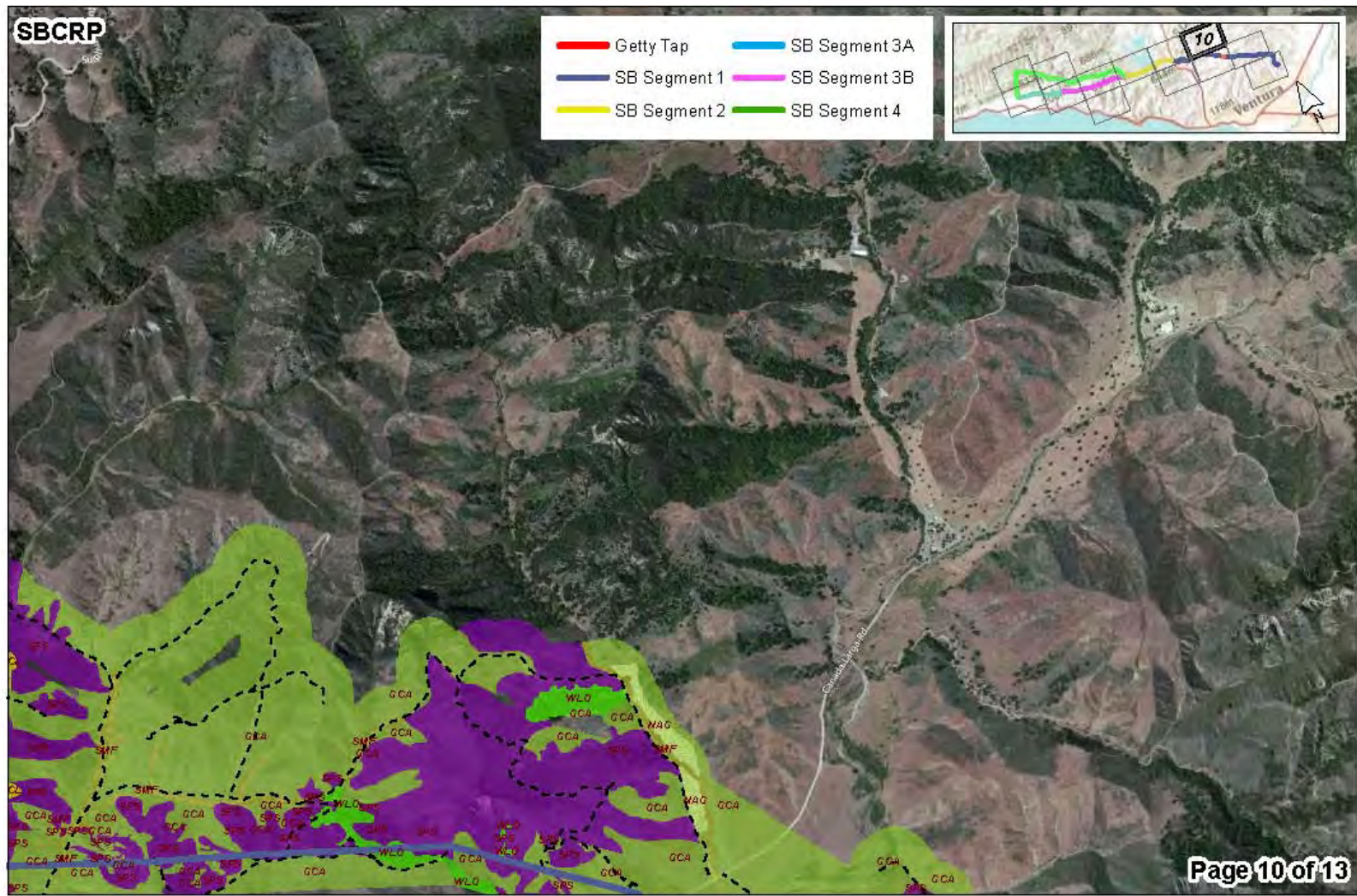






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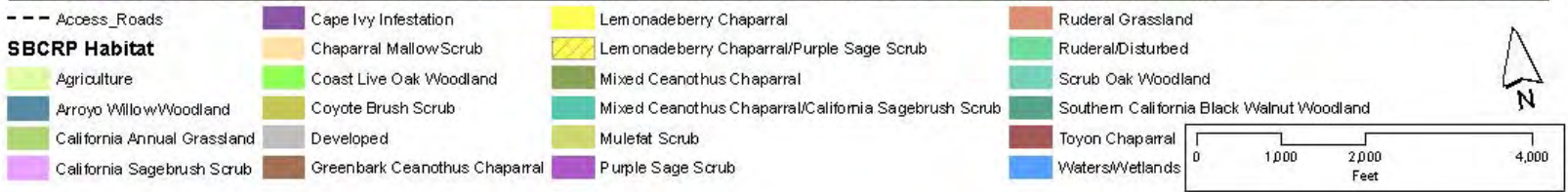
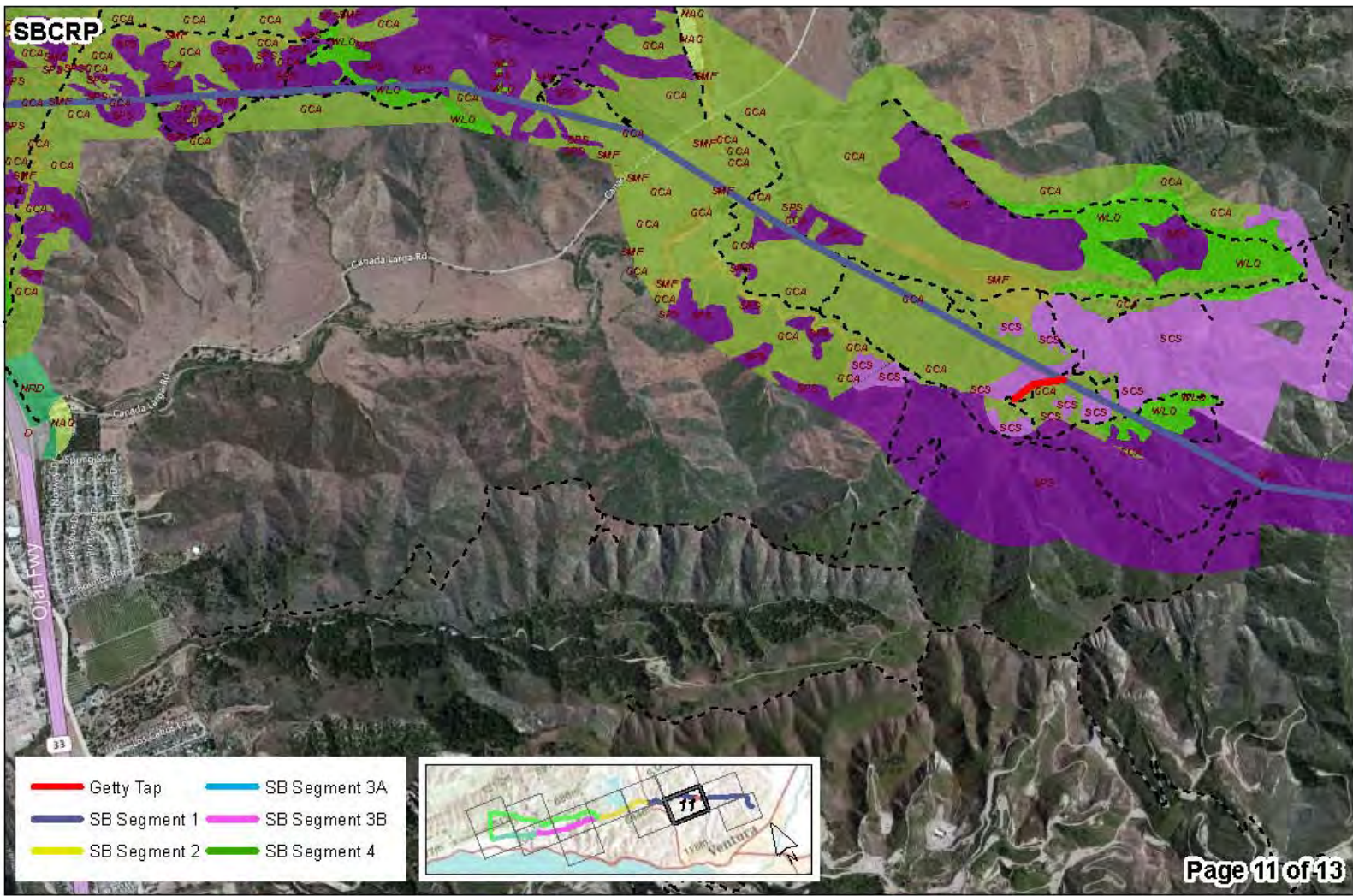
- Getty Tap
- SB Segment 3A
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<p>--- Access_Roads</p> <p><b>SBCRP Habitat</b></p> <ul style="list-style-type: none"> <li><span style="color: lightgreen;">■</span> Agriculture</li> <li><span style="color: blue;">■</span> Arroyo Willow Woodland</li> <li><span style="color: lightgreen;">■</span> California Annual Grassland</li> <li><span style="color: magenta;">■</span> California Sagebrush Scrub</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: purple;">■</span> Cape Ivy Infestation</li> <li><span style="color: orange;">■</span> Chaparral Mallow Scrub</li> <li><span style="color: lightgreen;">■</span> Coast Live Oak Woodland</li> <li><span style="color: olive;">■</span> Coyote Brush Scrub</li> <li><span style="color: grey;">■</span> Developed</li> <li><span style="color: brown;">■</span> Greenbark Ceanothus Chaparral</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: yellow;">■</span> Lemnadeberry Chaparral</li> <li><span style="color: yellow;">■</span> Lemnadeberry Chaparral/Purple Sage Scrub</li> <li><span style="color: olive;">■</span> Mixed Ceanothus Chaparral</li> <li><span style="color: teal;">■</span> Mixed Ceanothus Chaparral/California Sagebrush Scrub</li> <li><span style="color: lightgreen;">■</span> Mulefat Scrub</li> <li><span style="color: purple;">■</span> Purple Sage Scrub</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: orange;">■</span> Ruderal Grassland</li> <li><span style="color: lightgreen;">■</span> Ruderal/Disturbed</li> <li><span style="color: teal;">■</span> Scrub Oak Woodland</li> <li><span style="color: darkgreen;">■</span> Southern California Black Walnut Woodland</li> <li><span style="color: brown;">■</span> Toyon Chaparral</li> <li><span style="color: blue;">■</span> Waters/Wetlands</li> </ul>
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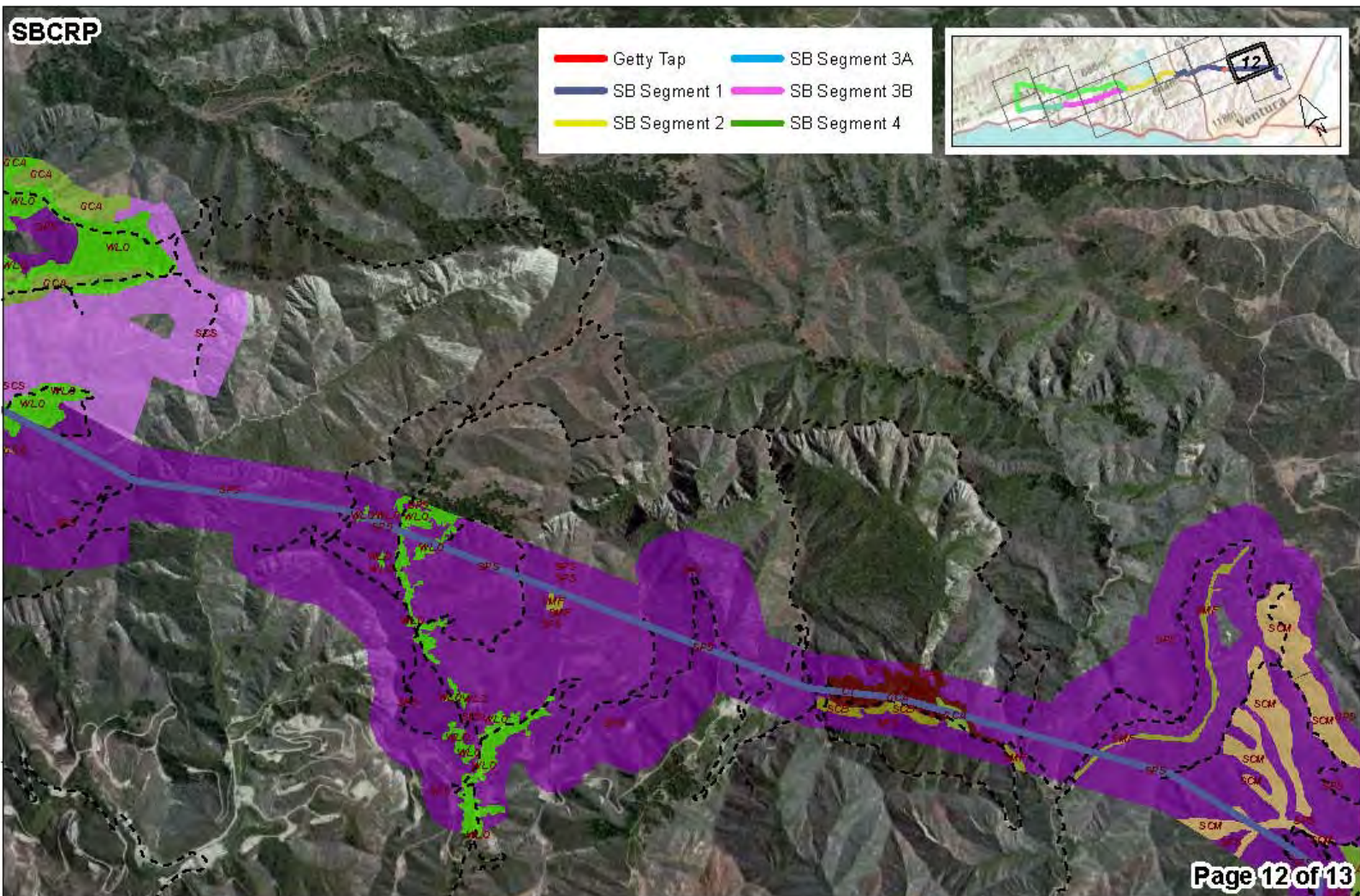






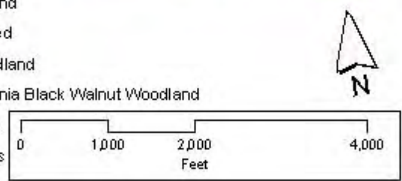
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- Getty Tap
- SB Segment 3A
- SB Segment 1
- SB Segment 2
- SB Segment 3B
- SB Segment 4

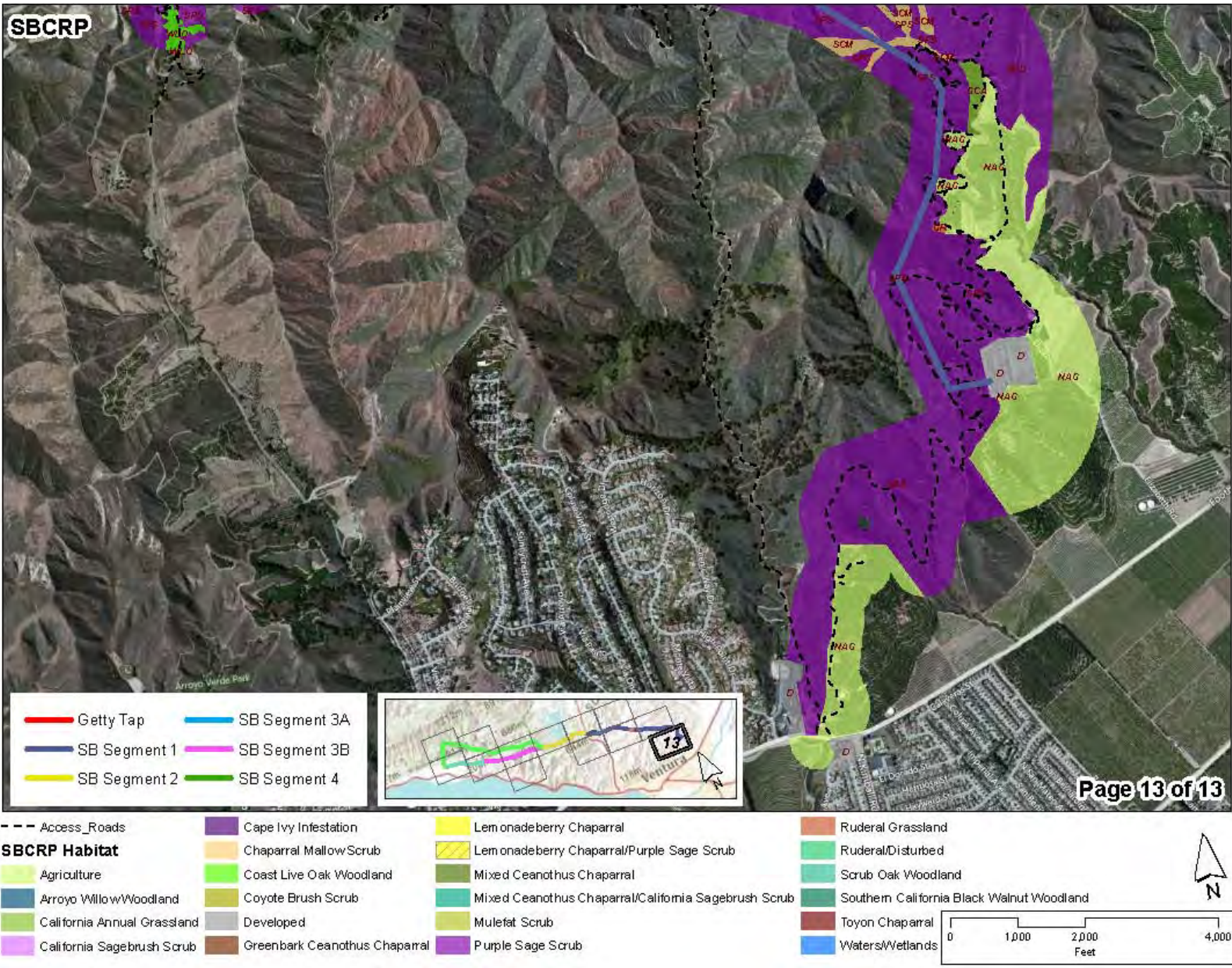


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- |   |  |   |  |
|---|--|---|--|
| --- Access_Roads  | <span style="color: purple;">■</span> Cape Ivy Infestation         | <span style="color: yellow;">■</span> Lemonadeberry Chaparral   | <span style="color: orange;">■</span> Ruderal Grassland                            |
| <b>SBCRP Habitat</b>  | <span style="color: lightblue;">■</span> Chaparral Mallow Scrub    | <span style="color: yellow; border: 1px dashed black;">■</span> Lemonadeberry Chaparral/Purple Sage Scrub | <span style="color: lightgreen;">■</span> Ruderal/Disturbed                        |
| <span style="color: lightgreen;">■</span> Agriculture                 | <span style="color: lightgreen;">■</span> Coast Live Oak Woodland  | <span style="color: olive;">■</span> Mixed Ceanothus Chaparral  | <span style="color: teal;">■</span> Scrub Oak Woodland                             |
| <span style="color: blue;">■</span> Arroyo Willow/Woodland            | <span style="color: olive;">■</span> Coyote Brush Scrub            | <span style="color: teal;">■</span> Mixed Ceanothus Chaparral/California Sagebrush Scrub                  | <span style="color: darkgreen;">■</span> Southern California Black Walnut Woodland |
| <span style="color: lightgreen;">■</span> California Annual Grassland | <span style="color: grey;">■</span> Developed                      | <span style="color: yellow;">■</span> Mulefat Scrub   | <span style="color: brown;">■</span> Toyon Chaparral                               |
| <span style="color: pink;">■</span> California Sagebrush Scrub        | <span style="color: brown;">■</span> Greenbark Ceanothus Chaparral | <span style="color: purple;">■</span> Purple Sage Scrub   | <span style="color: blue;">■</span> Waters/Wetlands                                |







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**APPENDIX B:**  
**Plant and Wildlife Species Compendiums**



**Plant Species Observed During Botanical Surveys Along Project Alignment. An asterisk indicates taxa not native to California, bold indicates a special-status species.**

<b>Common Name</b>	<b>Scientific Name</b>
white yarrow	<i>Achillea millefolium</i> var. <i>millefolium</i>
deerweed	<i>Acmispon glaber</i> var. <i>glaber</i>
hosackia	<i>Acmispon maritimus</i> var. <i>maritimus</i>
chamise	<i>Adenostoma fasciculatum</i>
California maiden-hair	<i>Adiantum jordanii</i>
mountain dandelion	<i>Agoseris heterophylla</i>
colonial bentgrass	<i>Agrostis capillaris</i> *
bentgrass	<i>Agrostis viridis</i> *
Carolina foxtail	<i>Alopecurus carolinianus</i>
ragweed, western ambrosia	<i>Ambrosia psilostachya</i> var. <i>californica</i>
scarlet pimpernel	<i>Anagallis arvensis</i> *
cherimoya	<i>Annona cherimola</i> *
Santa Ynez Mountains manzanita	<i>Arctostaphylos glandulosa mollis</i>
bigberry manzanita	<i>Arctostaphylos glauca</i>
California sagebrush	<i>Artemisia californica</i>
mugwort	<i>Artemisia douglasiana</i>
big sagebrush	<i>Artemisia tridentata tridentata</i>
narrowleaf milkweed	<i>Asclepias fascicularis</i>
freckled milkvetch	<i>Astragalus lentiginosus</i> var.
antisell three-pod milkvetch	<i>Astragalus trichopodus</i> var. <i>phoxus</i>
Brewer's big saltbush	<i>Atriplex lentiformis breweri</i>
Australian saltbush	<i>Atriplex semibaccata</i> *
slender wild oats	<i>Avena barbata</i> *
wild oats	<i>Avena fatua</i> *
coyote brush	<i>Baccharis pilularis</i>
<b>Plummer's baccharis</b>	<b><i>Baccharis plummerae plummerae</i></b>
mulefat	<i>Baccharis salicifolia salicifolia</i>
goldenstars	<i>Bloomeria crocea crocea</i>
shortfoot brachypodium	<i>Brachypodium distachyon</i> *
black mustard	<i>Brassica nigra</i> *
California brickellbush	<i>Brickellia californica</i>
California brome	<i>Bromus carinatus</i>

Common Name	Scientific Name
ripgut brome	<i>Bromus diandrus</i> *
soft chess	<i>Bromus hordeaceus</i> *
woodland brome	<i>Bromus laevipes</i>
foxtail chess	<i>Bromus madritensis madritensis</i> *
red brome	<i>Bromus madritensis rubens</i> *
fairy lantern	<i>Calochortus albus</i>
<b>Catalina mariposa lily</b>	<b><i>Calochortus catalinae</i></b>
<b>late-flowered mariposa lily</b>	<b><i>Calochortus fimbriatus</i></b>
coast morning-glory	<i>Calystegia macrostegia cyclostegia</i>
western morning glory	<i>Calystegia occidentalis</i>
Italian thistle	<i>Carduus pycnocephalus</i> *
sea fig	<i>Carpobrotus chilensis</i> *
Hottentot fig	<i>Carpobrotus edulis</i> *
coast paintbrush	<i>Castilleja affinis affinis</i>
hoaryleaf ceanothus	<i>Ceanothus crassifolius</i>
buckbrush	<i>Ceanothus cuneatus</i> var. <i>cuneatus</i>
chapparal whitethorn	<i>Ceanothus leucodermis</i>
bigpod ceanothus	<i>Ceanothus megacarpus</i> var. <i>megacarpus</i>
hoary ceanothus	<i>Ceanothus oliganthus</i>
greenbark ceanothus	<i>Ceanothus spinosus</i>
blueblossom	<i>Ceanothus thyrsiflorus</i> var. <i>thyrsiflorus</i>
totalote	<i>Centaurea melitensis</i> *
birchleaf mountain mahogany	<i>Cercocarpus betuloides</i> var. <i>betuloides</i>
rattlesnake spurge	<i>Chamaesyce albomarginata</i>
Mexican tea	<i>Chenopodium ambrosioides</i> *
California goosefoot, soaproot	<i>Chenopodium californicum</i>
common soaproot, wavyleaf soap plant	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>
red thistle	<i>Cirsium occidentale</i> var. <i>venustum</i>
bull thistle	<i>Cirsium vulgare</i> *
lemon	<i>Citrus x limon</i> *
orange	<i>Citrus x sinensis</i> *
four-spotted purple clarkia	<i>Clarkia purpurea quadrivulnera</i>
elegant clarkia	<i>Clarkia unguiculata</i>
miners kettuce	<i>Claytonia perfoliata</i>

<b>Common Name</b>	<b>Scientific Name</b>
chaparral clematis	<i>Clematis lasiantha</i>
virgin's bower	<i>Clematis ligusticifolia</i>
yerba buena	<i>Clinopodium douglasii</i>
poison hemlock	<i>Conium maculatum*</i>
sandaster	<i>Corethrogyne filaginifolia</i>
Pampas grass	<i>Cortedaria selloana*</i>
beaked hawkbeard	<i>Crepis vesicaria taraxacifolia*</i>
popcorn flower	<i>Cryptantha spp.</i>
dodder	<i>Cuscuta sp.</i>
Bermuda grass	<i>Cynodon dactylon*</i>
Spanish broom	<i>Cytisus multiflorus*</i>
Cape ivy	<i>Dalairea odorata*</i>
jimson weed	<i>Datura wrightii</i>
Queen Anne's lace	<i>Daucus carota*</i>
rattlesnake weed	<i>Daucus pusillus</i>
clustered tarplant	<i>Deinandra fasciculata</i>
western tansymustard	<i>Descurainia pinnata</i>
blue dicks	<i>Dichelostemma capitatum capitatum</i>
shooting star	<i>Dodecatheon clevelandii</i>
coastal wood fern	<i>Dryopteris arguta</i>
lance leaved live forever	<i>Dudleya lanceolata</i>
giant wild-rye	<i>Elymus condensatus</i>
woodland wild rye	<i>Elymus glaucus glaucus</i>
wheat grass	<i>Elymus stebbinsii</i>
creeping wild rye	<i>Elymus triticooides</i>
devils thorn	<i>Emex spinosa*</i>
California bush sunflower	<i>Encelia californica</i>
California fuschia, zauschneria	<i>Epilobium canum canum</i>
broad-leaved California fuchsia	<i>Epilobium canum latifolium</i>
dove weed	<i>Eremocarpus setigerus</i>
flax-leaved horseweed	<i>Erigeron bonariensis*</i>
horseweed	<i>Erigeron canadensis</i>
slender fleabane	<i>Erigeron foliosus var. foliosus</i>
coastal buckwheat	<i>Eriogonum cinereum</i>

<b>Common Name</b>	<b>Scientific Name</b>
leafy California buckwheat	<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>
naked buckwheat	<i>Eriogonum nudum</i>
golden yarrow	<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>
longbeak stork's bill	<i>Erodium botrys</i> *
redstem filaree	<i>Erodium cicutarium</i> *
whitestem filaree	<i>Erodium moschatum</i> *
western wallflower	<i>Erysimum capitatum</i> var. <i>capitatum</i>
California poppy	<i>Eschscholzia californica</i>
Tasmanian blue gum eucalyptus	<i>Eucalyptus globulus globulus</i> *
eucrypta	<i>Eucrypta chrysanthemifolia</i>
petty spurge	<i>Euphorbia peplus</i> *
western goldenrod	<i>Euthamia occidentalis</i>
slender fescue	<i>Festuca bromoides</i> *
Italian rye	<i>Festuca perennis</i> *
California filago	<i>Filago californica</i>
fennel	<i>Foeniculum vulgare</i> *
wild strawberry	<i>Fragaria vesca</i>
alkali heath	<i>Frankenia salina</i>
California flowering ash	<i>Fraxinus dipetala</i>
California flannel bush	<i>Fremontodendron californicum californicum</i>
chaparral bedstraw	<i>Galium angustifolium angustifolium</i>
common bedstraw	<i>Galium aparine</i>
San Diego bedstraw	<i>Galium nuttallii nuttallii</i>
Carolina geranium	<i>Geranium carlinianum</i>
cutleaf geranium	<i>Geranium dissectum</i> *
green everlasting	<i>Gnaphalium californicum</i>
sawtooth goldenbush	<i>Hazardia squarrosa</i> var. <i>obtusa</i>
peak rush-rose	<i>Helianthemum scoparium</i>
common sunflower	<i>Helianthus annuus</i>
bristly ox-tongue	<i>Helminthotheca echioides</i> *
chapparal yucca	<i>Hesperoyucca whipplei</i>
toyon	<i>Heteromeles arbutifolia</i>
telegraphweed	<i>Heterotheca grandiflora</i>
hawkweed	<i>Hieracium argutum</i>

<b>Common Name</b>	<b>Scientific Name</b>
wild mustard	<i>Hirschfeldia incana</i> *
low barley	<i>Hordeum depressum</i>
Mediterranean barley	<i>Hordeum marinum gussoneanum</i> *
summer barley	<i>Hordeum murinum glaucum</i> *
dragonfruit	<i>Hylocereus sp.</i>
coast goldenbush	<i>Isocoma menziesii</i> var. <i>menziesii</i>
<b>Southern California black walnut</b>	<b><i>Juglans californica</i> var. <i>californica</i></b>
spreading rush	<i>Juncus patens</i>
heart-leaved bush penstemon	<i>Keckiella cordifolia</i>
northern blue stemmed keckiella	<i>Keckiella ternata</i> var. <i>septentrionalis</i>
prickly wild lettuce	<i>Lactuca serriola</i> *
goldentop	<i>Lamarckia aurea</i> *
Pacific peavine	<i>Lathyrus vestitus laetiflorus</i>
Pacific peavine	<i>Lathyrus vestitus vestitus</i>
duckweed	<i>Lemna sp.</i>
cudweed aster	<i>Lessingia filaginifolia</i>
<b>ocellated Humboldt lily</b>	<b><i>Lilium humboldtii ocellatum</i></b>
prickly phlox	<i>Linanthus californicus</i>
California cottonrose	<i>Logfia filaginoides</i>
Italian ryegrass	<i>Lolium multiflorum</i> *
chapparal honeysuckle	<i>Lonicera interrupta</i>
southern honeysuckle	<i>Lonicera subspicata</i> var. <i>denudata</i>
<b>Santa Barbara honeysuckle</b>	<b><i>Lonicera subspicata</i> var. <i>subspicata</i></b>
bajada lupine	<i>Lupinus concinnus</i>
long-leaved bush lupine	<i>Lupinus longifolius</i>
sky lupine	<i>Lupinus nanus</i>
fleshy lupine	<i>Lupinus succulentus</i>
slender tarplant	<i>Madia gracilis</i>
chaparral mallow	<i>Malacothamnus fasciculatus</i>
cliff aster	<i>Malacothrix saxatilis</i> var. <i>implicata</i>
cliff-aster	<i>Malacothrix saxatilis</i> var. <i>saxatilis</i>
tenuated cliff-aster	<i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>
laurel sumac	<i>Malosma laurina</i>
cheeseweed	<i>Malva parviflora</i> *

Common Name	Scientific Name
California man-root	<i>Marah fabaceus</i> var. <i>agrestis</i>
horehound	<i>Marrubium vulgare</i> *
rayless chamomile	<i>Matricaria discoidea</i> *
burclover	<i>Medicago polymorpha</i> *
California melic	<i>Melica imperfecta</i>
white sweetclover	<i>Melilotus albus</i> *
sourclover	<i>Melilotus indicus</i> *
sticky monkeyflower	<i>Mimulus aurantiacus</i> var. <i>aurantiacus</i>
scarlet monkeyflower	<i>Mimulus cardinalis</i>
California wishbone bush	<i>Mirabilis californica</i>
California four o'clock	<i>Mirabilis leavis</i> var. <i>crassifolia</i>
watercress	<i>Nasturtium officinale</i>
navarretia	<i>Navarretia jaredii</i>
tree tobacco	<i>Nicotiana glauca</i> *
coast prickly pear	<i>Opuntia littoralis</i>
radishroot woodsorrel	<i>Oxalis albicans</i>
California peony	<i>Paeonia californica</i>
passionfruit	<i>Passiflora</i> sp. *
coffee fern	<i>Pellaea andromedifolia</i>
fountaingrass	<i>Pennisetum setaceum</i> *
goldenback fern	<i>Pentagramma triangularis</i>
avocado	<i>Persea americana</i> *
phacelia	<i>Phacelia affinis</i>
short lobed phacelia	<i>Phacelia brachyloba</i>
caterpillar phacelia	<i>Phacelia cicutaria</i>
ciliate phacelia	<i>Phacelia ciliata</i> var. <i>ciliata</i>
parry phacelia	<i>Phacelia parryi</i>
canary grass	<i>Phalaris minor</i> *
fiesta flower	<i>Pholistoma auritum</i> var. <i>auritum</i>
Pacific mistletoe	<i>Phoradendron serotinum tomentosum</i>
smilo grass	<i>Piptatherum miliaceum</i> *
California plantain	<i>Plantago erecta</i>
common plantain	<i>Plantago major</i> *
western sycamore	<i>Platanus racemosa</i>

<b>Common Name</b>	<b>Scientific Name</b>
Annual Bluegrass	<i>Poa annua</i> *
<b>Fish's milkwort</b>	<b><i>Polygala cornuta var. fishiae</i></b>
smartweed	<i>Polygonum lapathafoilum</i>
California polypody	<i>Polypodium californicum</i>
rabbitsfoot grass	<i>Polypogon monspeliensis</i> *
rabbitsfoot grass	<i>Polypogon monspeliensis</i> *
water bentgrass	<i>Polypogon viridis</i> *
sword fern	<i>Polystichum munitum</i>
black cottonwood	<i>Populus balsamifera trichocarpa</i>
hollyleaf cherry	<i>Prunus ilicifolia</i>
California cudweed, ladies' tobacco	<i>Pseudognaphalium californicum</i>
guava	<i>Psidium sp.</i> *
western brackenfern	<i>Pteridium aquilinum</i>
coast live oak	<i>Quercus agrifolia var. agrifolia</i>
scrub oak	<i>Quercus berberidifolia</i>
<b>Nuttall's scrub oak</b>	<b><i>Quercus dumosa</i></b>
California chicory	<i>Rafinesquia californica</i>
California buttercup	<i>Ranunculus californicus</i>
wild radish	<i>Raphanus sativus</i> *
redberry	<i>Rhamnus crocea</i>
spiny redberry	<i>Rhamnus crocea</i>
hollyleaf redberry	<i>Rhamnus ilicifolia</i>
skunk bush	<i>Rhus aromatica</i>
lemonade berry	<i>Rhus integrifolia</i>
sugarbush	<i>Rhus ovata</i>
<b>Hoffmann's bitter gooseberry</b>	<b><i>Ribes amarum var. hoffmannii</i></b>
chaparral currant	<i>Ribes malvaceum var. malvaceum</i>
fuchsia-flowered gooseberry	<i>Ribes speciosum</i>
California wildrose	<i>Rosa californica</i>
Pacific blackberry	<i>Rubus ursinus</i>
curly dock	<i>Rumex crispus</i> *
sandbar willow	<i>Salix exigua</i>
arroyo willow	<i>Salix lasiolepis</i>
tumbleweed	<i>Salsola tragus</i> *

Common Name	Scientific Name
white sage	<i>Salvia apiana</i>
chia	<i>Salvia columbariae</i>
purple sage	<i>Salvia leucophylla</i>
black sage	<i>Salvia mellifera</i>
hummingbird sage	<i>Salvia spathacea</i>
blue elderberry	<i>Sambucus nigra caerulea</i>
sanicle	<i>Sanicula arguta</i>
poison sanicle	<i>Sanicula bipinnata</i>
Pacific sanicle	<i>Sanicula crassicaulis</i>
<b>Hoffman's snakeroot</b>	<b><i>Sanicula hoffmannii</i></b>
Peruvian pepper tree	<i>Schinus molle</i> *
Arabian grass	<i>Schismus arabicus</i> *
California figwort, bee plant	<i>Scrophularia californica</i>
Cape ivy	<i>Senecio mikanioides</i> *
common groundsel	<i>Senecio vulgaris</i> *
California globe mallow	<i>Sidalcea malvaeflora californica</i>
windmill pink	<i>Silene gallica</i> *
cardinal catchfly	<i>Silene laciniata laciniata</i>
milkthistle	<i>Silybum marianum</i> *
western blue-eyed-grass	<i>Sisyrinchium bellum</i>
white nightshade	<i>Solanum americanum</i>
Douglas' nightshade	<i>Solanum douglasii</i>
chaparral nightshade	<i>Solanum xantii</i> var. <i>xantii</i>
spiny sowthistle	<i>Sonchus asper asper</i> *
common sowthistle	<i>Sonchus oleraceus</i> *
hedge nettle	<i>Stachys bullata</i>
chicoryleaf wirelettuce	<i>Stephanomeria cichoriacea</i>
tall wirelettuce	<i>Stephanomeria virgata</i>
purple needle grass	<i>Stipa pulchra</i>
bird-of-paradise	<i>Strelitzia reginae</i>
creeping snowberry	<i>Symphoricarpos mollis</i>
meadow-rue	<i>Thalictrum fendleri</i>
common dandelion	<i>Toraxacum officinale</i> *
rattlesnake plant	<i>Torilis nodosa</i> *



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<b>Common Name</b>	<b>Scientific Name</b>
western poison oak	<i>Toxicodendron diversilobum</i>
California bay laurel	<i>Umbellularia californica</i>
giant creek nettle	<i>Urtica dioica holosericea</i>
canyon sunflower	<i>Venegasia carpesioides</i>
western verbena	<i>Verbena lasiostachys</i>
western vervain, western verbena	<i>Verbena lasiostachys</i> var. <i>lasiostachys</i>
spring vetch	<i>Vicia sativa</i> *
hairy vetch	<i>Vicia villosa varia</i>
Johnny jump-up	<i>Viola pedunculata</i>
cocklebur	<i>Xanthium sturmarium</i>

**Animal Species Observed During Surveys Along Project Alignment.**  
**Bold indicates a special-status species.**

Common Name	Scientific Name
<i><b>INSECTS</b></i>	
<b>Monarch</b>	<i>Danaus plexippus</i>
<i><b>AMPHIBIANS</b></i>	
California treefrog	<i>Pseudacris cadaverina</i>
Baja California treefrog	<i>Pseudacris hypochondriaca hypochondriaca</i>
<i><b>REPTILES</b></i>	
coastal whiptail	<i>Aspidoscelis tigris stejnegeri</i>
gopher snake	<i>Pituophis catenifer</i>
northwestern fence lizard	<i>Sceloporus occidentalis occidentalis</i>
western side-blotched lizard	<i>Uta stansburiana elegans</i>
<i><b>BIRDS</b></i>	
<b>Cooper's hawk</b>	<i>Accipiter cooperii</i>
red-winged blackbird	<i>Agelaius phoeniceus</i>
mallard	<i>Anas platyrhynchos</i>
<b>golden eagle</b>	<i>Aquila chrysaetos</i>
great blue heron	<i>Ardea herodias</i>
oak titmouse	<i>Baeolophus inornatus</i>
cedar waxwing	<i>Bombycilla cedrorum</i>
Canada goose	<i>Branta canadensis</i>
red-tailed hawk	<i>Buteo jamaicensis</i>
red-shouldered hawk	<i>Buteo lineatus</i>
California quail	<i>Callipepla californica</i>
Anna's hummingbird	<i>Calypte anna</i>
lesser goldfinch	<i>Carduelis psaltria</i>
American goldfinch	<i>Carduelis tristis</i>
house finch	<i>Carpodacus mexicanus</i>
turkey vulture	<i>Cathartes aura</i>
canyon wren	<i>Catherpes mexicanus</i>
wrentit	<i>Chamaea fasciata</i>
killdeer	<i>Charadrius vociferus</i>
<b>northern harrier</b>	<i>Circus cyaneus</i>
northern flicker	<i>Colaptes auratus</i>
rock pigeon	<i>Columba livia</i>
American crow	<i>Corvus brachyrhynchos</i>
common raven	<i>Corvus corax</i>
yellow-rumped warbler	<i>Dendroica coronata</i>
snowy egret	<i>Egretta thula</i>
<b>white-tailed kite</b>	<i>Elanus leucurus</i>

Common Name	Scientific Name
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
American kestrel	<i>Falco sparverius</i>
greater roadrunner	<i>Geococcyx californianus</i>
common yellowthroat	<i>Geothlypis trichas</i>
dark-eyed junco	<i>Junco hyemalis</i>
<b>loggerhead shrike</b>	<b><i>Lanius ludovicianus</i></b>
acorn woodpecker	<i>Melanerpes formicivorus</i>
California towhee	<i>Melospiza crissalis</i>
northern mockingbird	<i>Mimus polyglottos</i>
brown-headed cowbird	<i>Molothrus ater</i>
orange-crowned warbler	<i>Oreothlypis celata</i>
house sparrow	<i>Passer domesticus</i>
band-tailed pigeon	<i>Patagioenas fasciata</i>
downy woodpecker	<i>Picoides pubescens</i>
spotted towhee	<i>Pipilo maculatus</i>
black-capped chickadee	<i>Poecile atricapillus</i>
bush-tit	<i>Psaltriparus minimus</i>
ruby-crowned kinglet	<i>Regulus calendula</i>
black phoebe	<i>Sayornis nigricans</i>
Say's phoebe	<i>Sayornis saya</i>
western bluebird	<i>Sialia mexicana</i>
western meadowlark	<i>Sturnella neglecta</i>
European starling	<i>Sturnus vulgaris</i>
Bewick's wren	<i>Thryomanes bewickii</i>
California thrasher	<i>Toxostoma redivivum</i>
American robin	<i>Turdus migratorius</i>
western kingbird	<i>Tyrannus verticalis</i>
Cassin's kingbird	<i>Tyrannus vociferans</i>
mourning dove	<i>Zenaida macroura</i>
<b>MAMMALS</b>	
coyote	<i>Canis latrans</i>
Virginia opossum	<i>Didelphis virginiana</i>
bobcat	<i>Lynx rufous</i>
striped skunk	<i>Mephitis mephitis</i>
dusky-footed woodrat	<i>Neotoma fuscipes</i>
California ground squirrel	<i>Otospermophilus beecheyi</i>
raccoon	<i>Procyon lotor</i>
western gray squirrel	<i>Sciurus griseus</i>
wild pig	<i>Sus scrofa</i>
desert cottontail	<i>Sylvilagus audubonii</i>
brush rabbit	<i>Sylvilagus bachmani</i>

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<b>Common Name</b>	<b>Scientific Name</b>
American black bear	<i>Ursus americanus</i>
<b>mule deer</b>	<i>Odocoileus hemionus</i>
<b>mountain lion</b>	<i>Puma concolor</i>

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**APPENDIX C:**  
**Burrowing Owl and Nesting Raptor Survey Report**

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## 1.0 INTRODUCTION

This report presents the results of a breeding season survey for the burrowing owl (*Athene cunicularia*) and nesting raptors within Segments 3B and 4, and the Getty Tap portion of Segment 1 of the Santa Barbara County Reliability Project, and identifies potential impacts to these biological resources that may result from implementation and construction of the Project.

### 1.1 Project Description

In 1998, the Southern California Edison Company (SCE) initiated the Project to increase reliability by reinforcing its existing 66 kilovolt (kV) sub-transmission system in northwestern Ventura County and southeastern Santa Barbara County to meet the electrical demands of the south coast of Santa Barbara County during emergency conditions while also enhancing operational flexibility.

The Project has been divided into six geographically-defined Segments (Segments 1, 2, 3A, 3B, and 4, and the Getty Tap) and at three substations (Carpinteria Substation, Casitas Substation, and Santa Clara Substation) (Figure 1).

Segment 1 begins at Santa Clara Substation off Foothill Road in unincorporated Ventura County. From that origin, it heads north along western Long Canyon; turns northwest at Harmon Canyon in the Ventura Hills; traverses Lake, Sexton, and Hall Canyons; then runs west along northern Cañada Seca and crosses Cañada Larga to Casitas Substation, which lies between SR-33 and the Ventura River. Segment 2 extends west from Casitas Substation along the south side of Lake Casitas, to the 'Y' near East Casitas Pass. Segment 3B heads west from the 'Y' through Casitas Valley along the south side of SR-150, crossing over Madranio Canyon, along Rincon Mountain, and through Rincon Valley. At the Santa Barbara/Ventura County line near the intersection of SR-150 and SR-192, Segment 3B becomes Segment 3A and continues to the west into the Shepard Mesa and Gobernador rural residential areas, then west along SR-192 to Carpinteria Substation. Segment 4 heads west from the 'Y' along the north side of SR-150, runs northwest along the ridgetop of Sutton Canyon, and then turns south to Carpinteria Substation. The 'Getty Tap,' is located approximately in the middle of Segment 1.

The Project includes the following physical elements:

- Reconstruct existing 66 kilovolt (kV) subtransmission facilities within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Install marker balls on overhead wire where determined to be necessary.
- Modify utility equipment within the existing Carpinteria Substation, Casitas Substation, Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Santa Clara Substation.
- Install telecommunications facilities to connect the Project to SCE's existing telecommunications system for the protection, monitoring and control of subtransmission and substation equipment. Install new telecommunications facilities along Segments 1, 2, and 4

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and at Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation<sup>1</sup>.

- Transfer distribution lines (and third-party infrastructure as necessary) to subtransmission structures along Segment 3A.
- Remove subtransmission infrastructure in Segments 1 and 2.

## 1.2 Environmental Setting

The Project lies north and west of US-101, between one and six miles from the coastline. Elevations vary through the Project Area from 31 feet above sea level (ASL) near the Carpinteria Substation, which lies in the coastal plain, to 1,500 feet ASL along Segment 4 in the foothills of the western Transverse Ranges, to more than 1,800 feet ASL along portions of Segment 3B near Rincon Peak.

The Project crosses the headwaters of multiple small streams and creeks that flow through agricultural and urban areas before reaching the ocean, and is located in lower gradient reaches of the Santa Clara River and Ventura River watersheds, including Cañada Larga, which is tributary to the Ventura River. While groundwater and surface water sources have been extensively developed for domestic and agricultural uses throughout the area, these riparian corridors contrast sharply with an otherwise dry landscape. Landslides are prone to occur in areas of steep, unstable terrain, and the area has a history of large and sometimes devastating wildland fire events, with “Sundowner” and “Santa Ana” winds contributing to fast-moving and destructive fires (USFS 2005).

The majority of the Project is located on private lands, while three tower sites and associated access and spur roads in Segment 4 are located within the Santa Barbara Front, a geographical unit of lands under the jurisdiction of the Los Padres National Forest owned by the U.S. Forest Service (USFS). Land uses in the immediate vicinity of the Project Area are dominated by agriculture (cattle grazing and orchards) and “open-space” areas covered by native vegetation communities, with low-density residential development and commercial areas (nurseries and row crops) scattered through Segments 3A, 3B, and 4.

Temperatures in the area average 50 to 71° F, with an average annual temperature of 60° F. Average rainfall ranges from 15.4 to 17.7 inches. The east-west orientation of the mountains, combined with the distinct Mediterranean/marine climate, results in a unique botanic zone and mix of species. Predominately north- or south-facing slopes are dominated by alternating bands of sedimentary rock formations, with oak woodlands at lower elevations. Conifers exist in small patches along ridgetops and on north-facing slopes. Noxious weed infestations, including black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), Cape ivy (*Delairea odorata*), and ruderal species and escaped cultivars occur throughout the vicinity of the Project, especially along road and trail corridors.

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<sup>1</sup> The Project also includes additional telecommunications-related work at Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substations, and Ventura Substation; this work would be conducted exclusively within the MEERs or on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this report.

Figure 1. Project Location





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### 1.3 Regulatory Setting

Raptor species, depending on their legal status, may be protected under various federal and state laws and regulations that include: The Endangered Species Act of 1973, The Migratory Bird Treaty Act of 1918, The Bald and Golden Eagle Protection Act of 1940, The California Endangered Species Act, and California Fish and Game Code Sections 3500-3516, and 3800, 4700, 5050, and 5515. These laws aim to protect special-status and non-game species by protecting individual birds, bird nests and eggs. These laws, regulations, and codes are detailed in the Biological Technical Report (BioResource Consultants 2012).

Additionally, CDFG has recently provided the *California Department of Fish and Game Staff Report on Burrowing Owl Mitigation* (2012) to provide a comprehensive conservation and mitigation strategy for burrowing owls. CDFG determined that reversing declining population and range trends for burrowing owls will require implementation of more effective conservation actions, including developing more rigorous burrowing owl survey methods; working to improve the adequacy of impacts assessments; developing clear and effective avoidance and minimization measures; and developing mitigation measures to ensure impacts to the species are effectively addressed at the project, local, and/or regional level. The 2012 Staff Report takes into account the California Burrowing Owl Consortium's Survey Protocol and Mitigation Guidelines (CBOC 1993, 1997) and supersedes the survey, avoidance, minimization and mitigation recommendations in the earlier 1995 Staff Report.

## 2.0 METHODOLOGY

Prior to conducting surveys, standard database searches were conducted and previous surveys in the area were reviewed to obtain a list of federal and state listed raptor species in the region. The results of these preliminary database searches provided a basis for addressing the appropriate special-status species in the footprint of existing infrastructure (i.e., substations, access roads, and crane pads), proposed additional workspace (spur roads, temporary and permanent drill and crane pads, pulling and stringing sites), and immediate surroundings (hereafter referred to in this section as the Project Area).

### 2.1 Literature and Database Review

Information about documented special-status raptor species was obtained from the California Natural Diversity Database (CNDDDB; CDFG 2003). The CNDDDB search included U.S. Geological Survey (USGS) 7.5-minute quadrangles Carpinteria, Matilija, Pitas Point, Saticoy, Ventura, and White Ledge Peak as well as the eleven surrounding quadrangles: Camarillo, Hildreth Peak, Lion Canyon, Little Pine Mountain, Ojai, Old Man Mountain, Oxnard, Santa Paula, Santa Paula Peak, Santa Barbara, and Wheeler Springs.

Additional literature and databases referenced include: *The Sibley Field Guide to Birds of Western North America* (Sibley 2003); the *eBird* website (Cornell Lab of Ornithology and National Audubon Society, Inc. 2012); and *California Wildlife Habitat Relationships* software (CDFG 2005).

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## 2.2 Survey Methods

Biological reconnaissance surveys in the Survey Area were conducted in February and March 2012 to describe and map the vegetation present in the Project Area and to evaluate the potential of the habitats to support special-status plant and wildlife species. These surveys included searching for and identifying raptor nests, and habitat features that may attract and/or support burrowing owls.

### 2.2.1 Nesting Raptor Survey

Several inactive raptor nests were identified during the February and March reconnaissance surveys, however, only preliminary courtship displays by raptor pairs were observed, and no active nests or nest fidelity were noted at this time. To determine the presence of active raptor nesting in Segments 3B, 4, and the Getty Tap portion of Segment 1, a focused nesting raptor survey within one mile of the Project alignment was conducted in May 2012. A general survey of these Segments was conducted to look for newly constructed nests, nests that had not been detected in the reconnaissance survey, or raptors and their behaviors that might indicate a nest not visually detectable. An additional visit was made to all nests that were documented during the reconnaissance survey to determine their use during the 2012 nesting season.

### 2.2.2 Burrowing Owl Survey

Potentially suitable habitat for burrowing owl was noted in Segment 1 and near the Segment 3B/4 split during the February and March reconnaissance surveys. Documented winter occurrences for burrowing owl in Cañada Larga near the Getty Tap portion of Segment 1 were found during the database search (eBird 2012). A follow-up habitat assessment for burrowing owl was conducted on April 24 and 25 to determine the suitability of the area for burrowing owl, and the extent of suitable habitat in the Segment 1 and Segment 3B/4 areas respectively. The habitat assessment was conducted by walking the project area and an approximate 500-foot buffer, to visually inspect the project area and assess its potential for burrowing owls.

Because suitable habitat for burrowing owl was determined to be present at each location, focused breeding season (March 1 - August 31) surveys were conducted in the spring of 2012 in areas with suitable habitat and followed the *California Department of Fish and Game Staff Report on Burrowing Owl Mitigation* (CDFG 2012b).

Four survey visits occurred in which line transects were walked in all areas that were identified as having suitable habitat to look for burrowing owls or their sign (tracks, molted feathers, cast pellets, prey remains, egg shell fragments, owl white wash, nest burrow decoration materials). Transects were spaced less than 20 meters apart, and the area was scanned regularly with binoculars, at least every 100 meters. Surveys were conducted in the morning hours between civil twilight and 10:00 AM, and did not occur during periods of high wind (>20 km/hr), precipitation, or dense fog.

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## 3.0 RESULTS

### 3.1 Nesting Raptor Surveys

A total of eight raptor species have been observed in the Project vicinity, including four special-status species: Cooper’s hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), northern harrier (*Circus cyaneus*), and white-tailed kite (*Elanus leucurus*) (Table 1). Three additional special-status raptor species have a “High” or “Moderate” potential to occur in the Project Area: sharp-shinned hawk (*Accipiter striatus*), burrowing owl (*Athene cunicularia*), and peregrine falcon (*Falco peregrinus*).

**Table 1. Raptor Species Observed Within the Project Area.**  
**Species in bold have special status.**

<b>Common Name</b>	<b>Scientific Name</b>
<b>Cooper’s hawk</b>	<i>Accipiter cooperii</i>
<b>golden eagle</b>	<i>Aquila chrysaetos</i>
red-tailed hawk	<i>Buteo jamaicensis</i>
red-shouldered hawk	<i>Buteo lineatus</i>
turkey vulture	<i>Cathartes aura</i>
<b>northern harrier</b>	<i>Circus cyaneus</i>
<b>white-tailed kite</b>	<i>Elanus leucurus</i>
American kestrel	<i>Falco sparverius</i>

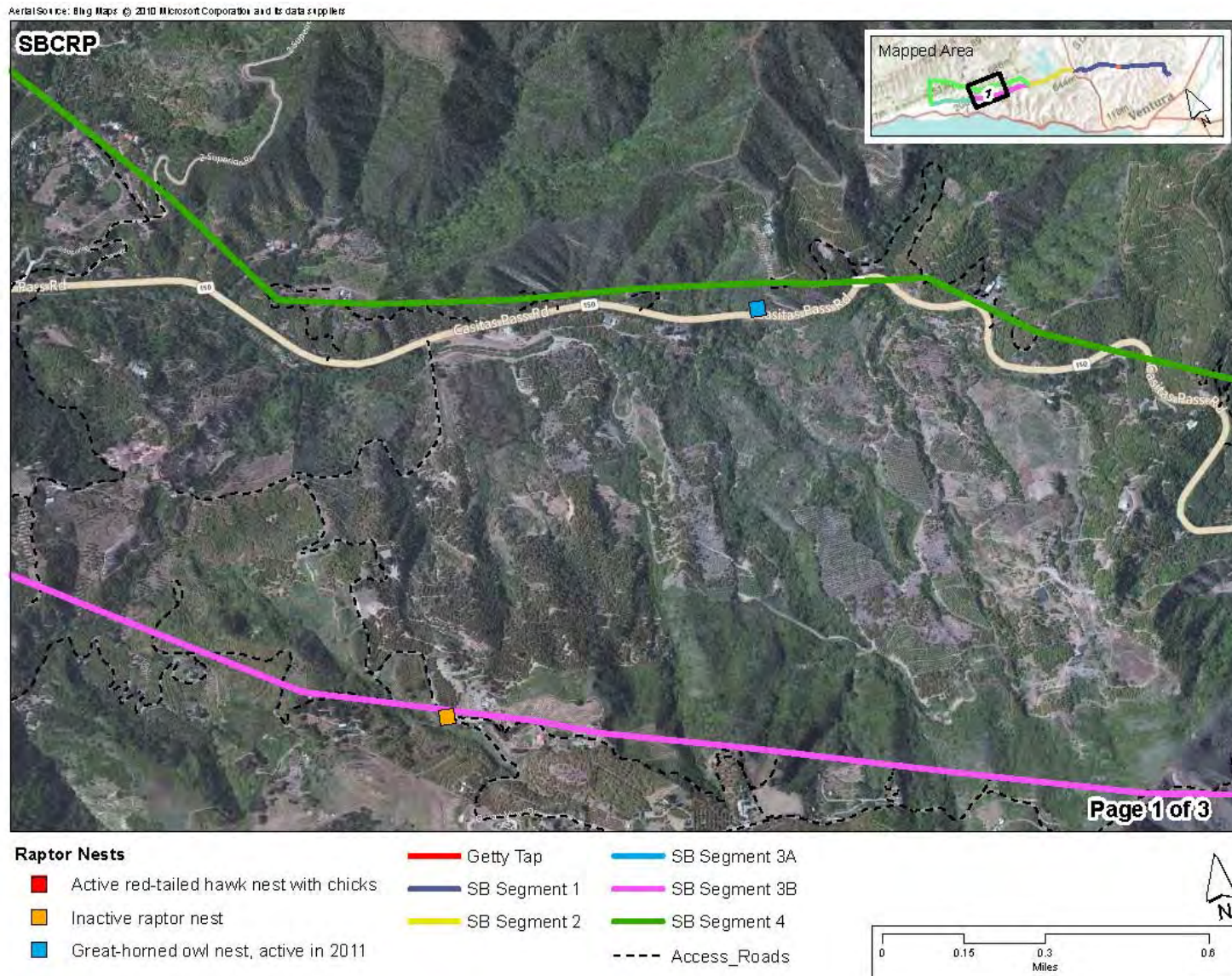
Suitable raptor nesting habitat is present throughout the Project Area and along the access routes. Eight raptor nests within Segments 3B and 4, and the Getty Tap portion of Segment 1 were observed. Five nests were found in existing lattice towers at Construction 60, 61, 70a, 84a, and 90 which will be removed as part of the Project, while the remaining three nests were found in a eucalyptus tree near Construction 62, a cliff wall near Construction 101, and in a lattice tower on a parallel circuit along the access road to the Getty Tap (Table 2, Figure 2, Photos 1-6). Seven of the eight nests found were consistent in size, shape, material, and location with those built by red-tailed hawk. Red-tailed hawk (*Buteo jamaicensis*) was the most common raptor observed during surveys. The remaining nest, within the pocket of the cliff wall, was observed in the spring of 2011 to be actively used by a pair of great-horned owl.

No nesting behavior was observed during the reconnaissance surveys in February and March 2012, though pairs of red-tailed hawks were observed in courtship displays in the vicinity. During the May 2012 raptor survey, three of the seven nests were actively used by red-tailed hawk, and hatchlings were observed in each.

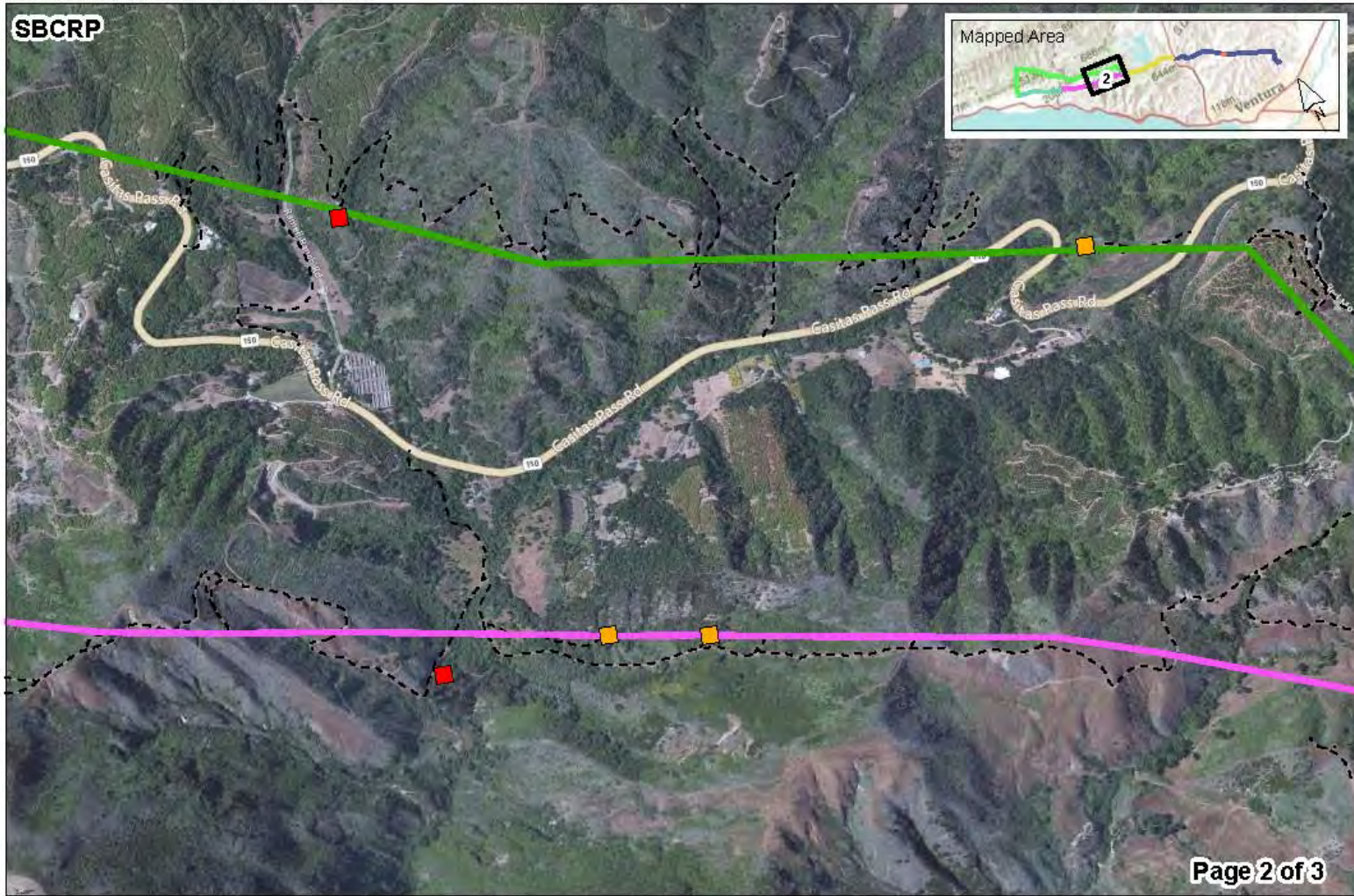
**Table 2. Raptor Nests Observed Within Segments 3B and 4, and the Getty Tap portion of Segment 1 of the Project Area. Nests in bold were active during 2012 Raptor Survey.**

Construction #	Segment	Location	UTM NAD 83	Species
60	3B	Existing lattice tower M5-T3	279331E, 3806558N	Likely a red-tailed hawk nest (Photo 1)
61	3B	Existing lattice tower M5-T4	279062E, 3806597N	Likely a red-tailed hawk nest, may be used by common raven as raven feathers were found at base of pole (Photo 2)
<b>Between 61 and 62</b>	<b>3B</b>	<b>In eucalyptus tree</b>	<b>278607E, 3806560N</b>	<b>Active red-tailed hawk nest with chicks (Photo 3)</b>
70a	3B	Existing lattice tower M7-T6	275703E, 3807338N	Likely a red-tailed hawk nest (no photo)
84a	4	Existing lattice tower M4-T5	280483E, 3807441N	Likely a red-tailed hawk nest (Photo 4)
<b>90</b>	<b>4</b>	<b>Existing lattice tower M6-T1</b>	<b>278511E, 3807813N</b>	<b>Active red-tailed hawk with chicks (Photo 5)</b>
SR-150 near Construction 101	4	In cliff wall cavity ~300' sw of Construction 101	276785E, 3808394N	Great-horned owl nest, active in 2011 (Photo 6)
<b>Access Road to the Getty Tap</b>	<b>1</b>	<b>In lattice tower on non-project line ~450' from access road</b>	<b>292983E, 3802886N</b>	<b>Active red-tailed hawk nest with chicks (no photo)</b>

**Figure 2. Raptor Nest Locations (3 pages).**



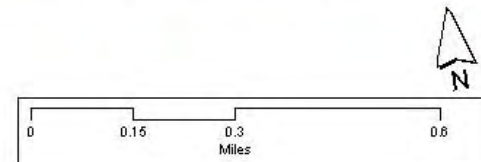




**Raptor Nests**

- Active red-tailed hawk nest with chicks
- Inactive raptor nest
- Great-horned owl nest, active in 2011




- Getty Tap
- SB Segment 3A
- SB Segment 2
- SB Segment 3B
- SB Segment 4
- - - Access\_Roads



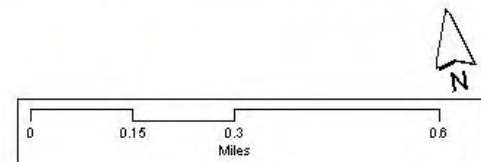




**Raptor Nests**

-  Active red-tailed hawk nest with chicks
-  Inactive raptor nest
-  Great-horned owl nest, active in 2011

-  Getty Tap
-  SB Segment 1
-  SB Segment 2
-  SB Segment 3A
-  SB Segment 3B
-  SB Segment 4
-  Access\_Roads





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**Photo 1. Red-tailed hawk perched near inactive nest on existing lattice tower M5-T3 at Construction 60.**



**Photo 2. Inactive red-tailed hawk nest on existing lattice tower M5-T4 at Construction 61.**





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**Photo 3. Active red-tailed hawk nest with two chicks in eucalyptus tree between Construction 61 and 62.**



**Photo 4. Inactive red-tailed hawk nest on existing lattice tower M4-T5 to be removed as Construction 84a.**



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**Photo 5. Active red-tailed hawk nest on existing lattice tower M6-T1 at Construction 90.**



**Photo 6. Great-horned owl nest, active in spring 2011, in pocket of the cliff wall ~300' sw of Const. 101.**





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## 3.2 Burrowing Owl Surveys

### 3.2.1 Segment 1 – Getty Tap

#### *Habitat*

Potential burrowing owl habitat in the Getty Tap area of Segment 1 consists of two disjunct areas that provide requisite burrows created by California ground squirrel (*Spermophilus beechyi*) (Figure 3). The first area is a thin band (~15 feet wide) of burrows that extend east from the Project access road, along the south side of Cañada Larga Road. Burrowing activity is also present on the slopes just north of Cañada Larga Road. The second area is a larger polygon within the floodplain on the south side of the Cañada Larga drainage, along the existing SCE access road that will not be used for the Project (Photos 7 and 8). The southern-most portion of this area extends into a smaller valley. This area may have a steeper slope than areas more commonly used by burrowing owl, but the remaining constituents of habitat (ground-squirrel burrows, short grasses, etc) are present (Photo 9). Farther up the canyon there is evidence of historic ground-squirrel activity, however, without active construction and maintenance by the squirrels, burrows in this area have collapsed due to cattle trampling and or weathering of the softer soils (Figure 3).

Both areas are located within a rural valley bottom characterized by level to gentle topography and well-drained soils. Vegetation in the area is a California Annual Grassland community dominated by a mix of native and non-native annual grasses (genera including *Avena*, *Bromus*, *Hordeum*, *Lolium*, and *Vulpia*) and herbs, with non-native species such as black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), and thistle (*Cirsium sp.*). Vegetation throughout the area is kept short by cattle grazing and ground squirrel activity, and areas adjacent to the burrow complexes would provide suitable foraging habitat. The Cañada Larga drainage, though indicated as an intermittent stream, provides water for most of the year. Fence-posts and other substrate provide perching opportunities throughout the area.

#### *Survey Results*

Due to limitations in gaining property owner permission to access the area, and the project timeline, methods detailed in the *California Department of Fish and Game Staff Report on Burrowing Owl Mitigation* were adhered to as practicable, but the recommended date of the first survey (between February 15 and April 15), and recommended spacing between survey visits (at least three weeks apart) were not fully met. Four transect survey visits occurred on April 24, May 15 and 29, and June 15 2012 in suitable burrowing owl habitat near the access to the Getty Tap area of Segment 1 (Table 4). No owls or sign were detected during any of the site visits.

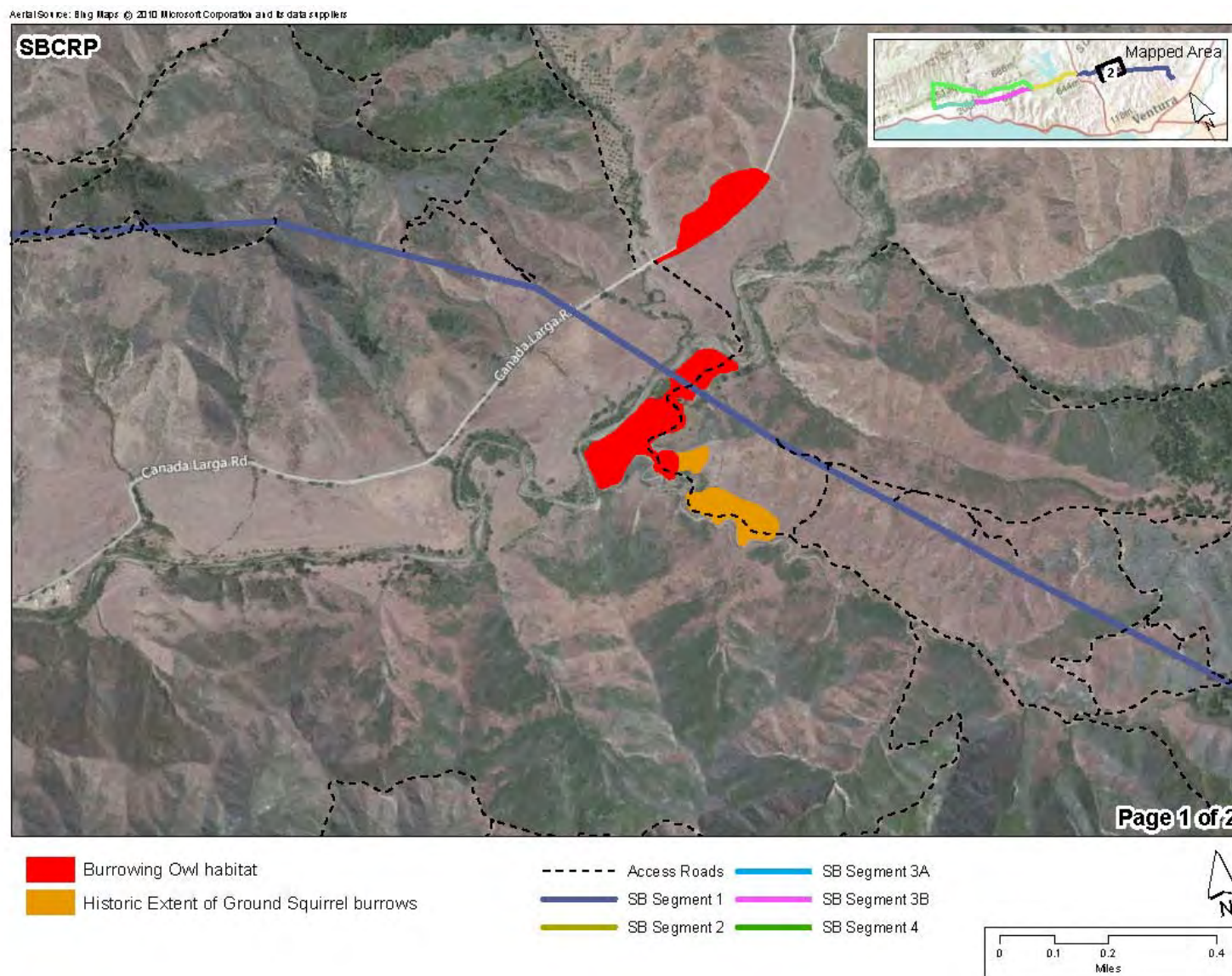
Wildlife observed during the surveys includes: California ground squirrel, wild boar (*Sus scrofa*), western scrub-jay (*Aphelocoma californica*), red-tailed hawk (*Buteo jamaicensis*), California quail (*Callipepla californica*), lesser goldfinch (*Carduelis psaltria*), house finch (*Carpodacus mexicanus*), turkey vulture (*Cathartes aura*), killdeer (*Charadrius vociferus*), northern flicker (*Colaptes auratus*), Brewer's blackbird (*Euphagus cyanocephalus*), American kestrel (*Falco sparverius*), greater roadrunner (*Geococcyx californianus*), acorn woodpecker (*Melanerpes formicivorus*), song sparrow (*Melospiza melodia*), California towhee (*Melospiza crissalis*), northern mockingbird (*Mimus polyglottos*), ash-throated flycatcher (*Myiarchus cinerascens*),

band-tailed pigeon (*Patagionas fasciata*), phainopepla (*Phainopepla nitens*), bank swallow (*Riparia riparia*), western meadowlark (*Sturnella neglecta*), European starling (*Sturnus vulgaris*), violet-green swallow (*Tachycineta thalassina*), western kingbird (*Tyrannus verticalis*), and mourning dove (*Zenaida macroura*).

**Table 3. Burrowing owl surveys for Segment 1- Getty Tap**

<b>Survey Date/Time</b>	<b>Weather</b>	<b>Surveyor(s)</b>	<b>Results</b>
4/24/2012 0736-0955	Overcast, calm, 63-65°	C. Schade	No owls or owl sign observed
5/15/2012 0745-0952	Sunny, clear, calm, 64-68°	C. Schade T. Rhaintre S. Jones	No owls or owl sign observed
5/29/2012 1000-1100	Sunny, clear, calm, 75-78°	S. Jones C. Villasenor	No owls or owl sign observed
6/15/2012 0900-1015	Overcast, calm, 62-64°	C. Schade	No owls or owl sign observed

**Figure 3. Potential Burrowing Owl Habitat in the Getty Tap Area of Segment 1.**





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**Photo 7.** Looking southwest across ground squirrel complex/burrowing owl habitat of the main polygon. The existing access road to the Getty Tap is on the left.



**Photo 8.** Active ground squirrel burrow in the survey area.





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**Photo 9.** Burrowing owl habitat in the southern-most portion of the main polygon. Slope may be greater than commonly used by burrowing owl, but remaining habitat constituents are present.



### 3.2.2 Segment 3B/4 Split

#### *Habitat*

Potential burrowing owl habitat in the area of the Segment 3B/4 split consists of a contiguous area along the Project access road that provides requisite burrows created by California ground squirrel (Figure 4). An adjacent area extending to the south shows evidence of historic ground-squirrel activity, however, without active construction and maintenance by the squirrels, burrows in this area have collapsed due to cattle trampling and or weathering of the softer soils, and from the use of ground disturbing equipment by the landowner.

This burrow habitat is located within a rural area characterized by gentle topography and well-drained soils (Photos 10-12). Vegetation in the area is a California Annual Grassland community dominated by a mix of native and non-native annual grasses and herbs, with non-native species such as black mustard, tocalote, and thistle. Vegetation throughout the area is kept short by cattle grazing and ground squirrel activity, and areas adjacent to the burrow complexes would provide suitable foraging habitat. A cattle tank provides water year-round in the immediate area. Fence-posts and other substrate provide perching opportunities throughout the area.

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### ***Survey Results***

Due to limitations in gaining property owner permission to access the area, and the project timeline, methods detailed in the *California Department of Fish and Game Staff Report on Burrowing Owl Mitigation* were adhered to as practicable, but the recommended date of the first survey (between February 15 and April 15), and recommended spacing between survey visits (at least three weeks apart) were not fully met. Four transect survey visits occurred on April 25, May 16 and 31, and June 14 2012 in suitable burrowing owl habitat in the area of the Segment 3B/4 split (Table 5). No owls or sign were detected during any of the site visits.

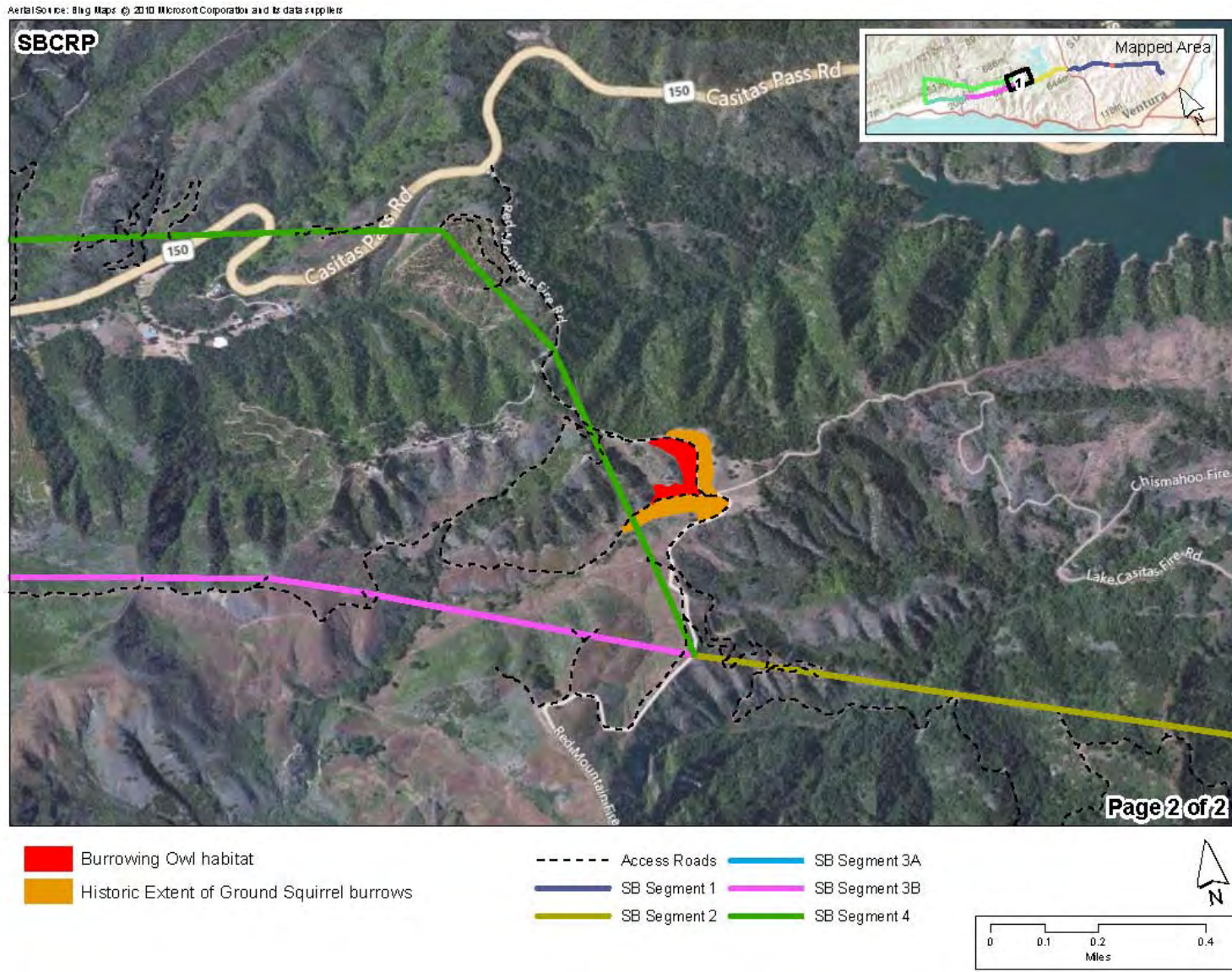
Wildlife observed during the surveys includes: coyote (*Canis latrans*), red-tailed hawk, California quail, turkey vulture, killdeer, hooded oriole (*Icterus cucullatus*), California towhee, phainopepla, western bluebird (*Sialia mexicana*), western meadowlark (*Sturnella neglecta*), northern mockingbird, mourning dove.

**Table 4. Burrowing owl surveys for Segment 3B/4**

<b>Survey Date/Time</b>	<b>Weather</b>	<b>Surveyor(s)</b>	<b>Results</b>
4/25/2012 0820-1100	Mostly cloudy, calm, 63°	C. Schade	No owls or owl sign observed
5/16/2012 0906-0936	Sunny, clear, calm, 71°	C. Schade S. Jones	No owls or owl sign observed
5/31/2012 0830-0900	Sunny, clear, calm, 69°	C. Schade	No owls or owl sign observed
6/14/2012 0915-0945	Overcast, calm, 64°	C. Schade A. Baczyk T. Rhaintre	No owls or owl sign observed



**Figure 4. Potential Burrowing Owl Habitat in the Area of the Segment 3B/4 Split.**



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**Photo 10.** Looking north at ground squirrel complex/burrowing owl habitat near Segment 3B/4 split. Roadways in the upper right and middle of the photo will both be used by the Project. Cattle tank is slightly visible behind the tree in the lower right foreground.



**Photo 11.** Looking south across ground squirrel complex/burrowing owl habitat near Segment 3B/4 split.





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**Photo 12.** Active ground squirrel burrows in the survey area.



## **4.0 DISCUSSION**

### **4.1 Nesting Raptors**

Four special-status raptor species are documented to occur in the Project Area: Cooper's hawk, golden eagle, northern harrier, and white-tailed kite. No nests of any of these species was found during any of the survey periods, and none are documented in the Project Area. No suitable eagle nesting structures or substrate are found within the Project vicinity, and eagles are not expected to nest within the Project vicinity.

Three of the eight nests found during surveys were actively being used by red-tailed hawk during the May 2012 survey. Great horned owls (*Bubo virginianus*) breed earlier than most raptor species in North America, often in late January or early February. Therefore, the Great-horned owl nest located near Construction 101 in 2011 may have been active this year, but fledged young before the May 2012 survey.

Great horned owls do not build their own nests, and often use nests built by red-tailed hawks. Red-tailed hawks often construct a new nest within a few hundred meters of the previous years nest if it is already occupied by an owl. The red-tailed hawks may return to an old nest in subsequent years if it is not occupied. The three nests in close proximity at Construction 60, 61, and 62 may all be nests from the same pair actively nesting in the eucalyptus during the May 2012 survey. This pair, or pairs of great horned owl, may return to use either of the two currently inactive nests in lattice towers M5-T3 and M5-T4 in future breeding seasons.

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Activities such as grading, vegetation trimming or removal, and general project noise or vibration could result in construction-related impacts to nesting raptors, including potential disruption of nesting activity, or destruction of active nests. Construction disturbance during the breeding season (February 1 – August 31) that results in the incidental loss of fertile eggs or nestlings, or otherwise leads to nest abandonment is considered take by USFWS under the Migratory Bird Treaty Act, as well as by CDFG under the California Fish and Game Codes 3503, 3503.5, and 3513. Pre-construction surveys of the Project area for active nests, establishment of work buffers around nests found to be active, and monitoring of nest success would help ensure that no take of raptor nests occurs during Project construction.

## **Recommendations**

Because nests in at Construction 60, 61, 70a, 84a, and 90 are in existing lattice towers that will be removed as part of the Project, SCE should consult with CDFG about appropriate measures to remove these nests during the non-breeding season prior to construction.

### **4.2 Burrowing Owl**

Burrowing owl is a yearlong resident of open, dry grassland and desert habitats, and in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine forests as high as 5,300 feet ASL. In the vicinity of the Project Area, burrowing owls are predominantly known to be rare transients and winter visitors most frequently found in agricultural and grassland areas near the coast. The occurrence of burrowing owl in the region has notably decreased, as have the number of actively used breeding sites. A search of the eBird website shows five records of burrowing owl in the Cañada Larga area near Segment 1 and the Getty Tap between 2006 and 2010, all during the winter months of December to February (eBird 2012). Burrowing owls recorded at Cañada Larga are believed to be just winter visitors (Ventura Audubon Society 2011). No breeding areas or breeding season observations are documented for this species in the Project Area. It is believed that burrowing owls have largely been, if not completely, eliminated as a breeding species from Ventura and Santa Barbara Counties (Center for Biological Diversity 2010, USFWS 2003).

## **Recommendations**

Though no burrowing owl have been observed in the area during the breeding season, or found during the 2012 breeding season transect surveys, there is suitable habitat for this species and suitable burrows at the two locations described above. No physical ground disturbance is expected to occur within 500 feet of any potential burrow site, however, vehicle and equipment travel will occur along roadways adjacent to habitat at both locations. Activities such as grading, vegetation trimming or removal, and general project noise or vibration could result in construction-related impacts to nesting burrowing owl, including potential disruption of nesting activity, or destruction of active burrows. Construction disturbance during the breeding season (February 1 – August 31) that results in the incidental loss of fertile eggs or nestlings, or otherwise leads to nest abandonment is considered take by USFWS under the Migratory Bird Treaty Act, as well as by CDFG under the California Fish and Game Codes 3503, 3503.5, and 3513. A pre-construction survey of these areas, and occasional visits during construction would help ensure that no burrowing owl breeding activity is occurring at these locations, or is disturbed by Project activities.

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**APPENDIX D:**  
**Special Status Plant Survey Report**

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## 1.0 INTRODUCTION

This report presents the results of a blooming season focused surveys for special status plant species within Segments 3B and 4, and the Getty Tap portion of Segment 1 of the Santa Barbara County Reliability Project, and identifies potential impacts to these biological resources that may result from implementation and construction of the Project.

### 1.1 Project Description

In 1998, the Southern California Edison Company (SCE) initiated the Project to increase reliability by reinforcing its existing 66 kilovolt (kV) sub-transmission system in northwestern Ventura County and southeastern Santa Barbara County to meet the electrical demands of the south coast of Santa Barbara County during emergency conditions while also enhancing operational flexibility.

The Project has been divided into six geographically-defined Segments (Segments 1, 2, 3A, 3B, and 4, and the Getty Tap) and at three substations (Carpinteria Substation, Casitas Substation, and Santa Clara Substation) (Figure 1).

Segment 1 begins at Santa Clara Substation off Foothill Road in unincorporated Ventura County. From that origin, it heads north along western Long Canyon; turns northwest at Harmon Canyon in the Ventura Hills; traverses Lake, Sexton, and Hall Canyons; then runs west along northern Cañada Seca and crosses Cañada Larga to Casitas Substation, which lies between SR-33 and the Ventura River. Segment 2 extends west from Casitas Substation along the south side of Lake Casitas, to the 'Y' near East Casitas Pass. Segment 3B heads west from the 'Y' through Casitas Valley along the south side of SR-150, crossing over Madranio Canyon, along Rincon Mountain, and through Rincon Valley. At the Santa Barbara/Ventura County line near the intersection of SR-150 and SR-192, Segment 3B becomes Segment 3A and continues to the west into the Shepard Mesa and Gobernador rural residential areas, then west along SR-192 to Carpinteria Substation. Segment 4 heads west from the 'Y' along the north side of SR-150, runs northwest along the ridgetop of Sutton Canyon, and then turns south to Carpinteria Substation. The 'Getty Tap,' is located approximately in the middle of Segment 1.

The Project includes the following physical elements:

- Reconstruct existing 66 kilovolt (kV) subtransmission facilities within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Install marker balls on overhead wire where determined to be necessary.
- Modify utility equipment within the existing Carpinteria Substation, Casitas Substation, Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Santa Clara Substation.
- Install telecommunications facilities to connect the Project to SCE's existing telecommunications system for the protection, monitoring and control of subtransmission and substation equipment. Install new telecommunications facilities along Segments 1, 2, and 4

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and at Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation<sup>1</sup>.

- Transfer distribution lines (and third-party infrastructure as necessary) to subtransmission structures along Segment 3A.
- Remove subtransmission infrastructure in Segments 1 and 2.

## 1.2 Environmental Setting

The Project lies north and west of US-101, between one and six miles from the coastline. Elevations vary through the Project Area from 31 feet above sea level (ASL) near the Carpinteria Substation, which lies in the coastal plain, to 1,500 feet ASL along Segment 4 in the foothills of the western Transverse Ranges, to more than 1,800 feet ASL along portions of Segment 3B near Rincon Peak.

The Project crosses the headwaters of multiple small streams and creeks that flow through agricultural and urban areas before reaching the ocean, and is located in lower gradient reaches of the Santa Clara River and Ventura River watersheds, including Cañada Larga, which is tributary to the Ventura River. While groundwater and surface water sources have been extensively developed for domestic and agricultural uses throughout the area, these riparian corridors contrast sharply with an otherwise dry landscape. Landslides are prone to occur in areas of steep, unstable terrain, and the area has a history of large and sometimes devastating wildland fire events, with “Sundowner” and “Santa Ana” winds contributing to fast-moving and destructive fires (USFS 2005).

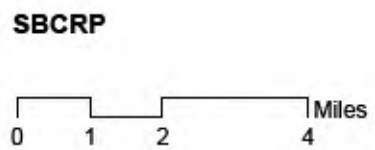
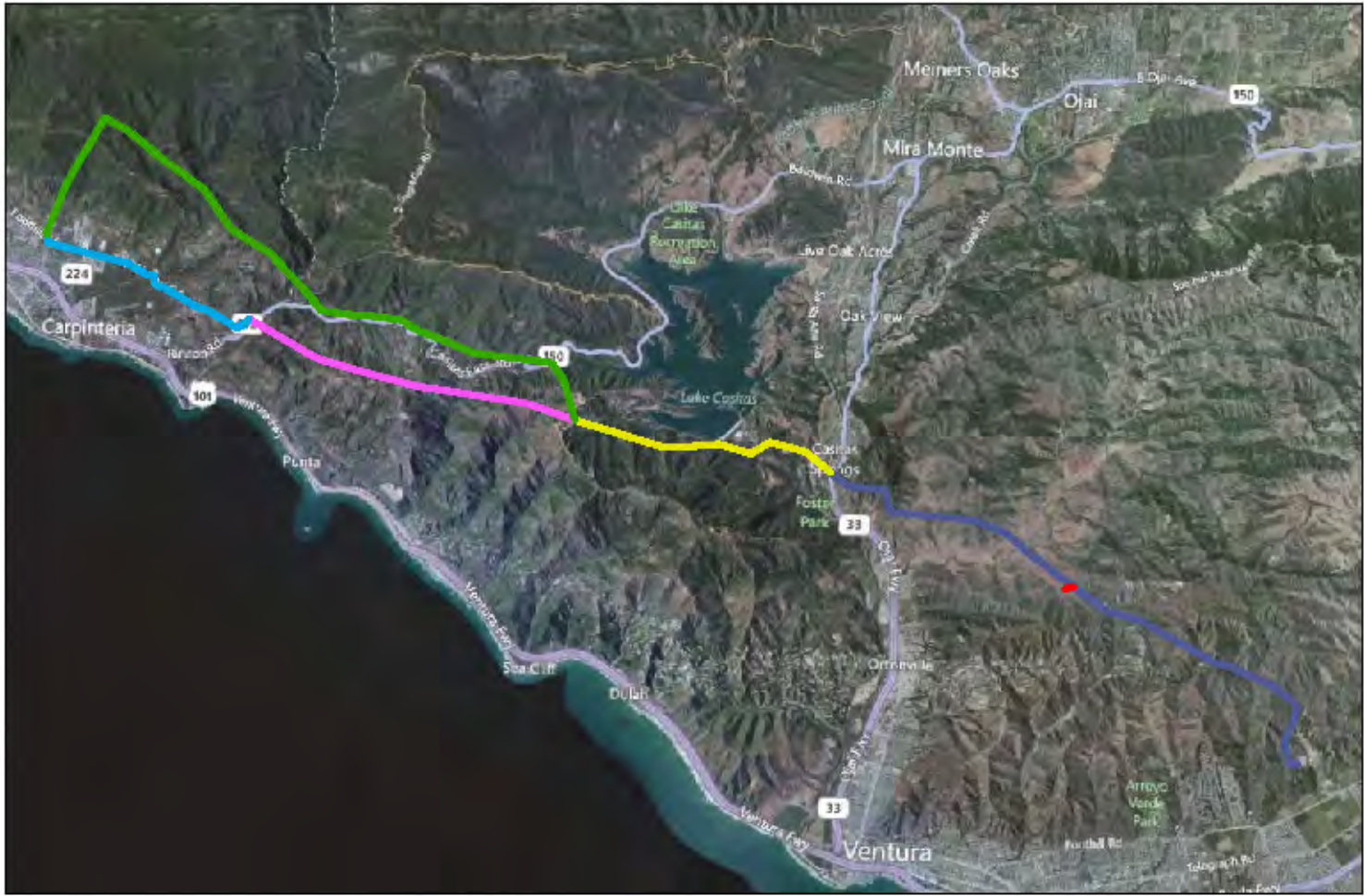
The majority of the Project is located on private lands, while three tower sites and associated access and spur roads in Segment 4 are located within the Santa Barbara Front, a geographical unit of lands under the jurisdiction of the Los Padres National Forest owned by the U.S. Forest Service (USFS). Land uses in the immediate vicinity of the Project Area are dominated by agriculture (cattle grazing and orchards) and “open-space” areas covered by native vegetation communities, with low-density residential development and commercial areas (nurseries and row crops) scattered through Segments 3A, 3B, and 4.

Temperatures in the area average 50 to 71° F, with an average annual temperature of 60° F. Average rainfall ranges from 15.4 to 17.7 inches. The east-west orientation of the mountains, combined with the distinct Mediterranean/marine climate, results in a unique botanic zone and mix of species. Predominately north- or south-facing slopes are dominated by alternating bands of sedimentary rock formations, with oak woodlands at lower elevations. Conifers exist in small patches along ridgetops and on north-facing slopes. Noxious weed infestations, including black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), Cape ivy (*Delairea odorata*), and ruderal species and escaped cultivars occur throughout the vicinity of the Project, especially along road and trail corridors.

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<sup>1</sup> The Project also includes additional telecommunications-related work at Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substations, and Ventura Substation; this work would be conducted exclusively within the MEERs or on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this report.

Figure 1. Project Location



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## 2.0 METHODOLOGY

Prior to conducting the 2012 botanical survey, standard database searches were conducted, and previous surveys in the area were reviewed to obtain a list of federal and state listed plant species documented in the region. The results of these preliminary database searches provided a basis for addressing the appropriate special-status species in the footprint of existing infrastructure (i.e., substations, access roads, and crane pads), proposed additional workspace (spur roads, temporary and permanent drill and crane pads, pulling and stringing sites), and immediate surroundings (hereafter referred to in this section as the Project Area).

### 2.1 Literature and Database Review

Information about documented special-status plant species was obtained from the California Natural Diversity Database (CNDDDB; CDFG 2003). The CNDDDB search included U.S. Geological Survey (USGS) 7.5-minute quadrangles Carpinteria, Matilija, Pitas Point, Saticoy, Ventura, and White Ledge Peak as well as the eleven surrounding quadrangles: Camarillo, Hildreth Peak, Lion Canyon, Little Pine Mountain, Ojai, Old Man Mountain, Oxnard, Santa Paula, Santa Paula Peak, Santa Barbara, and Wheeler Springs.

Additional literature and databases referenced include: *The Jepson Manual* (Baldwin 2012); the *CalFlora Database* (CalFlora, 2012); and the *Inventory of Rare and Endangered Plants of California* (CNPS 2010).

### 2.2 Survey Methods

A biological reconnaissance survey of the Project Area was conducted in February and March 2012 to describe and map the vegetation present in the Project Area and to evaluate the potential of the habitats to support special-status plant and wildlife species. This survey included searching for and identifying whole plants, remnant annual stalks, and/or inflorescences when present.

A focused survey for special-status plant species was conducted within the Segments 3B, 4, and the Getty Tap portion of Segment 1 of the Project Area between May 7 and 15, 2012. The surveys were conducted during the appropriate blooming season for target special-status plant species with a known presence, or have a “Moderate”, or “High” potential to occur in the Project Area. The survey included an area within 100 feet (a 200-foot wide corridor) of the alignment in locations that may provide suitable habitat for special-status species (hereafter referred to as the Survey Area). Individuals or populations of special-status plant species were recorded using a global positioning system (GPS) unit, and representative specimens or photographs of species were taken for identification.

## 3.0 RESULTS

### 3.1 Plant Species

A comprehensive list of plant species observed in the Project Area is provided in the Biological Technical Report (BRC 2012). A total of 279 species were identified from the collective botanical surveys of the Project Area with 201 native and 78 non-native species. The list of native species includes ten CNPS Ranked special-status plant species.



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## Special-Status Plant Species

No Federal or State listed threatened or endangered plant species are documented in the Project Area, or are likely to be found in the Project Area. Suitable habitat exists for one State listed rare species, Santa Ynez false lupine (*Thermopsis macrophylla*). This species has been documented within 5 miles of the project area, although no individuals were observed during field surveys.

Ten special-status species were found within the Survey Area during previous surveys or during the May 2012 botanical survey (Table 1, Figure 2).

Two listed plant species (CNPS RPR List 1 and 2) were documented to occur in the Survey Area: Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*) and Nuttall's scrub oak (*Quercus dumosa*). Based on geographic ranges and the presence of suitable habitat within the Project Area, eight additional CNPS RPR 1 and 2 species have a "High" or "Moderate" potential to occur in the Project Area: Davidson's saltscall (*Atriplex serenana* var. *davidsonii*), late-flowered mariposa lily (*Calochortus fimbriatus*), Plummer's mariposa-lily (*Calochortus plummerae*), Santa Barbara morning glory (*Calystegia sepium binghamiae*), mesa horkelia (*Horkelia cuneata puberula*), Carmel Valley malacothrix (*Malacothrix saxatilis* var. *arachnoidea*), and Ojai navarretia (*Navarretia ojaiensis*). Seven additional listed plant species (CNPS RPR List 3 and 4) are documented to occur in the Survey Area, while three more have a "High" or "Moderate" potential to occur. Descriptions of individual species and locations of documented occurrence are presented in Section 4.1.

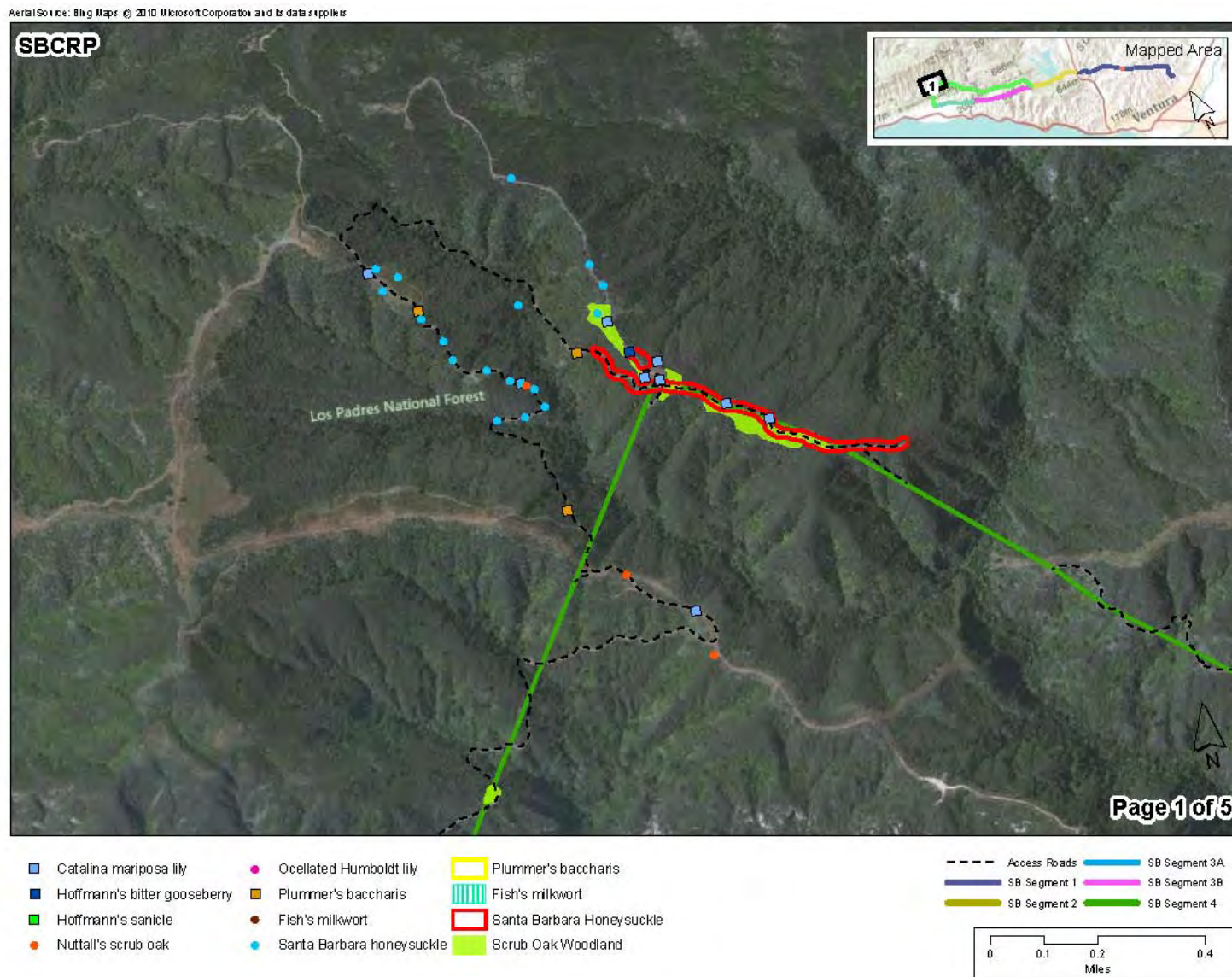
**Table 1. Locations of Special-status Plant Species Observed within the Survey Area.**

Scientific Name	Common Name	Segment	Location (Construction # or UTM NAD 83)
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	4	E269538 N3813539
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	4	E269538 N3813539
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	4	E269893 N3812884
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	4	E269988 N3813347
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	3A	79
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	3A	80
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	3A	84a
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	4	102
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	3B	E278024 N3806815
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	3B	E279548 N3806479
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	3B	E279500 N3806540
<i>Baccharis plummerae plummerae</i>	Plummer's baccharis	3B	E281297 N3806641
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	E269811 N3813280
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	123
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	124
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	125a
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	125
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	139
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	140
<i>Calochortus catalinae</i>	Catalina mariposa lily	3B	E278112 N3806080
<i>Calochortus catalinae</i>	Catalina mariposa lily	3B	E278113 N3806116
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	E270223 N3813230
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	E270409 N3813132
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	E270528 N3813066
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	E272300 N3811768
<i>Calochortus catalinae</i>	Catalina mariposa lily	4	E272300 N3811768
<i>Calochortus catalinae*</i>	Catalina mariposa lily*	4	E269406 N3813672
<i>Calochortus catalinae*</i>	Catalina mariposa lily*	4	E270092 N3813424
<i>Calochortus catalinae*</i>	Catalina mariposa lily*	4	E270177 N3813242
<i>Calochortus catalinae*</i>	Catalina mariposa lily*	4	E270227 N3812529
<i>Calochortus fimbriatus</i>	late flowered mariposa lily	4	126
<i>Calochortus fimbriatus</i>	late flowered mariposa lily	4	127
<i>Calochortus fimbriatus</i>	late flowered mariposa lily	4	128
<i>Juglans californica californica</i>	California black walnut	4	96
<i>Juglans californica californica</i>	California black walnut	4	98
<i>Lilium humboldtii ocellatum</i>	Ocellated Humboldt lily	4	E269722 N3813182
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269430 N3813684
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269440 N3813614
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269492 N3813649
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269542 N3813515
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269597 N3813441
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269618 N3813380
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269715 N3813335
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269722 N3813182
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269778 N3813292
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269806 N3813180
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269811 N3813280
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269836 N3813513

<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269847 N3813260
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269870 N3813892
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E269871 N3813203
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270028 N3813344
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270059 N3813336
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270064 N3813604
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270065 N3813454
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270082 N3813276
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270096 N3813536
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270159 N3813320
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270163 N3813217
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270166 N3813283
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270186 N3813283
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E270202 N3813284
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	4	E272302 N3811768
<i>Polygala cornuta</i>	Fish's milkwort	4	101
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	E269824 N3813271
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	E270038 N3812670
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	E270261 N3812391
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	114
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	121
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	122
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	123
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	124
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	125a
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	125
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	139
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	140
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	126
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	127
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	128
<i>Quercus dumosa</i>	Nuttall's scrub oak	4	130
<i>Ribes amarum</i> var. <i>hoffmannii</i>	Hoffmann's bitter gooseberry	4	E270143 N3813326
<i>Sanicula hoffmannii</i>	Hoffmann's sanicle	4	E269404 N3811521
<i>Sanicula hoffmannii</i>	Hoffmann's sanicle	3B	E277377 N3806821
<i>Sanicula hoffmannii</i>	Hoffmann's sanicle	3B	E277977 N3806844

Asterisk\* indicates a non-confirmed identification due to missing plant parts.

**Figure 2. Locations of Special-status Plant Species Observed within Segment 3B, Segment 4, and the Getty Tap portion of Segment 1 of the Project Area (5 pages).**

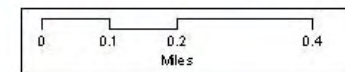




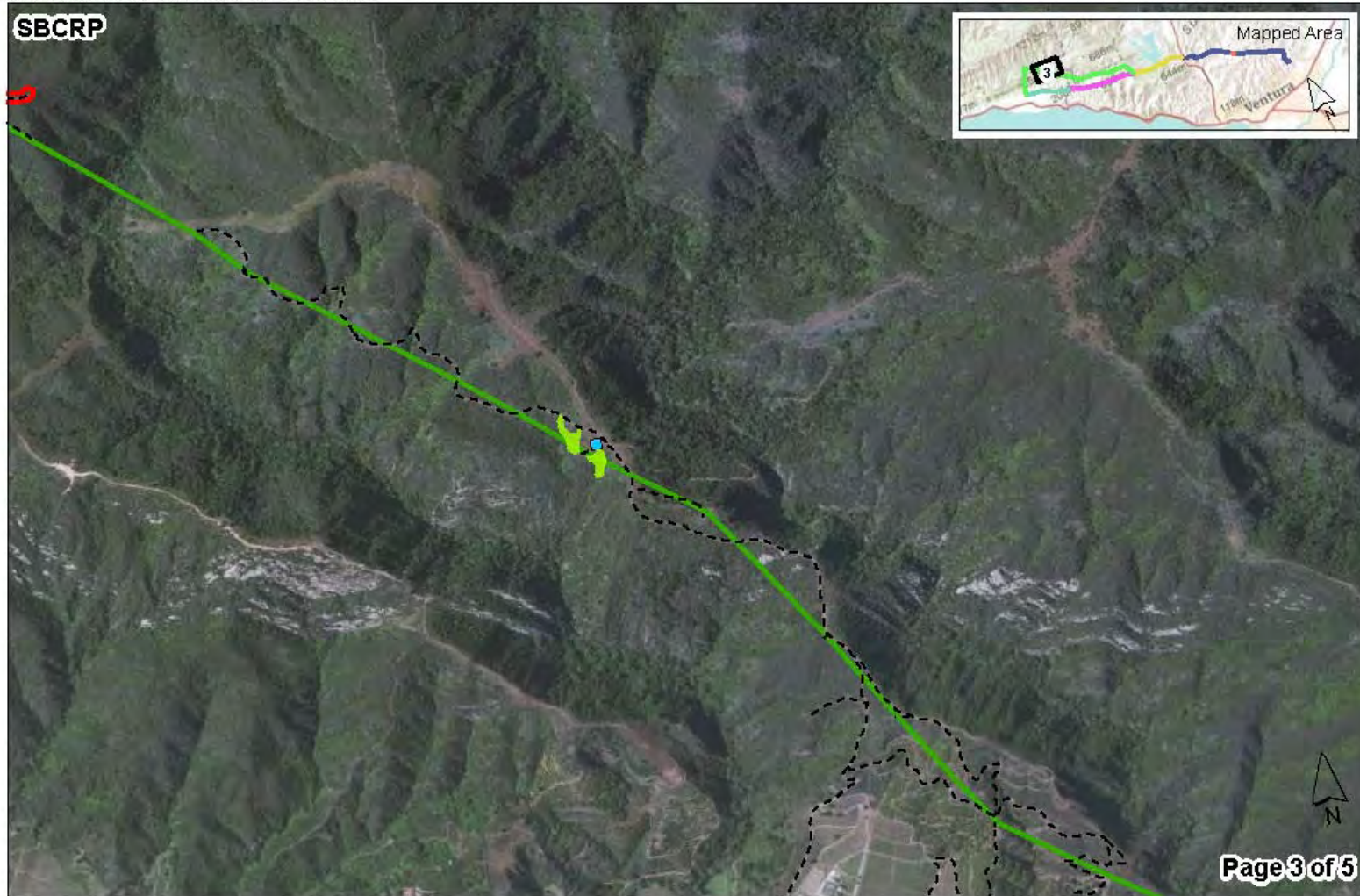


- |                              |                           |                           |
|------------------------------|---------------------------|---------------------------|
| Catalina mariposa lily       | Ocellated Humboldt lily   | Plummer's baccharis       |
| Hoffmann's bitter gooseberry | Plummer's baccharis       | Fish's milkwort           |
| Hoffmann's sanicle           | Fish's milkwort           | Santa Barbara Honeysuckle |
| Nuttall's scrub oak          | Santa Barbara honeysuckle | Scrub Oak Woodland        |

- |              |               |
|--------------|---------------|
| Access Roads | SB Segment 3A |
| SB Segment 1 | SB Segment 3B |
| SB Segment 2 | SB Segment 4  |

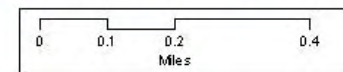






- |                              |                           |                           |
|------------------------------|---------------------------|---------------------------|
| Catalina mariposa lily       | Ocellated Humboldt lily   | Plummer's baccharis       |
| Hoffmann's bitter gooseberry | Plummer's baccharis       | Fish's milkwort           |
| Hoffmann's sanicle           | Fish's milkwort           | Santa Barbara Honeysuckle |
| Nuttall's scrub oak          | Santa Barbara honeysuckle | Scrub Oak Woodland        |

- |              |               |
|--------------|---------------|
| Access Roads | SB Segment 3A |
| SB Segment 1 | SB Segment 3B |
| SB Segment 2 | SB Segment 4  |

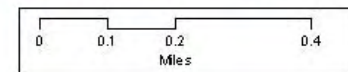




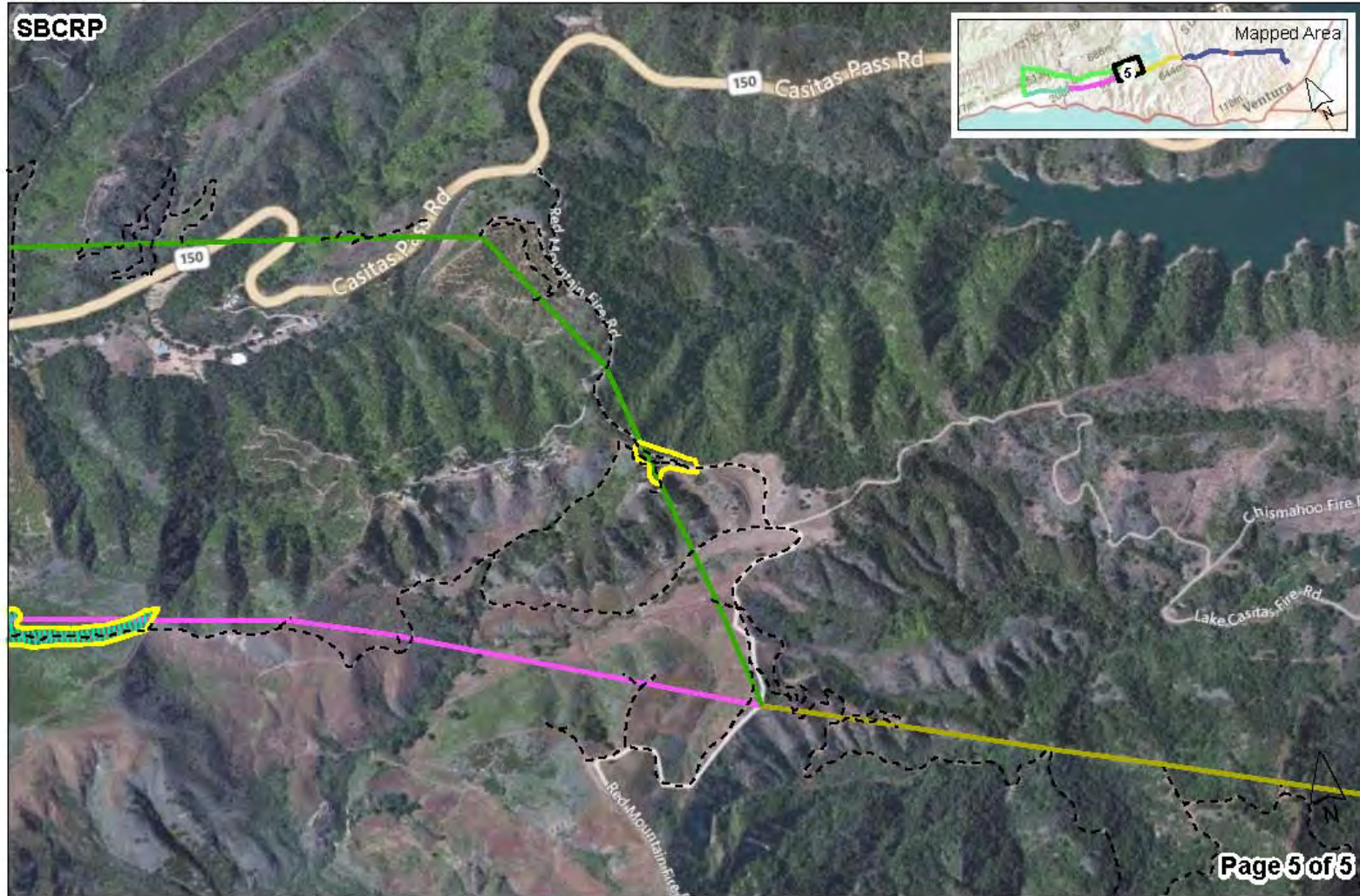


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|------------------------------|---------------------------|---------------------------|
| Catalina mariposa lily       | Ocellated Humboldt lily   | Plummer's baccharis       |
| Hoffmann's bitter gooseberry | Plummer's baccharis       | Fish's milkwort           |
| Hoffmann's sanicle           | Fish's milkwort           | Santa Barbara Honeysuckle |
| Nuttall's scrub oak          | Santa Barbara honeysuckle | Scrub Oak Woodland        |

- |              |               |
|--------------|---------------|
| Access Roads | SB Segment 3A |
| SB Segment 1 | SB Segment 3B |
| SB Segment 2 | SB Segment 4  |

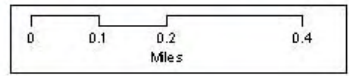






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|------------------------------|---------------------------|---------------------------|
| Catalina mariposa lily       | Ocellated Humboldt lily   | Plummer's baccharis       |
| Hoffmann's bitter gooseberry | Plummer's baccharis       | Fish's milkwort           |
| Hoffmann's sanicle           | Fish's milkwort           | Santa Barbara Honeysuckle |
| Nuttall's scrub oak          | Santa Barbara honeysuckle | Scrub Oak Woodland        |

- |              |               |
|--------------|---------------|
| Access Roads | SB Segment 3A |
| SB Segment 1 | SB Segment 3B |
| SB Segment 2 | SB Segment 4  |



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## 4.0 DISCUSSION

### 4.1 Special-Status Plant Species Descriptions and Occurrence

#### Plummer's Baccharis (*Baccharis plummerae plummerae*)

STATUS		
Federal	State /CNDDDB	CNPS (CNPS 2001)
None	None / G3G4, S3.2	Rank 4.3: Uncommon in California

Plummer's baccharis (Photo 1) is a small, broad-leaved winter-deciduous shrub (<2 meters tall) with fine-curved, hair-covered, wand-like stems and 20 to 45-mm, oblanceolate, toothed, 3-veined (prominent), sessile leaves. The flowers, generally blooming between August and October, are arranged in panicle heads with a bell-shaped involucre, and are not particularly showy. The flower heads are either staminate (5-6.5 mm long) or pistillate (6-8.5 mm long). Plummer's Baccharis is a member of the sunflower family (Asteraceae). Plummer's baccharis typically occurs on rocky, well-drained, north-facing slopes in coastal sage scrub and oak woodland plant communities. It ranges from southern coastal Santa Barbara County to coastal Los Angeles County, and Santa Cruz and Anacapa Islands, from 300 to 1,250 feet in elevation.

Plummer's baccharis was documented during surveys along the access road in Sutton Canyon north of the Carpinteria Substation, at sites between Construction 79 to 102 and 124 to 126 in Segment 4, between Construction 59 to 64 in 3B, and at sites in Segments 1 and 2.

#### Catalina Mariposa Lily (*Calochortus catalinae*)

STATUS		
Federal	State /CNDDDB	CNPS (CNPS 2001)
None	None / G3, S3.2	Rank 4.2: Uncommon in California

Catalina mariposa lily (Photos 2 and 3) is a perennial herb that re-sprouts annually from a small bulb. The stems are 20 to 40 cm long, generally branched above. The basal strap-shaped leaves are 10 to 30 cm long and usually wither before anthesis (flowering). The inflorescence consists of 1 to 4 bowl-shaped flowers with subtending, opposite bracts 2 to 10 cm long. Sepals are white with purple spots near the base (20 to 30 mm long). Petals are nearly glabrous, white, tinged lilac, and purple-spotted near the base (20 to 50 mm long). The inside of the petals have oblong and densely branched-hairy nectaries. Catalina mariposa lily blooms between February and May. The fruit (capsules) are erect, two to five cm long, and not angled as in other Mariposa lilies. *C. catalinae* is a member of the lily family (Liliaceae). Catalina mariposa lily grows in heavy soils of open grassland, chaparral, and Coastal Sage Scrub communities, at elevations below 2,300 feet. It ranges from San Luis Obispo County to San Diego County, and on Santa Rosa, Santa Cruz, and Santa Catalina Islands.



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**Photo 1.** Plummer's Baccharis (*Baccharis plummerae* ssp. *plummerae*) on Segment 4 in bloom, May 2012.





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**Photo 2.** Catalina Mariposa Lily (*Calochortus catalinae*) on Segment 4 in bloom, May 2012.



**Photo 3.** Catalina Mariposa Lily (*Calochortus catalinae*) on Segment 4 in bloom, May 2012.



Catalina mariposa lily was documented during surveys along the access road in Sutton Canyon north of the Carpinteria Substation, between Construction 124 and 140 in Segment 4, and sites along Segments 1, 2, and 3B.

**California Black Walnut (*Juglans californica californica*)**

STATUS		
Federal	State / CNDDB	CNPS (CNPS 2001)
None	None / G3, S3.2	Rank 4.2: Uncommon in California

California black walnut is a small, broad-leaved, monoecious, winter-deciduous tree (15 meters tall) with one to five trunks. It has pinnately divided leaves with 11 to 19 lanceolate to ovate toothed leaflets (two to eight cm long). The wind pollinated, greenish flowers, blooming between March and May, have four-lobed sepals arranged in pendulous clusters before the leaves emerge. This species produces spheric, leathery-husked, strong-smelling fruit (walnuts) two to three centimeters in diameter. *J. californica californica* is listed in the NIWP with an FAC wetland indicator status (facultative species that is equally likely to occur in wetlands and non-wetlands). *Juglans californica californica* is uncommon, but can be found on slopes and canyons at elevations between 150 and 3,000 feet, and it is often associated with riparian habitats. It ranges from the Santa Lucia Mountains (where they were cultivated), Santa Barbara County, and along the coastal portions of the Transverse Ranges, south to the northern Peninsular Ranges in northern San Diego County. California Black Walnut Forest is a much-fragmented, declining natural community, and it is threatened by urbanization and grazing, which inhibit natural reproduction.

California black walnut is found along numerous drainages and uplands in all Segments of the Project Area, including along some Project access routes in Segment 3B.

**Ocellated Humboldt Lily (*Lilium humboldtii ocellatum*)**

STATUS		
Federal	State / CNDDB	CNPS (CNPS 2001)
None	None / G4T3, S3.2	Rank 4.2: Uncommon in California

Ocellated Humboldt lily is a perennial bulbiferous herb (<3.1 meters). Bulb scales are often purple at the tip, obscurely two to five segmented. Flowers are perianth yellow or light orange, with spots margined in lighter red. Ocellated Humboldt lily blooms between March and August. Ocellated Humboldt lily can be found in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland at elevations between 100 and 5,900 feet. It ranges among the following counties: Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, and Ventura. It also exists on Anacapa Island and Santa Rosa Island. *L. humboldtii ocellatum* is threatened by development and horticultural collecting on the mainland, and by feral herbivores on Santa Cruz and Santa Rosa Islands.

Ocellated Humboldt lily was documented from previous Project surveys in a drainage along the access road in Sutton Canyon, Segment 4, north of the Carpinteria Substation. This species was not found during the 2012 survey.

**Santa Barbara Honeysuckle (*Lonicera subspicata* var. *subspicata*)**

STATUS		
Federal	State /CNDDDB	CNPS (CNPS 2001)
None	None / G5T2, S2.2	Rank 1B.2: rare, threatened, or endangered in California and elsewhere

Santa Barbara Honeysuckle is perennial evergreen shrub. Stems are generally twining or reclining (9 to 24 dm); herbage glabrous to puberulent. Leaves are one to four centimeters, narrowly elliptic, and three times longer than wide. *L. subspicata* var. *subspicata* blooms between May and February. Habitats include chaparral, cismontane woodland, and coastal scrub. It ranges from Los Angeles to Santa Barbara Counties, and Santa Catalina Island at elevations below 3,300 feet. This species is threatened by development, road construction, and vehicles.

Santa Barbara honeysuckle was documented during surveys along the access road in Sutton Canyon north of the Carpinteria Substation, and along access roads and pads between Construction 124 and 126 of Segment 4.

**Fish’s Milkwort (*Polygala cornuta* var. *fishiae*)**

STATUS		
Federal	State / CNDDDB	CNPS (CNPS 2001)
None	None / G5T4, S3.3	Rank 4.3: Uncommon in California

Fish’s milkwort (Photo 4) is a small, broad-leaved, winter-deciduous, 25 cm-tall shrub, from rhizomes, that often form dense thickets up to 2 meters wide. The stems are decumbent to erect (6 to 25 dm long) and covered with leaves that are less than two times as long as wide. The flowers, blooming May through August, are somewhat peaflower-shaped, 7 to 11 mm long, and pale with dark pink buds. Fish’s milkwort can be found on exposed slopes growing in chaparral, oak woodland, and riparian woodland habitats at elevations between 300 and 3,500 feet. It ranges from Santa Barbara County in the Outer South Coast Ranges, south through the Transverse Ranges, to the northern Peninsular Ranges in northern San Diego County.

Fish’s milkwort was documented during surveys near 12 tower sites in Segments 1 and 2, between Construction 59 to 64 in Segment 3B, and at Construction 101 in Segment 4.

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**Photo 4.** Fish's milkwort (*Polygala cornuta* var. *fishiae*) on Segment 4 in bloom, May 2012.





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### Nuttall's Scrub Oak (*Quercus dumosa*)

STATUS		
Federal	State / CNDDDB	CNPS (CNPS 2001)
C2	None / G2, S1.1	Rank 1B.1: Plants considered to be rare, threatened, or endangered

Nuttall's scrub oak is a broad-leaved evergreen shrub (1 to 3 m tall) with sparsely short-hairy, dark reddish-brown slender twigs (becoming glabrous) and oblong/elliptic, obtuse-tipped to abruptly pointed, and toothed-margined leaves (1 to 2.5 cm long). The upper leaf surface is slightly shiny-green, and the lower is finely tomentose, becoming glabrous, dull pale green. The fruit (acorn) has a cup that is 8 to 15 mm wide, 5 to 8 mm deep, and bowl-shaped with tubercled scales, and has a nut that is 15 to 25 mm long, slender, ovoid, tapered-tipped, and glabrous-shelled (inside). *Q. dumosa* blooms from February to August. *Q. dumosa* grows predominantly in sandy, clay-loam, and sandstone soils of chaparral and Coastal Sage Scrub habitats near the coast. It is known to occur along the South Coast in Orange, Santa Barbara, and San Diego Counties, and Baja, California at elevations below 1,300 feet. Nuttall's scrub oak is primarily threatened by development.

Nuttall's scrub oak hybridizes with inland scrub oak (*Q. berberidifolia*), which is the widespread scrub type oak known throughout much of cismontane California. Because the two species are able to hybridize, various individual shrubs in one location may show characteristics of both species on a gradient scale. During the most recent botanical survey, May 2012, no definitive samples of Nuttall's scrub oak were identified. However, positive identifications of samples of the rare species were documented in previous years near Construction 121 to 128, and 139 and 140 in Segment 4. The Scrub Oak Woodland polygons from the Biological Technical Report (BioResource Consultants 2012) are used in the mapping to indicate areas where individuals, or hybrids, of the species may occur within the project area (Figure 3).

### Hoffmann's Bitter Gooseberry (*Ribes amarum* var. *hoffmannii*)

STATUS		
Federal	State / CNDDDB	CNPS (CNPS 2001)
None	None / G4?T2T3, S2S3	Rank 1B.1: Plants considered to be rare, threatened, or endangered

Hoffmann's bitter gooseberry is a perennial deciduous scrub (<2 m tall). Stems have three nodal spines. Leaves are 2 to 4 cm and glandular-hairy. Inflorescences possess one to three flowers. Flowers are longer than wide with reflexed, purple sepals (2 to 4 mm) and white petals with margins curled inward. Fruit is 15 to 20 mm and purple with stiff bristles. *R. amarum* var. *hoffmannii* blooms between March and April. Hoffmann's bitter gooseberry is found in chaparral and riparian woodland at elevations between 500 to 3,900 feet. Hoffmann's bitter gooseberry ranges among Santa Barbara County, San Diego County, and Ventura County. It has also been found in the Sierra Nevada Foothills, Tehachapi Mountains, and San Francisco Bay Area.

Hoffman's bitter gooseberry was documented in previous years during surveys near Construction 124 and 125 in Segment 4.

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### Hoffmann's Sanicle (*Sanicula hoffmannii*)

STATUS		
Federal	State / CNDDDB	CNPS (CNPS 2001)
None	None / G3, S3.3	Rank 4.3: uncommon in California

Hoffmann's sanicle (Photo 5) is an erect, taprooted, biennial to perennial herb (<1 m tall). Leaves are bluegreen and generally compound palmate (4.5 to 13.5 cm long). It is a member of the Apiaceae family with umbel like inflorescence. Flowers are green to yellow and bisexual with calyx lobes fused at the base (1 to 2.3 mm) blooming March through May. Hoffmann's sanicle is found in coastal sage scrub, chaparral, and pine woodland areas below 1,650 feet. The range of Hoffmann's sanicle includes the central and south coasts, including the Channel Islands.

Hoffmann's sanicle was documented during the most recent botanical surveys along the access roads between Construction 64 and 66 in Segment 3B and between Construction 131 and 132 on Segment 4. This species may occur in other roadside locations on Segments 3B and 4.

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**Photo 5.** Hoffmann's sanicle (*Sanicula hoffmannii*) on Segment 4 in May 2012.



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## 4.2 Project Impacts on Special-Status Plants

In general, impacts to special-status species are not expected at a population level for any listed species. However, some individuals of these species may be adversely impacted during the grading of access roads, tower pads, or other workspaces. Special avoidance measures should be conducted during road grading activities for spur roads and tower pads at documented Catalina or late-flowered mariposa lily locations during their respective seven-month blooming periods from February through August.

Much of the potential impacts to any species are not expected to be greater than what normally occurs during regular maintenance of the existing access roads and pads, though some new access spur roads and tower pads will be developed. However, weed species that may out-compete native species may spread and colonize disturbed areas following construction, causing indirect impacts to special-status plant populations. Special measures should be prescribed to prevent the introduction, continuance, and spread of noxious weeds within the Project Area.

### Recommendations

Impacts to these special-status plant species can be reduced, if not avoided altogether by implementing the following measures:

- A biologist should conduct environmental training for crews, including information about the species that may occur, and avoidance measures that may be practiced to avoid these species.
- Confine work areas and activities to minimize the amount of unnecessary disturbance to native vegetation communities.
- A biologist should conduct a pre-construction survey for special-status plant species, and flag individuals or populations for avoidance as practicable.
- A biological monitor may be used to help direct work activities around special-status species when working in proximity to these sensitive resources.



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**Southern California Edison Company  
Environmental Affairs Division**

**Sensitive Species Surveys for the  
Santa Clara-Carpinteria  
66kV Power Line Project**

**March 2000**

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**Southern California Edison  
Environmental Affairs Division  
Rosemead, California**

**Sensitive Species Surveys for  
the Santa Clara-Carpinteria 66kV  
Power Line Project**

**By:**

**BioResource Consultants  
P.O. Box 1539  
Ojai, California 93024**

**In association with:**

**David Magney Environmental Consulting  
Ojai, California**

**March 2000**

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## 1.0 INTRODUCTION

Southern California Edison (SCE) is considering replacing or upgrading its 66 kV transmission line towers along the Santa Clara-Carpinteria line. They generally follow a westerly course from Saticoy in eastern Ventura County toward Carpinteria in southeastern Santa Barbara County.

This document describes the results of seasonal field surveys of the natural vegetation and special-status plant and wildlife species conducted along the Southern California Edison's (SCE) Santa Clara-Carpinteria Transmission Line. The purpose of the field surveys was to determine the potential and actual occurrence of any special-status plant and wildlife species at any of the transmission line towers being proposed for upgrade.

## 2.0 STUDY AREA

The Santa Clara-Carpinteria 66 kV transmission line originates at the SCE Santa Clara (River) Substation in eastern Ventura (Saticoy), Ventura County, and terminates at the Carpinteria Substation in Carpinteria, Santa Barbara County (Figure 1). Detailed maps showing individual tower placements are provided in Appendix A.

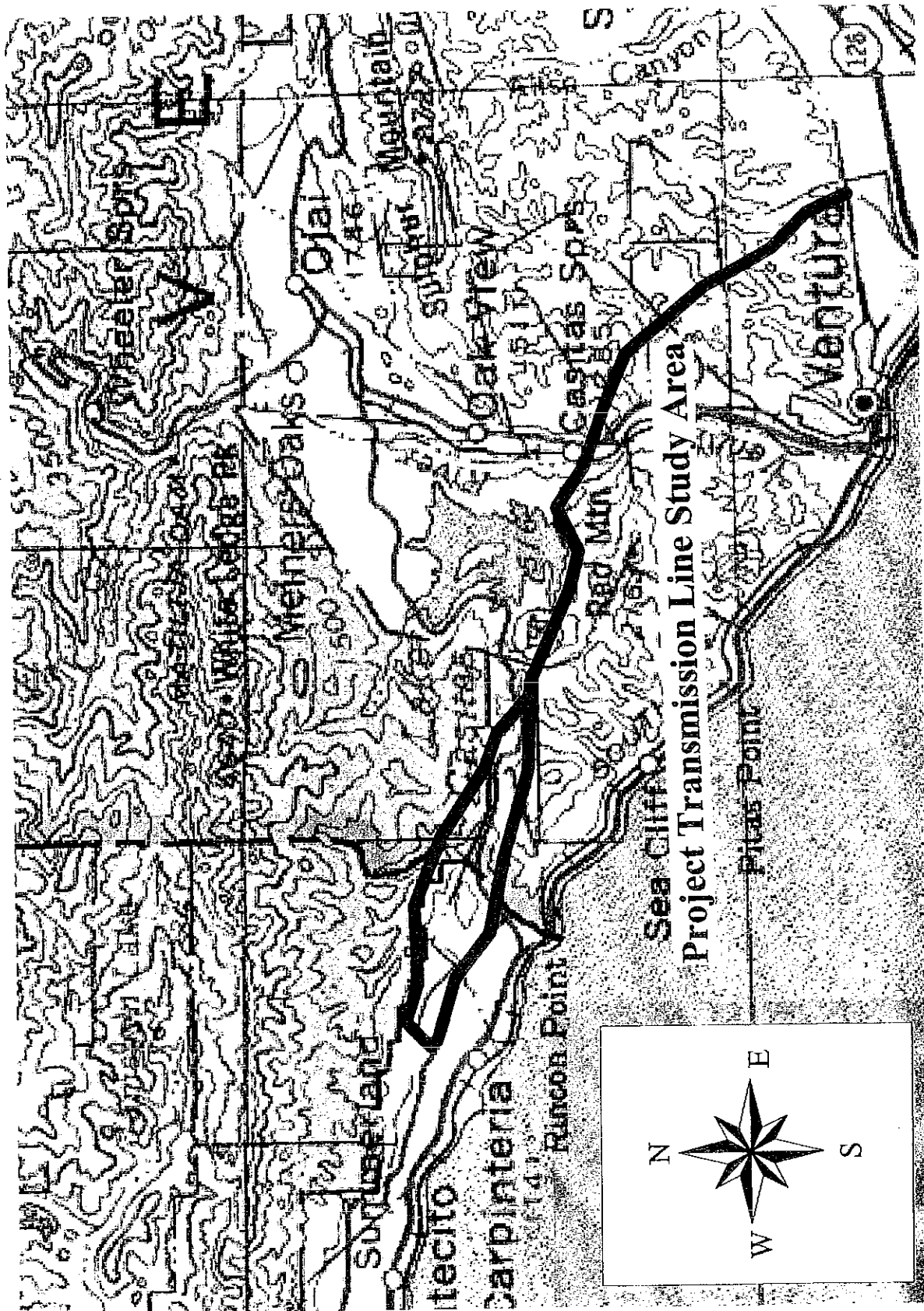
The transmission line bifurcates at approximately its halfway point near East Casitas Pass, a few miles east of the Ventura/Santa Barbara County line. The northern line splits again near the county line.

The biological resources, particularly special-status species and sensitive habitats, were surveyed within a 50-foot radius of each tower. The place of origin, line direction, ending location, and tower/survey site numbers of the "main" SCE transmission line (the Santa Clara-Carpinteria transmission line), and its two "branch" lines, are provided in the following descriptions.

### 2.1 MAIN LINE:

The Main Line (Santa Clara-Carpinteria Line [Survey Tower Nos. 1-N to 114-N]) begins at Santa Clara Substation in Saticoy (Ventura), heads north along western Long Canyon, and turns northwest at Harmon Canyon (Ventura Hills). The transmission line traverses Lake, Sexton, and Hall Canyons, then runs west along northern Cañada Seca, and crosses Cañada Larga and the Ventura River just west of the Casitas Springs Substation. The Main Line runs along the south side of Lake Casitas, through Casitas Valley, along State Route (SR) 150 (past the Ventura/Santa Barbara County line), heads northwest along the south ridgetop of Sutton Canyon, and finally turns south ending at the Carpinteria Substation.

Figure 1. General Project Location Map



## **2.2 SOUTH BRANCH:**

The South Branch (Santa Clara-Getty Line [Survey Tower Nos. 56 to 166]) forks off from the Main Line, heading due west, at the eastern end of Casitas Valley. It crosses over northern Madranio Canyon, travels along Rincon Mountain and through Rincon Valley, and crosses the intersection of SR150 and SR192, and into the Shepard Mesa and Gobernador rural residential areas. The South Branch runs west along SR192 (69 closely spaced wood poles in ROW) to intersect the Main Line again, which terminates at Carpinteria Substation.

## **2.3 NORTH BRANCH**

The North Branch (Santa Clara-Ojai-Santa Barbara Line [Survey Tower Nos. 88-Na to 104-Na]) is a short line that forks off, to the north, from the Main Line at Gobernador Creek (Santa Barbara County). It heads northwest along the north ridgetop of Sutton Canyon, and turns south to intersect the Main Line again, which heads south, ending at the Carpinteria Substation.

## **3.0 METHODS**

The field surveys were completed between 17 May to 28 June 1999. A team of two qualified biologists (one botanist and one wildlife biologist) traveled to each of the towers and conducted a reconnaissance level survey. Each tower was visited for a minimum of 20 minutes, sometimes significantly longer.

To determine the presence or absence of most wildlife species requires intensive field sampling and observation. Since this was mainly a reconnaissance level survey, our approach was to determine the habitat types present relying on a standard vegetation classification system (Sawyer and Keeler-Wolf 1995) and to associate wildlife occurrence with the presence or absence of habitats that would predict the occurrence of individual wildlife species.

After an orientation meeting with SCE personnel familiar with the project study area, the fieldwork was scheduled and initiated. Travelling in a single off-road vehicle, the team drove SCE maintenance roads or public roads to reach the nearest point possible to each tower. Usually after a short hike, the base of each tower was inspected for a radius of approximately 50 feet. The focus of the surveys was to determine the presence or absence of sensitive plants and animals and to determine the habitat types present. The sensitive plant surveys were timed to include times when there was a high probability of seeing flowering plants. The biologists used standardized field forms to record all observations. These data were later transferred into a computerized database using Microsoft Excel<sup>®</sup>.

### 3.1 VEGETATION MAPPING PROTOCOLS AND CLASSIFICATIONS

Trees, shrubs, and herbs form a unique pattern that shifts subtly from season to season, year to year, and through growth, death, and reproduction of individual plants (Sawyer and Keeler-Wolf 1995). Each tower site, observed along the SCE transmission line from Saticoy (Ventura) to Carpinteria, California, has a unique history and varying physical characteristics (soils, climate, and topography), which create differences between each type of vegetation. Although vegetation classification may be determined using strict protocols, it is always subjective to the eye. For example, ecotonal transitions, successional growth stages, and even well established stands can easily be interpreted in more than one way.

Ecotonal transitions create difficulties in naming plant communities because gradual shifts in the land's physical characteristics may cause two separate dominant species to exist in an intermixed mosaic that blends the two otherwise different plant communities. Plant succession creates difficulties in naming plant communities because it causes vegetation to change over time, in which species dominance and community structure may be significantly different at two or more different times. However, a given landscape generally has a limited set of vegetation types, and vegetation following a disturbance often approaches conditions, over time, similar to those before the disturbance (Sawyer and Keeler-Wolf 1995). For these reasons, a hierarchical system of classification is useful for aiding the process of categorizing broad vegetative groups, into more specific and detailed vegetative entities, according to plant structure and species similarities.

Sawyer and Keeler-Wolf (1995) present the California Native Plant Society's (CNPS's) approach to hierarchical classification, in *A Manual of California Vegetation*, and it is the classification approach that is followed for the purposes of this report. Several (approximately 50%) of the plant communities observed during the field surveys are described as 'series' by Sawyer and Keeler-Wolf (1995). Their approach to hierarchical classification of vegetation forms a base line for the vegetation classification at the SCE tower sites, in which the most important units of conservation in any vegetative hierarchy are the floristically based series (or plant communities).

Floristic components of classification include the individual plant taxa that contribute to the vegetation occupying an area, and they form the different plant communities (or series). Although all plant communities observed during the field survey are not described by Sawyer and Keeler-Wolf (1995), the newly observed plant communities are easily classified and named according to the same hierarchical protocols described by them. Section 2, Vegetation Descriptions of SCE Tower Sites, consists of descriptions of the vegetation observed at each of the transmission line towers during the field surveys conducted during Spring and Summer 1999. The three terms (vegetation type, plant community, and plant association) used to describe the vegetation, its floristic components, and the characteristics of each term are described below.



A vegetation type is a broad vegetative unit that is not floristically based, but is defined by stand structure and physiognomic features that are characteristic of the general vegetation. Stand structure is represented by *growth form* (i.e., trees form woodlands, shrubs form shrublands of either scrub or chaparral, and herbs/grasses form grasslands) and *habit* (i.e., woody, semi-woody, or herbaceous).

A plant community is a more defined vegetative unit that is characterized and named according to the vegetation's *dominant species*. More specifically, plant communities are defined by the one dominant plant taxon that contributes to the greatest percent ground cover and/or *canopy cover* (open, intermittent, or closed/continuous). This class is usually *floristically-based* (i.e. Purple Needlegrass Perennial Grassland), in which the plant community name specifies a dominant taxon; however, this class may not always be floristically based.

A plant community may also be classified according to more defined *habit* characteristics (i.e., annual [California Annual Grassland], biennial, or perennial; sclerophyll-leaved or soft-leaved; etc.), or can be classified into more descriptive units based on origin (Ruderal Grassland) or flower displays (Wildflower Field). These plant communities do not specify a dominant plant taxon in the name, but they are more defined grassland units, and for the purposes of this report, are considered plant communities.

Table 1 lists all plant communities observed making up the four vegetation types, within the SCE survey area. It gives each community an assigned class code used in the tables in Appendix C

The plant association is a detailed vegetative unit that is always floristically based with either one dominant species plus one or more important associate species, or two *co-dominant* species plus one or more associate species. Co-dominants are two plant taxa that are equally important contributors to the overall percent ground cover, in which neither species is dominant over the other. An example of a plant association is Bigpod Ceanothus-Toyon-Chamise-Lemonadeberry Chaparral, in which Bigpod Ceanothus is the dominant species, or Bigpod Ceanothus and Toyon may be equally important co-dominants, with Chamise and Lemonadeberry as important chaparral canopy associates.

**Table 1. Plant communities and class codes.**

Plant Community Name	Class Code	Plant Community Name	Class Code
Grassland Types	G	Coastal Sage Scrub Types	S
California Annual Grassland	GCA	Black Sage Scrub	SBS
Purple Needlegrass Perennial Grassland	GPN	Blue Elderberry Scrub	SBE
Ruderal Grassland	GR	California Sagebrush Scrub	SCS
Wildflower Field Grassland	GWF	Chaparral Mallow Scrub	CCM
Chaparral Types	C	Coyote Brush Scrub	SCB
Bigpod Ceanothus Chaparral	CBC	Deerweed Scrub	SD
Lemonadeberry Chaparral	CL	Giant Wildrye Scrub	SGW
Mixed Ceanothus Chaparral	CMC	Mixed Sage Scrub	SMS
Woodland Types	W	Poison Oak Scrub	SPO
Arroyo Willow Woodland	WAW	Purple Sage Scrub	SPS
California Sycamore Woodland	WCS	Developed Land	D
Coast Live Oak Woodland	WLO	Agricultural Orchard	O
Southern California Black Walnut Woodland	WBW	Agricultural Row Crops	RC
		Residential Buildings	R
		Commercial Buildings/Nursery	CN

### 3.2 SPECIAL STATUS SPECIES

Special-status species are plants and animals that are either listed as *endangered* or *threatened* under the Federal or California Endangered Special Acts, listed as *rare* under the California Native Plant Protection Act, or *considered to be rare* (but not formally listed) by resource agencies, professional organizations (e.g. Audubon Society, California Native Plant Society (CNPS), The Wildlife Society), and the scientific community. For the purposes of this project, we selected the special-status species to be considered using the criteria listed in Table 2.

To determine which special-status species are likely to occur within a 50-foot radius of each tower along the Santa Clara-Carpinteria transmission line, a literature survey (including Skinner and Pavlik [1994]) and a search of the California Department of Fish and Game's (CDFG) Natural Diversity Data Base (NDDDB), was conducted for known occurrences in the vicinity of the transmission line.

**Table 2. Definitions of special-status species.**

Plants & animals legally protected under the California and Federal Endangered Species Acts or under other regulations.	
Plants and animals considered sufficiently rare by the scientific community to qualify for such listing; or	
Plants and animals considered to be sensitive because they are unique, declining regionally or locally, or are at the extent of their natural range.	
Special-Status Plant Species	Special-Status Animal Species
<ul style="list-style-type: none"> <li>● Plants listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (50 CFR 17.12 for listed plants and various notices in Federal Register for proposed species).</li> <li>● Plants that are Category 1 or 2 candidates for possible future listing as threatened or endangered under the Federal Endangered Species Act (55 CFR 6184, February 21, 1990).</li> <li>● Plants that meet the definitions of rare or endangered species under the CEQA (State CEQA Guidelines, Section 15380).</li> <li>● Plants considered by CNPS to be "rare, threatened, or endangered" in California (Lists 1B and 2 in Skinner &amp; Pavlik [1994]).</li> <li>● Plants listed by CNPS as plants needing more information and plants of limited distribution (Lists 3 and 4 in Skinner and Pavlik [1994]).</li> <li>● Plants listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (14 CCR 670.5).</li> <li>● Plants listed under the California Native Plant Protection Act (California Fish and Game Code 1900 et seq.).</li> <li>● Plants considered sensitive by other federal agencies (i.e., U.S. Forest Service, Bureau of Land Management) or state and local agencies or jurisdictions.</li> <li>● Plants considered sensitive or unique by the scientific community; occurs at natural range limits (State CEQA Guidelines, Appendix G).</li> </ul>	<ul style="list-style-type: none"> <li>● Animals listed/proposed for listing as threatened/endangered under the Federal Endangered Species Act (50 CFR 17.11 for listed animals and various notices in Federal Register for proposed species).</li> <li>● Animals that are Category 1 or 2 candidates for possible future listing as threatened or endangered under Federal Endangered Species Act (54 CFR 554).</li> <li>● Animals that meet the definitions of rare or endangered species under the CEQA (State CEQA Guidelines, Section 15380).</li> <li>● Animals listed or proposed for listing by the State of California as threatened and endangered under the California Endangered Species Act (14 CCR 670.5).</li> <li>● Animal species of special concern to the CDFG (Remsen [1978] for birds; Williams [1986] for mammals).</li> <li>● Animal species that are fully protected in California (California Fish &amp; Game Code, Section 3511 [birds], 4700 [mammals], 5050 [reptiles, amphibians]).</li> </ul>

Appendix D provides status, habitat requirements, distribution, and survey results for each special-status species, either observed in the vicinity of the tower sites or believed to occur at or near the towers, based on the presence of suitable habitat. The information provided, for each identified special-status species, includes: scientific and common (vernacular) names; species status, including Federal and state, CDFG's NDDB Element (Global and State) Ranking, and CNPS List and Rarity-Endangerment-Distribution (R-E-D) Code; a physical description; habitat requirements; species distribution; and survey results.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service [USFWS]), pursuant to the federal Endangered Species Act or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act.

The NDDDB Element Ranking system (NDDDB 1997b) provides a numeric global and state ranking system for all special-status species tracked by the NDDDB. The global rank (G-rank) is a reflection of the overall condition of an element (species or natural community) throughout its global range. The state ranking (S-rank) is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank. This Element Ranking system is defined in Appendix D.

As described for the NDDDB ranking, not all special-status species considered in this report are tracked by CNPS, nor are R-E-D codes given to them; therefore, we applied the rules described above to “rank” those special-status species lacking such rankings or codes. This applies to rare lichen taxa that may occur at the towers, for which CNPS has not yet developed or incorporated into its *Inventory of Rare and Endangered Vascular Plants of California* or developed and established by the California Lichen Society. Rarity G- and S-ranks devised for taxa of this report are followed by a “?”, denoting tentative assignment.

The CNPS R-E-D Code is a three-numbered numeric ranking for three categories (Rrarity-Endangerment-Distribution), which more accurately describes each plant’s population levels. Each number-code is described in Appendix E, California Native Plant Society R-E-D Code, is specific for each category.

### **3.3 TOWER NUMBERING SYSTEMS**

Most of the 245 towers surveyed along the SCE transmission line are presently number-and/or letter-coded by SCE; however, several towers, or wooden and steel poles, are either not numbered, out of sequence, or have duplicated numbers. If no original SCE tower number was available during the survey, a temporary consecutive tower number with a “?” was assigned, using SCE’s tower numbering system. However, for easier tower accounting and inventorying for these surveys, a unique sequential numbering/letter-codes system was developed and used for all towers surveyed.

## 4.0 RESULTS

### 4.1 VEGETATION

Appendix B is a list of all the plant taxa that were observed during the surveys. The botanical vegetation survey of the Santa Clara-Carpinteria transmission line found four general vegetation types, plus the developed land areas, at 245 towers. A total of 390 vegetation/land use observations were recorded at the 245 towers along the transmission line. The number of observations is larger than the number of towers because more than one plant community (or development area) occurred within the 50-foot radius of one or more towers.

**4.1.1 Potential Special-Status Vascular Plants-** The literature review and database searches identified 44 special-status species of plants known to occur in the region of the SCE Santa Clara-Carpinteria 66 kV transmission line from Saticoy to Carpinteria. Table 3 summarizes the literature and field survey results for special-status vascular plant species. It includes scientific names, whether or not they were observed, and the likelihood of occurrence within SCE boundaries if not directly observed. (Note: the timing of the field surveys is outside the preferred season to observe or detect some of the special-status species [i.e. *Fritillaria ojaiensis*].)

**Table 3. Likelihood of occurrence of special-status vascular plants.**

Scientific Name	Common Name	Habitat Preference	Status Fed/State/CNPS	Occurrence Likelihood
<i>Acanthomintha obovata</i> ssp. <i>cordata</i>	Heart-leaved Thornmint	Chaparral, Woodland, Grassland	-/-/4 1-2-3	Unlikely
<i>Antirrhinum ovatum</i>	Oval-leaved Snapdragon	Chaparral, Woodland, Grassland	C3c/-/4 1-2-3	Unlikely
<i>Aphanisma blitoides</i>	Aphanisma	Coastal Sage Scrub	C2/-/1B 2-2-2	Moderate
<i>Astragalus brauntonii</i>	Braunton Milkvetch	Chaparral, Coastal Sage Scrub, Grassland	E/-/1B 3-2-3	Low
<i>Atriplex pacifica</i>	South Coast Saltscale	Coastal Sage Scrub	C2/-/1B 3-2-2	Moderate
<i>Atriplex serenana</i> var. <i> davidsonii</i>	Davidson Saltscale	Coastal Sage Scrub	-/-/1B 3-2-2	Moderate
<i>Baccharis plummerae</i> ssp. <i> plummerae</i>	Plummer Baccharis	Coastal Sage Scrub, Live Oak Woodland	-/-/4 1-1-3	Known
<i>Boykinia rotundifolia</i>	Round-leaved Boykinia	Chaparral, Riparian Woodland	-/-/4 1-1-3	Moderate
<i>Calandrinia breweri</i>	Brewer Calandrinia	Chaparral, Coastal Sage Scrub	-/-/4 1-2-2	Possible
<i>Calochortus catalinae</i>	Catalina Mariposa Lily	Coastal Sage Scrub, Grassland	-/-/4 1-2-3	Known
<i>Calochortus plummerae</i>	Plummer Mariposa Lily	Coastal Sage Scrub, Grassland	C2/-/1B 2-2-3	Possible
<i>Calochortus weedii</i> var. <i> vestus</i>	Late-flowered Mariposa Lily	Chaparral, Coastal Sage Scrub	C2/-/1B 2-2-3	Moderate



Scientific Name	Common Name	Habitat Preference	Status Fed/State/CNPS	Occurrence Likelihood
<i>Cercocarpus betuloides</i> var. <i>blancheae</i>	Island Mountain Mahogany	Chaparral	-/14 1-1-3	Low
<i>Chorizanthe procumbens</i>	Prostrate Spineflower	Chaparral, Woodland, Coastal Sage Scrub	-/14 1-2-2	Moderate
<i>Convolvulus simulans</i>	Small-flowered Morning-glory	Coastal Sage Scrub, Grassland	-/14 1-2-2	Moderate
<i>Delphinium inopinum</i>	Unexpected Larkspur	Upper Montane Coniferous Forest	C3c/11B 2-2-3	Unlikely
<i>Dichondra occidentalis</i>	Western Dichondra	Coastal Sage Scrub, Live Oak Woodland	C3c/14 1-2-1	Possible
<i>Eriophyllum jepsonii</i>	Jepson Woolly Sunflower	Coastal Sage Scrub, Chaparral	-/14 1-1-3	Low
<i>Fritillaria ojaiensis</i>	Ojai Fritillary	Chaparral, Live Oak Woodland	C21/11B 3-2-3	Low
<i>Galium cliftonsmithii</i>	Santa Barbara Bedstraw	Coastal Sage Scrub, Live Oak Woodland	-/14 1-1-3	Possible
<i>Hordeum intercedens</i>	Vernal Barley	Vernal Pool, Grassland	-/13 ?-2-2	Unlikely
<i>Hulsea vestita</i> ssp. <i>gabrielensis</i>	San Gabriel Mountains Sunflower	Coniferous Forest	-/14 1-1-3	Unlikely
<i>Hulsea vestita</i> ssp. <i>parryi</i>	Parry Sunflower	Chaparral, Coniferous Forest	-/14 1-1-3	Unlikely
<i>Juglans californica</i> var. <i>californica</i>	Southern California Black Walnut	Riparian Forest, Live Oak Woodland	-/14 1-2-3	Known
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	Southwestern Spiny Rush	Alkaline Seep; Saltmarsh	-/14 1-2-1	Low
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's Goldfields	Grassland	C21/11B 2-3-2	Low
<i>Layia heterotricha</i>	Pale-yellow Layia	Woodland, Grassland	C21/11B 3-3-3	Low
<i>Lepechinia fragrans</i>	Fragrant Pitcher Sage	Chaparral	-/14 1-2-3	Moderate
<i>Lessingia tenuis</i>	Spring Lessingia	Lower Coniferous Forest	-/14 1-1-3	Unlikely
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	Ocellated Humboldt Lily	Chaparral, Woodland	C21/14 1-2-3	Moderate
<i>Lupinus elatus</i>	Silky Lupine	Coniferous Forest	-/14 1-1-3	Unlikely
<i>Mucronea californica</i>	California Spineflower	Floodplain Washes	-/14 1-2-3	Unlikely
<i>Orcuttia californica</i>	California Orcutt Grass	Vernal Pool	E/E/11B 3-3-2	Unlikely
<i>Oxytheca carophylloides</i>	Chickweed Oxytheca	Lower Coniferous Forest	-/14 1-1-3	Unlikely
<i>Oxytheca parishii</i> var. <i>abramsii</i>	Abrams Oxytheca	Chaparral	-/11B 2-2-3	Low
<i>Perideridia pringlei</i>	Adobe Yampah	Coastal Sage Scrub, Chaparral	C3c/14 1-1-3	Moderate
<i>Phacelia exilis</i>	Transverse Range Phacelia	Coniferous Forests	-/14 1-1-3	Unlikely
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish Milkwort	Riparian Forest	-/14 1-1-2	Known
<i>Quercus dumosa</i>	Nuttall Scrub Oak	Chaparral	C21/11B 2-3-2	Known
<i>Sagittaria sanfordii</i>	Sanford Arrowhead	Marshes, Swamps	C21/11B 2-2-3	Unlikely
<i>Senecio aphanactis</i>	Rayless Ragwort	Coastal Sage Scrub	-/12 3-2-1	Moderate

Scientific Name	Common Name	Habitat Preference	Status Fed/State/CNPS	Occurrence Likelihood
<i>Sidalcea neomexicana</i>	Salt Spring Checkerbloom	Coastal Sage Scrub, Chaparral	-/2 2-2-1	Low
<i>Suaeda taxifolia</i>	Woolly Seablite	Coastal Bluff Scrub, Marshes, Swamps	-/4 1-2-1	Unlikely
<i>Thermopsis californica</i> var. <i>argentata</i>	Silvery False Lupine	Coniferous Forest, Juniper- Pinyon Woodland	-/4 1-1-3	Unlikely

**4.1.2 Observed Special-status Vascular Plant Species-** We observed five special-status species growing within the 50-foot radius of 58 towers (more than one special-status species may occur at the same tower). These include the following:

- Plummer Baccharis (*Baccharis plummerae* ssp. *plummerae* [16 towers]);
- Catalina Mariposa Lily (*Calochortus catalinae* [9 towers]);
- Southern California Black Walnut (*Juglans californica* var. *californica* [17 towers]);
- Fish Milkwort (*Polygala cornuta* var. *fishiae* [13 towers]); and
- Nuttall's Scrub Oak (*Quercus dumosa* [13 towers]).

These five special-status species were observed a total of 68 times, at a total of 58 towers, resulting in 24% of towers with one or more of the five special-status species. No special-status plant species were observed at the remaining 179 towers (76%). Information about each observed special-status vascular plant species is provided in Appendix C, including a physical description, legal and rarity status, habitat requirements, distribution, results of the field survey, and the survey site numbers where each species occurs.

## 4.2 WILDLIFE

### 4.2.1 Special Status Wildlife Species

The special-status wildlife known or found in the study region, or in habitats similar to those found in the project area are listed in Table 4.

**Table 4. Occurrence of potential special-status wildlife.**

Scientific Name	Common Name	Habitat Preference	Status Fed/State/CNPS	Occurrence Likelihood
<b>AMPHIBIANS</b>				
<i>Taricha torosa torosa</i>	Coast range newt	Vernal pools, Riparian woodlands	CSC	Low
<i>Scaphiopus hammondi</i>	Western spadefoot toad	Grassland with vernal pools	FSC, CSC	Low
<i>Bufo microscapus californica</i>	Southwestern arroyo toad	Washes, streams, sandy streambanks	FE	Low
<b>REPTILES</b>				
<i>Phrynosoma coronatum</i>	Coast horned lizard	Coastal Sage Scrub with friable soils	FSC, CSC	Low
<i>Cnemidophorus tigris multiscutatus</i>	Coastal western whiptail	Coastal Sage Scrub	FSC, CSC	Low to Moderate
<i>Aniella pulchra pulchra</i>	California legless lizard	Live Oak Woodland	FSC, CSC	Low
<i>Clemmys marmorata ssp. pallida</i>	Southwestern pond turtle	Aquatic	FSC, CSC	Low
<i>Salvadora hexalepis virgultea</i>	Coastal patch-nosed snake	Open, rocky outcrops	FSC, CSC	Low
<i>Thamnophis hammondi</i>	Two-striped garter snake	Coastal lowlands	FSC, CSC	Low
<b>BIRDS</b>				
<i>Accipiter cooperii</i>	Cooper's hawk	Oak Woodland, Riparian	CSC (nesting)	Moderate
<i>Accipiter striatus</i>	Sharp-shinned hawk	Oak Woodland, Riparian	CSC (nesting)	Low
<i>Elanus leucurus</i>	White-tailed kite	Oak Woodland, grasslands, wetlands	CFP	Low
<i>Circus cyaneus</i>	Northern harrier	Grasslands, Lowlands	CSC (nesting)	Low
<i>Vireo belli pusillus</i>	Least Bell's vireo	Riparian Forests	CE, FE	Low
<i>Campylorhynchus brunneicapillus</i>	Coastal cactus wren	Cactus scrub	CSC	Low
<i>Dendroica petechia brewsteri</i>	Yellow warbler	Riparian Forests	FSC, CSC	Low
<i>Poliopitila californica</i>	California gnatcatcher	Coastal Sage Scrub	FT, CSC	Low
<i>Lanius l. ludovicianus</i>	Loggerhead shrike	Grasslands, Shrubland	FSC, CSC	Low
<i>Aimophila ruficeps canescens</i>	Ashy rufous-crowned sparrow	Brush mixed with Grasslands on steep slopes	FSC, CSC	Low
<b>MAMMALS</b>				
<i>Antrozous pallidus</i>	Pallid bat	Caves, crevices, structures	CSC	Low

Scientific Name	Common Name	Habitat Preference	Status Fed/State/CNPS	Occurrence Likelihood
<i>Plecotus townsendii pallescens</i>	Pale big-eared bat	Caves, crevices, man-made structures	FSC, CSC	Low
<i>Eumops perotis californicus</i>	California mastiff bat	Rock crevices	FSC, CSC	Low
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	Cactus patches in Coastal Sage Scrub and Chapparal	FSC, CSC	High
<i>Taxidea taxus</i>	American badger	Grasslands, scrub habitats	CSC	Moderate

CE = California Endangered  
 CFP = Cal. Fully Protected  
 CSC = Cal. Species of Concern

FE = Federal Endangered  
 FSC = Federal Species of Concern  
 FT = Federal Threatened

No state or federally listed rare, threatened, or endangered wildlife species are known to occur or substantially utilize the habitats available in the project area.

The California gnatcatcher is a federally threatened species that occurs near the project area. One historical record (early 1900s) exists for this species in the South Mountain area near Santa Paula, which is outside the project area. The nearest contemporary occurrence record of the California gnatcatcher was formerly thought to be on the Palos Verdes Peninsula in southwestern Los Angeles County. However, one breeding pair was found recently in coastal sage scrub near the city of Moorpark, approximately 20 miles southeast of the eastern portion of this project's study area. Therefore, the project area remains outside the current known distribution for this species. Additionally, the coastal sage scrub habitat present in much of the project area does not appear to be optimal for this species, which typically prefers relatively dense sagebrush that is mixed with prickly pear cactus.

At present, the U.S. Fish and Wildlife Service does not require intensive surveys for the species, using standardized protocols, north of the Santa Clara River (R. Farris, U.S. Fish and Wildlife Service Biologist, Ventura Field Office, pers. comm.) Therefore, this project is exempt from the existing federal requirements to conduct intensive surveys to determine the presence/absence of this listed species.

The Least Bell's vireo is listed as both a federal and a state endangered species, and the project area is within the species' breeding range. However, least Bell's vireos require relatively extensive and contiguous riparian forests with adjacent upland foraging areas for breeding. No towers are located directly in riparian habitat, although several are adjacent, and no impacts to this species are expected from any tower modifications.

A number of raptor species known to utilize the habitats present in the project area are considered sensitive due to declining populations and habitat loss. Cooper's hawks are relatively common in the area and nest at several locations within the project region. However, none were seen in the project area, nor were any nests observed immediately adjacent to the towers.

Sharp-shinned hawks and northern harriers are likely winter visitors to parts of the project area. The latter is a rare breeding species. White-tailed kites also breed in the region, generally in woodlands, near their grassland and wetland foraging areas. There is very limited suitable habitat for this species in the project area, and no impacts are expected in relation to the proposed project.

The coastal cactus wren is relatively common in the region where cactus scrub is available in large patches. No individuals or suitable habitat were observed in the project area. Yellow warblers have been recorded in the project area. However, this species requires extensive riparian forests for breeding, which would not be impacted by any proposed tower modifications.

Loggerhead shrikes frequent open habitats with sparse shrubs. Extensive losses of grasslands and breeding habitat have resulted in widespread population declines. The species has previously been suggested to forage in Sexton Canyon within the project area, and two individuals were recorded (Towers #43-N and 110-N) during field surveys. Pre-construction and construction monitoring would determine if a nest site were present at a tower scheduled for rebuild. No significant impacts to this species are expected.

Ashy rufous-crowned sparrows prefer to nest on relatively steep slopes with sparse brush and intermixed with grassy areas. Coastal sage scrub is generally considered suitable breeding habitat. The western end of the project area contains some rocky open areas that are potential habitat for this species. While it is possible that this species occurs in the project area, no impacts would be expected.

Three bat species listed as sensitive may occur in the project vicinity. No significant impacts due to tower replacements are expected to any of the sensitive bat species that occur in the region.

It is possible that any of these bat species may periodically use crevices on the existing towers as temporary roost sites. The California mastiff bat typically roosts in small crevices. This species has been found in Wheeler Gorge, some 15 miles north of the project area. This species could be found in the western end of the project area, but it is unlikely that any significant impacts would result from power line modifications. These conditions are very similar for both the pallid bat and the pale big-eared bat.

The San Diego desert woodrat inhabits cactus patches and rocky areas in coastal sage scrub and open chaparral. Six woodrat middens were found during the field surveys (Towers 1-N, 4-N, 8-N, 50-N, 68-N, and 86). It is possible that these were inhabited by San Diego desert woodrats. We made no effort (live trapping) to confirm which woodrat species was present.

American badgers are classified as a California Special Animal, preferring grasslands and open habitats, and feeding mostly on ground squirrels and pocket gophers. Badgers are known to occur in the Santa Paula area. One suspected but unconfirmed den was located in the project area (Tower 3-N). It is likely that badgers are found in or near tower locations, but that this species is not expected to be impacted by the proposed project modifications.



Coast range newts occur in the project area in or near streams in hardwood forests as well as in coastal sage scrub, chaparral, and grassland habitats. This species would not be impacted since power lines in the project area span all wetland habitats.

The western spadefoot toad occupies grassland areas in the region where shallow, temporary pools form after winter rains. It burrows into loose soil or uses existing rodent dens or other underground access. No tower sites were found within vernal pool habitat, and no impacts to this species would be expected from tower modifications. The southwestern arroyo toad is found near washes, streams, and along sandy banks with willows, cottonwoods, or sycamores. Tower lines span areas with habitat for this species, and no impacts are expected.

The coast horned lizard occupies grassland, brushland, woodland, and open coniferous forest in the region. The species' occurrence in the project area is considered limited. We observed few harvester ant colonies, which are prey for the species, and a general absence of friable soils. Ant colonies were found at three locations in the western end of the study site (Towers 88-Na, 97-N, and 99-N). Therefore, it is possible this species may be found in the project area. No impacts from tower modifications are expected.

Coastal western whiptail lizards occur near the project area (e.g., Steckel Park), and may be found in the project area within the more open and drier portions of coastal sage scrub. No impacts of proposed modifications on this species are expected.

California legless lizards occur in the duff under oak groves. Since none of the transmission towers occur within oak groves, no impacts to this species are expected.

The southwestern pond turtle is a highly aquatic species and the two-striped garter snake is a semi-aquatic species. The transmission towers in the project area span wetland and riparian areas. Therefore no impacts to these species are expected.

The coastal patch-nosed snake prefers rocky areas, near grassland, chaparral, sagebrush, and desert scrub. The western end of the project area contains potential habitat for this species, but no impacts are expected from activities associated with transmission tower rebuilding.

## **5.0 DISCUSSION AND RECOMMENDATIONS**

### **5.1 VEGETATION TYPES**

Of the 390 total vegetation type observations, 246 (63% of all observations) are recorded as a type of natural vegetation, including the vegetation types and plant communities/associations described in the preceding section. These habitat types may or may not have been affected by human activities; however, they are sustaining growth and reestablish without the aid of, or enhancement by, humans. Of the four general vegetation types, Coastal Sage Scrub makes up the largest percent ground cover along the transmission line (42% of all vegetative observations), Grassland makes up 25%, Chaparral contributes 18% of the vegetation, and Woodland contributes 15%.

Of the 245 towers, 136 towers (56%) contained only natural vegetation of one or more plant communities. A total of 20 towers (8%) contained natural vegetation and development, while the remaining 89 towers (36%) lacked natural vegetation (of which most contained agricultural crops).

### **5.2 DEVELOPED AREAS**

Of the 390 total observations, 144 (37% of all observations) are recorded as developed (non-natural areas). Developed land includes residential buildings (27 observations), commercial buildings (church, community center, nurseries [34 observations combined]), and agricultural land (avocado, citrus, and exotic fruit orchards [73 observations combined] and row-crops [10 observations]). The developed land percentage, at 37%, is disproportionately high because the towers that were surveyed along SR192 (from the intersection of SR150 west to the Carpinteria Substation) are wooden poles spaced relatively close to each other. These poles are predominantly in the immediate highway right-of-way where no or very few natural/native species are growing. If this stretch of highway were not surveyed, the percentage of developed land within the SCE survey area would be much smaller.

### **5.3 WILDLIFE CONSIDERATIONS**

The Santa Clara-Carpinteria 66kV Power Line Project is not expected to affect any sensitive wildlife species that may occur in the project area.

There are no scientific occurrence records in or near the project area to indicate the presence of California gnatcatchers, a federally threatened species. Potential impacts to other sensitive wildlife species are avoided because the transmission towers avoid wetlands and riparian areas. This assumes that the construction will not require impacts or losses of these habitat types due to

the building of new access roads, storage or staging areas, or other project activities that might disturb sensitive habitats.

For the San Diego desert woodrat, a federal and state species of special concern, possible impacts can be avoided by monitoring construction to ensure that no woodrat middens are removed. If middens cannot be avoided, the biological monitor can ensure that such middens are vacant before they are disturbed. Implementing a sensitive biological resources construction monitoring program will reduce any impacts.

Wherever possible, the construction effort to be contained to existing transmission tower pads, access roads, and other previously disturbed areas to minimize additional impacts to natural resources and sensitive species habitat. Based on our surveys, it appeared that new access roads would be needed only rarely, with some construction possibly involving removal/replacement using helicopters due to the rugged terrain or to minimize vegetation losses.

SCE should implement a biological resources monitoring program prior to and during construction. A qualified biologist should be assigned to flag sensitive biological resources for avoidance during construction and to work with construction managers to minimize habitat loss and disturbance to sensitive species.

SCE should implement appropriate erosion control measures to avoid siltation of runoff, streams, and wetlands and minimize erosion of slopes.

Removing the existing transmission towers may affect nesting and roosting sites used by several wildlife species, including several species of bats and raptors. Red-tailed hawk nests were found on six of the towers in the study area. Standard SCE raptor protection procedures should be used to ensure minimal disturbance in these areas.

## 5.4 SENSITIVE PLANT SPECIES CONSIDERATIONS

The proposed project may affect five sensitive (special-status) plant species, only one of which is considered rare and endangered (but not listed). These plants exist within the project area, and they were observed at several tower sites.

The five sensitive plants include: Plummer Baccharis (*Baccharis plummerae*), Catalina Mariposa Lily (*Calochortus catalinae*), Southern California Black Walnut (*Juglans californica* var. *californica*), Fish Milkwort (*Polygala cornuta* var. *fishiae*), and Nuttall's Scrub Oak (*Quercus dumosa*). The botanists conducting the field survey at each tower site confirm the presence of these sensitive plants, and these five plants were observed 68 times at 58 different towers.

Greater concern is placed upon *Quercus dumosa* because it is considered a species of special concern by the U.S. Fish and Wildlife Service, and was a former C2 candidate, plus it is the only special-status plant that is CNPS listed as 1B (considered to be rare, threatened, or endangered).

*Quercus dumosa* is distributed in only a limited number of occurrences in a small range of chaparral habitats primarily near the coast. This scrub oak grows on predominantly dry, south-facing slopes, but may be found on less shaded north-facing slopes as well. *Q. dumosa* often only occurs as an occasional shrub, but it is also recorded as co-dominating chaparral associations or as an important chaparral contributor. For example, Nuttall Scrub Oak thrives locally in Bigpod Ceanothus Chaparral, which is dominated by *Ceanothus megacarpus* var. *megacarpus*.

Another significant botanical concern involves a habitat type that supports special-status wildlife species. Coastal Sage Scrub plant communities, more specifically California Sagebrush (*Artemisia californica*) Scrub, Mixed Sage (*A. californica* plus *Salvia* spp.) Scrub, or any scrub type that is dominated or co-dominated by *A. californica*, is of special concern because it provides the required habitat for the federally threatened California Gnatcatcher. These scrub plant communities suffer continuous great losses due to urbanization and development. These shrublands occur throughout the project area and in the immediate vicinity of many of its towers; therefore, efforts should conserve as much California Sagebrush dominated habitat as possible.

A sensitive biological resources monitoring plan should be implemented in order to avoid any unnecessary impacts to all special-status plant species, including the rare *Q. dumosa* and the important California Sagebrush habitat required by the threatened Californian Gnatcatcher. SCE should be informed of the characteristics of the special-status plants involved with this project, and they should be aware of tower locations, which exist in areas inhabited by *Q. dumosa* or *A. californica* dominant scrub plant communities. Potential impacts to *Q. dumosa* can be minimized by avoiding construction activities in the direct vicinity of this species; therefore, all *Q. dumosa* shrubs with the potential to be impacted by construction activities should be flagged so they may be visible and avoided. All construction activities involved with this tower replacement project should be conducted within a minimum area within, or as close to each tower's 50-foot radius as possible in order to minimize or avoid impacts to special-status plants. Lastly, a biological monitor should be present during construction activities to ensure compliance with these regulations.

## 6.0 ACKNOWLEDGEMENTS

Carl G. Thelander (Project Manager) and Ed Johnson completed the wildlife elements of the project. David Magney Environmental Consulting, Ojai, California provided the botanical elements of the project, including that portion of the fieldwork, data analysis, and reporting. Special thanks go to Cher Wellonen for her efforts in the field and with the reporting. DMEC provided valuable wildlife observations while conducting the botanical fieldwork. We thank Michael Ward, Mike Hernandez, and John Polito, SCE transmission line maintenance personnel, for providing logistical assistance in the field.

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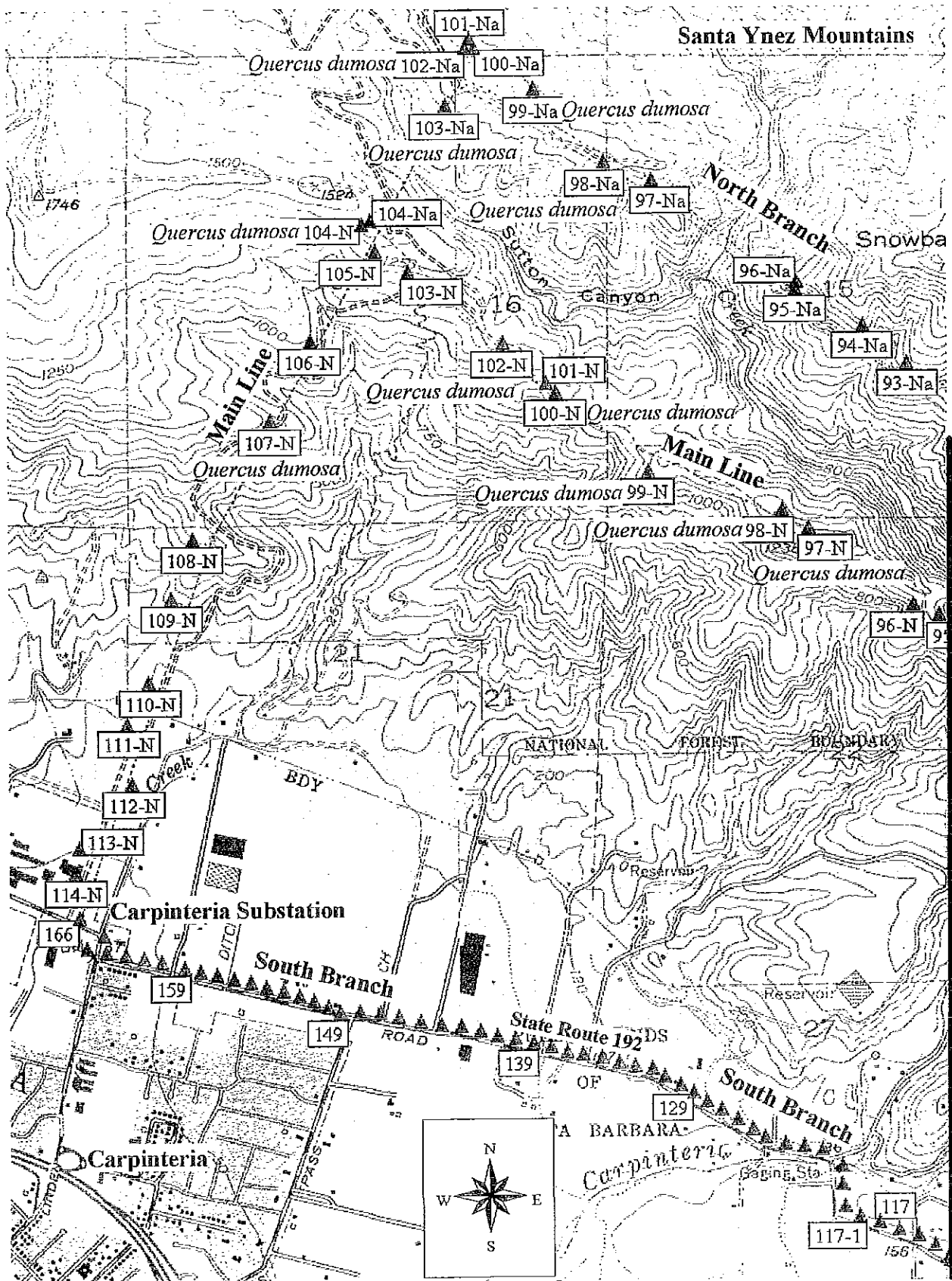


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# APPENDICES

## APPENDIX A. MAP ATLAS OF THE PROJECT AREA.

**Figure A1. Location of Sensitive Resources along the SCE Santa Clara-Carpinteria Transmission Line Towers**



Marchline to Figure A2

Figure A2. Location of Sensitive Resources along the SCE Santa Clara-Carpinteria Transmission Line Towers

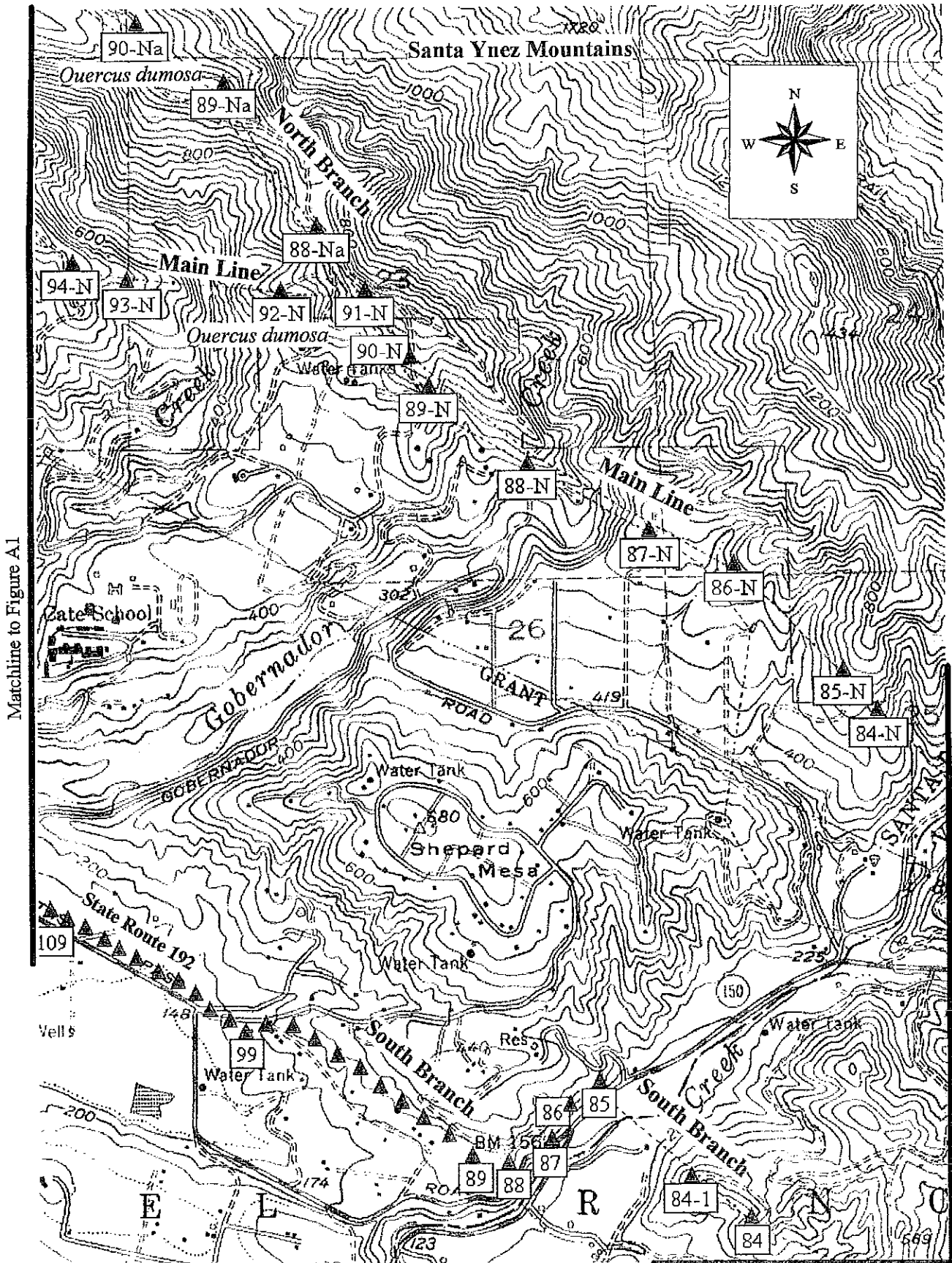


Figure A3. Location of Sensitive Resources along the SCE Santa Clara-Carpinteria Transmission Line Towers

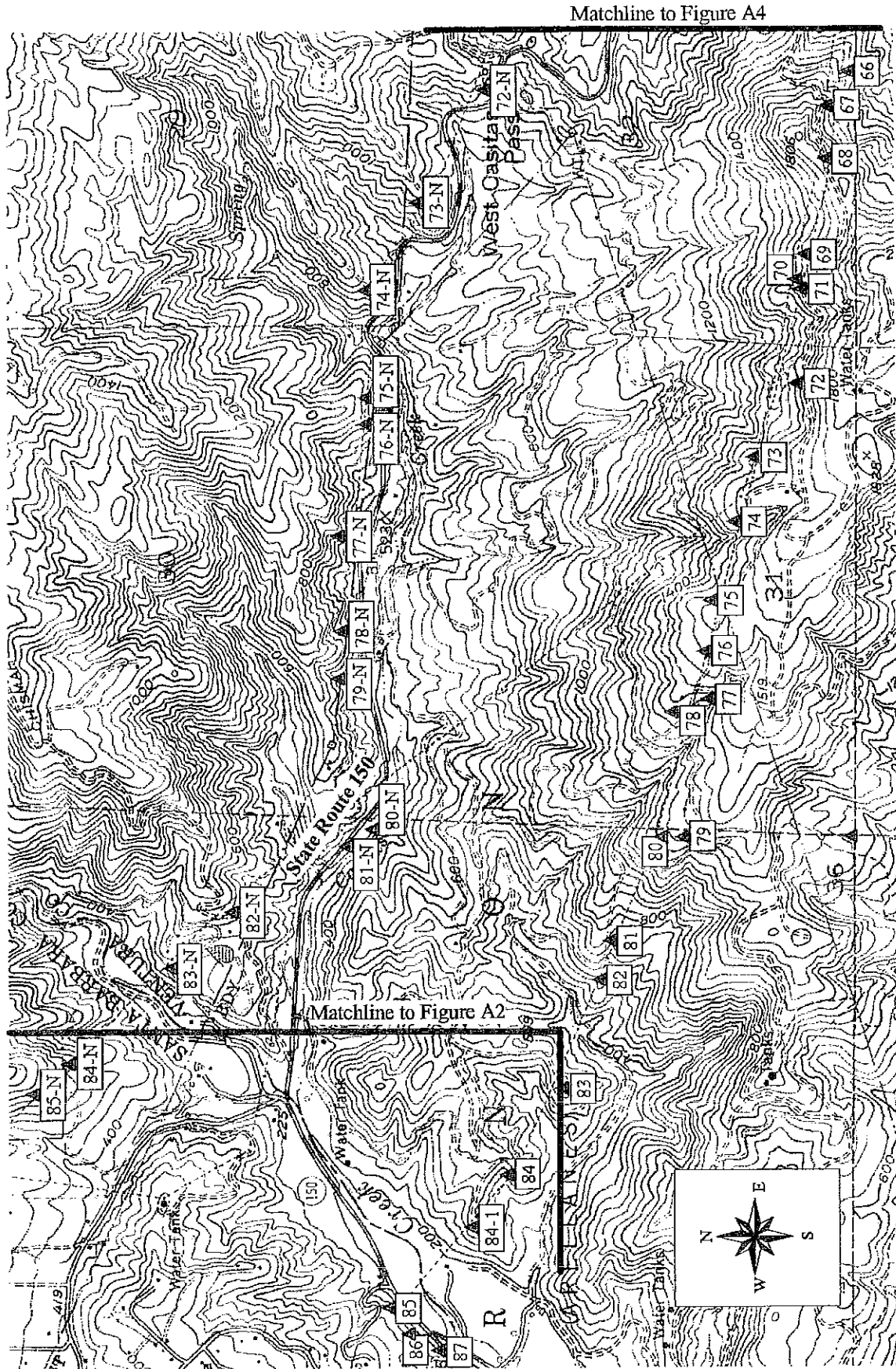
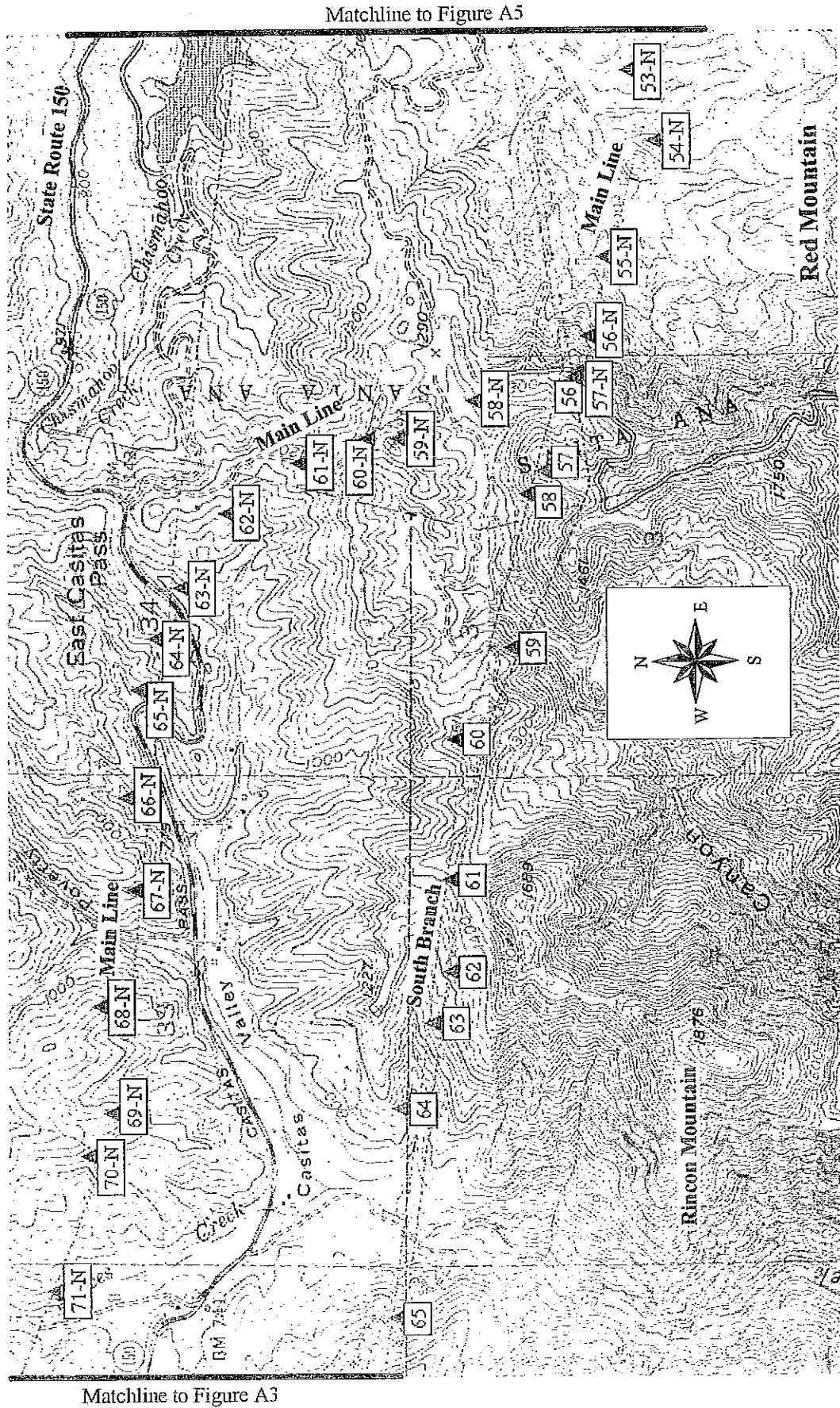


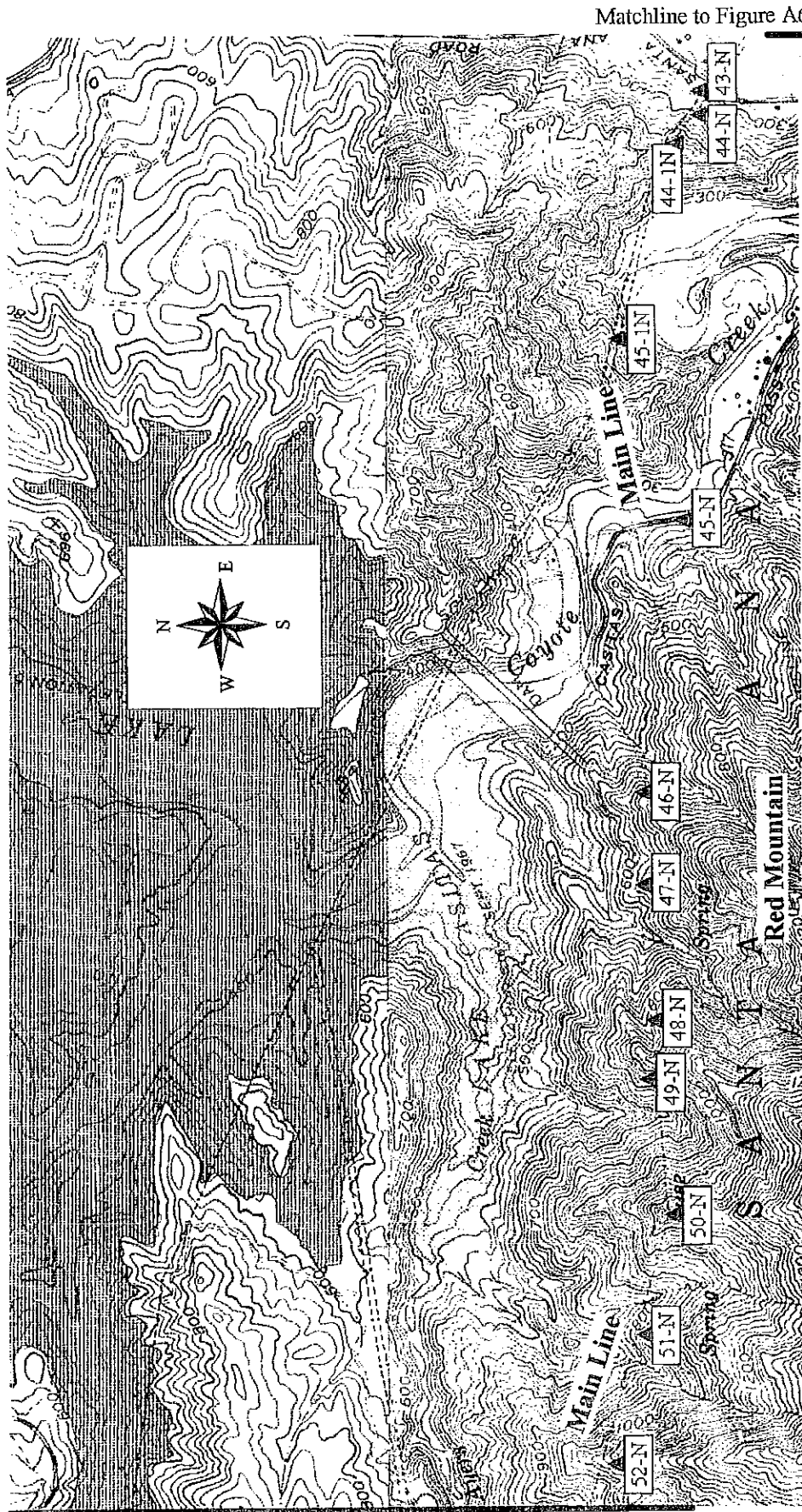


Figure A4. Location of Sensitive Resources along the SCE Santa Clara-Carpinteria Transmission Line Towers



Matchline to Figure A3

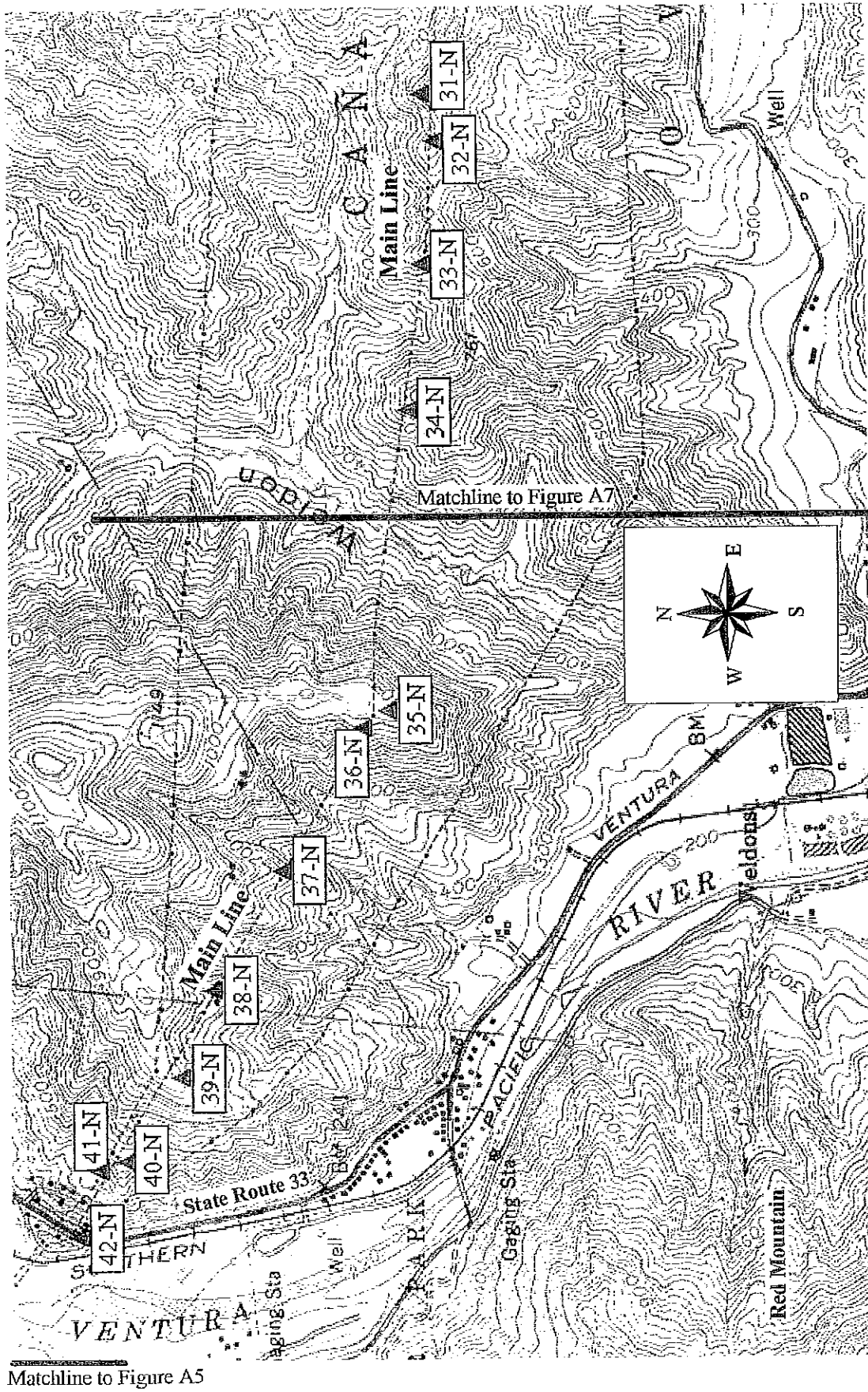
Figure A5. Location of Sensitive Resources along the SCE Santa Clara-Carpinteria Transmission Line Towers



Matchline to Figure A4

Matchline to Figure A6

Figure A6. Location of Sensitive Resources along the SCE Santa Clara-Carpinteria Transmission Line Towers



Matchline to Figure A5

Figure A7. Location of Sensitive Resources along the SCE Santa Clara-Carpinteria Transmission Line Towers

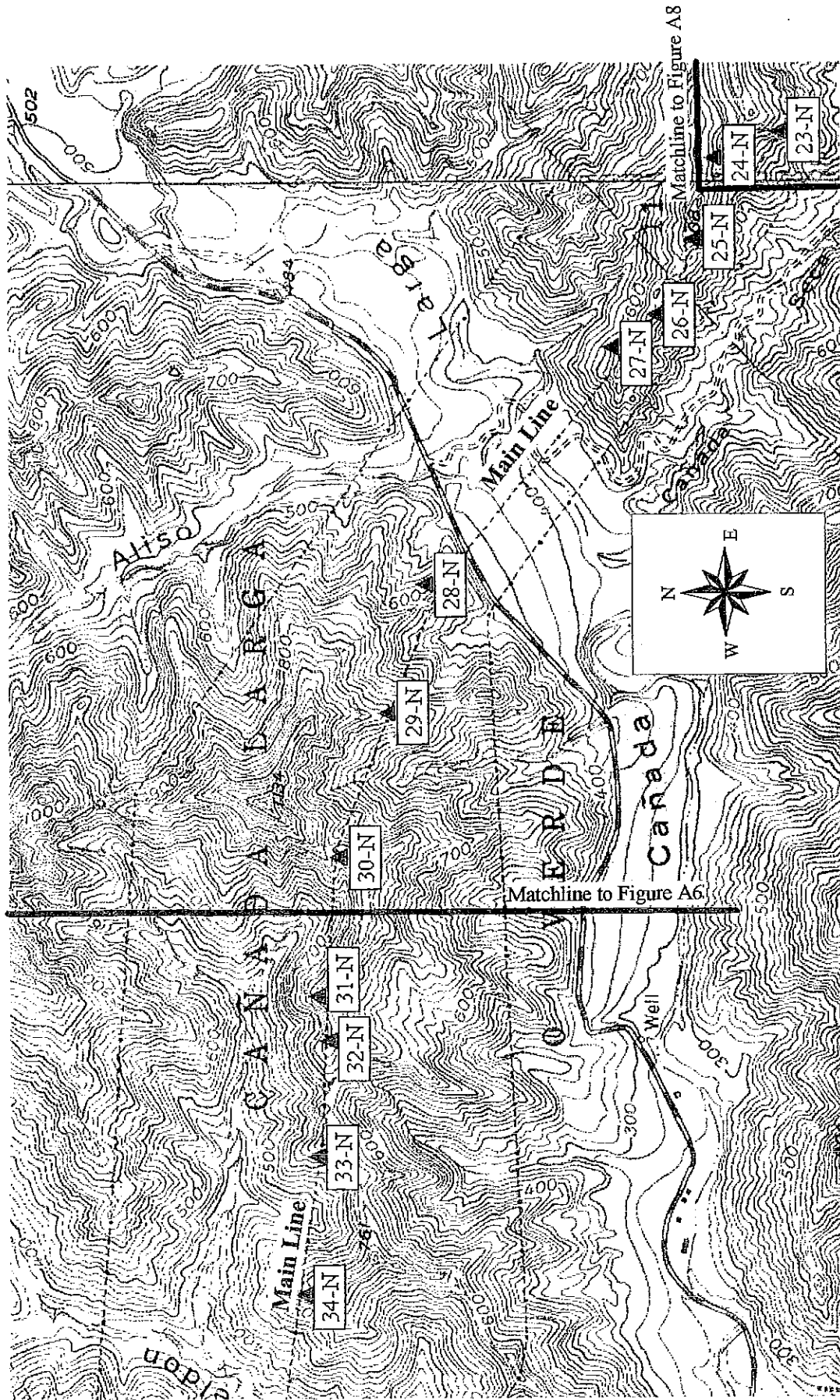
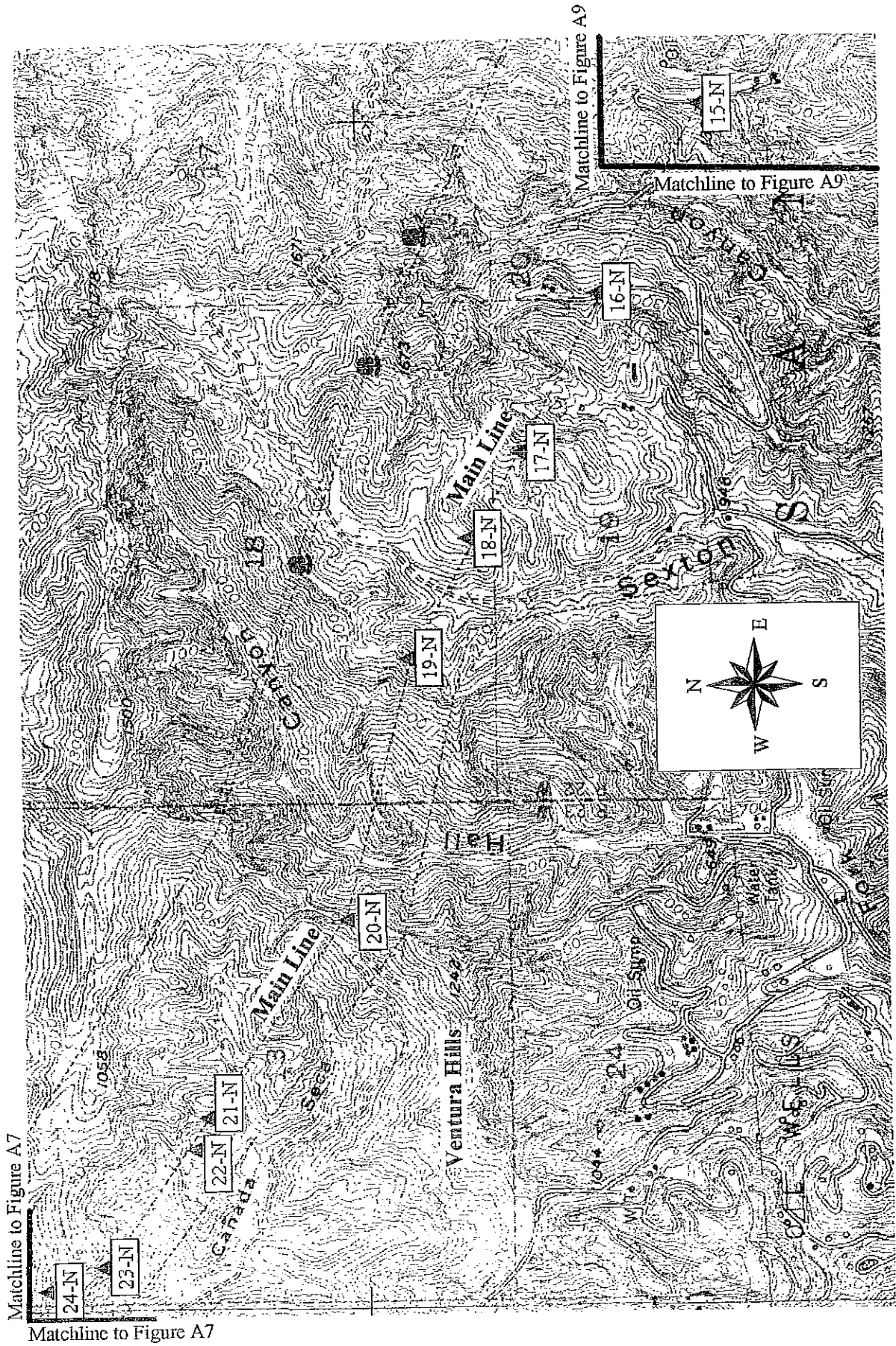


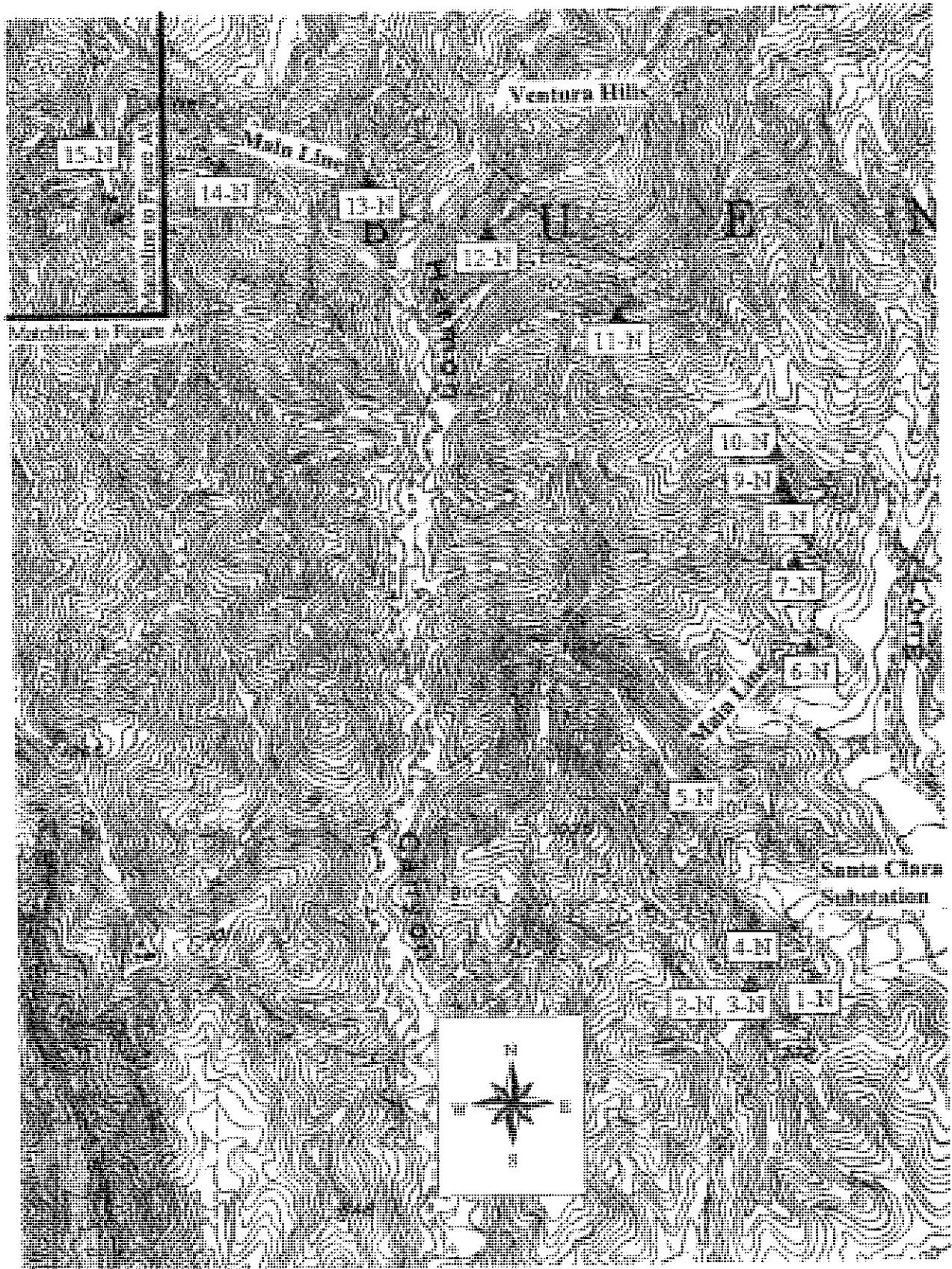


Figure A8. Location of Sensitive Resources along the SCE Santa Clara-Carpinteria Transmission Line Towers





**Figure A9. Location of Sensitive Resources  
along the SCE Santa Clara-Carpinteria Transmission Line Towers**



## APPENDIX B. PLANT SPECIES OBSERVED

Appendix B lists the plant taxa (common and scientific names) that were observed collectively at all tower sites within the survey area. Special-status species encountered during the field study are in bold-faced type, and the species that are X-marked are the dominant plants observed forming the floristically-based plant communities and associations at the SCE tower sites.

Scientific Name <sup>1</sup>	Common Name <sup>2</sup>	Dominant <sup>3</sup>
<i>Achillea millefolium</i> var. <i>millefolium</i>	White Yarrow	X
<i>Adenostoma fasciculatum</i>	Chamise	X
<i>Adiantum jordanii</i>	California Maiden-hair	
<i>Agoseris heterophylla</i>	Mountain Dandelion	
<i>Agrostis viridis</i> * <sup>4</sup>	Bentgrass	
<i>Alopecurus carolinianus</i>	Carolina Foxtail	
<i>Ambrosia psilostachya</i> var. <i>californica</i>	Western Ambrosia	
<i>Anagallis arvensis</i> *	Scarlet Pimpernel	
<i>Arctostaphylos glandulosa</i> ssp. <i>mollis</i>	Santa Ynez Mtns. Eastwood Manzanita	X
<i>Artemisia californica</i>	California Sagebrush	X
<i>Artemisia douglasiana</i>	Mugwort	
<i>Asclepias fascicularis</i>	Narrowleaf Milkweed	
<i>Astragalus trichopodus</i> var. <i>phoxus</i>	Antisell Three-pod Milkvetch	
<i>Atriplex lentiformis</i> ssp. <i>breweri</i>	Brewer Big Saltbush	
<i>Atriplex semibaccata</i> *	Australian Saltbush	
<i>Avena barbata</i> *	Slender Oat	X
<i>Avena fatua</i> *	Wild Oat	X
<i>Baccharis pilularis</i>	Coyote Brush	X
<i>Baccharis plummerae</i> ssp. <i>plummerae</i>	Plummers Baccharis	
<i>Baccharis salicifolia</i>	Mulefat	
<i>Bloomeria crocea</i> ssp. <i>crocea</i>	Goldenstars	
<i>Brachypodium distachyon</i> *	Shortfoot Brachypodium	
<i>Brassica nigra</i>	Black Mustard	X
<i>Brickellia californica</i>	California Brickellbush	X
<i>Bromus laevipes</i>	Woodland Brome	
<i>Bromus diandrus</i> *	Ripgut Grass	X
<i>Bromus hordeaceus</i> *	Soft Chess	X
<i>Bromus madritensis</i> ssp. <i>madritensis</i> *	Foxtail Chess	

<sup>1</sup> Botanical nomenclature follows Hickman (1993).

<sup>2</sup> Common (vernacular) names follow Abrams and Ferris (1960), Neihaus and Ripper (1976), and DeGarmo (1980).

<sup>3</sup> A plant is considered a dominant species when its percent cover is 20% or more.

<sup>4</sup> An asterisk "\*" indicates taxa not native to California.

Scientific Name <sup>1</sup>	Common Name <sup>2</sup>	Dominant <sup>3</sup>
<i>Bromus madritensis</i> ssp. <i>rubens</i> *	Red Brome	X
<i>Bromus trini</i> * (26 May; Tower No. 6-5)	Chilean Grass	
<i>Calochortus albus</i>	Fairy Lantern	
<i>Calochortus catalinae</i>	Catalina Mariposa Lily	
<i>Calystegia macrostegia</i> ssp. <i>cyclostegia</i>	Morning-glory	
<i>Carduus pycnocephalus</i> *	Italian Thistle	
<i>Carpobrotus chilensis</i> *	Sea Fig	
<i>Carpobrotus edulis</i> *	Hottentot Fig	
<i>Castilleja affinis</i> ssp. <i>affinis</i>	Lay-and-Collie Indian Paintbrush	
<i>Ceanothus megacarpus</i> var. <i>megacarpus</i>	Bigpod Ceanothus	X
<i>Ceanothus oliganthus</i>	Hoary Ceanothus	X
<i>Ceanothus spinosus</i>	Greenbark Ceanothus	X
<i>Centaurea melitensis</i> *	Tocalote	
<i>Cercocarpus betuloides</i> var. <i>betuloides</i>	Birchleaf Mountain Mahogany	X
<i>Chamomilla suaveolens</i>	Pineapple Weed	
<i>Chenopodium ambrosioides</i> *	Mexican Tea	
<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Soap Plant	
<i>Cirsium occidentale</i> var. <i>venustum</i>	Red Thistle	
<i>Cirsium vulgare</i> *	Bull Thistle	
<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	Four-spotted Purple Clarkia	
<i>Clarkia unguiculata</i>	Elegant Clarkia	
<i>Claytonia perfoliata</i>	Miners Lettuce	
<i>Clematis ligusticifolia</i>	Virgin Bower	
<i>Conium maculatum</i> *	Poison Hemlock	X
<i>Conyza bonariensis</i> *	South American Horseweed	
<i>Conyza canadensis</i>	Horseweed	
<i>Cortaderia selloana</i> *	Pampas Grass	
<i>Cuscuta</i> sp.	Dodder	
<i>Cynodon dactylon</i> *	Bermuda Grass	
<i>Cytisus multiflorus</i> *	Spanish Broom	
<i>Datura wrightii</i>	Jimson Weed	
<i>Daucus carota</i> *	Queen Anne's Lace	
<i>Daucus pusillus</i>	Rattlesnake Weed	
<i>Dichelostemma capitatum</i> ssp. <i>capitatum</i>	Blue Dicks	
<i>Dryopteris arguta</i>	Coastal Wood Fern	
<i>Dudleya lanceolata</i>	Lance-leaf Live Forever	
<i>Elymus glaucus</i> ssp. <i>glaucus</i>	Woodland Wildrye	
<i>Elymus stebbinsii</i>	Wheat Grass	
<i>Emex spinosa</i> *	Devils Thorn	
<i>Encelia californica</i>	California Bush Sunflower	X

Scientific Name <sup>1</sup>	Common Name <sup>2</sup>	Dominant <sup>3</sup>
<i>Epilobium canum</i> ssp. <i>canum</i>	California Fuchsia	
<i>Epilobium canum</i> ssp. <i>latifolium</i>	Broad-leaved California Fuchsia	
<i>Eremocarpus setigerus</i>	Dove Weed	
<i>Eriogonum cinereum</i>	Ash Coast Buckwheat	X
<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	Leafy California Buckwheat	X
<i>Erigeron foliosus</i> var. <i>foliosus</i>	Slender Fleabane	
<i>Eriogonum</i> sp. 1	Buckwheat	
<i>Eriogonum</i> sp. 2	Buckwheat	
<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	Golden Yarrow	X
<i>Erodium botrys</i> *	Broadleaf Filaree	
<i>Erodium cicutarium</i> *	Redstem Filaree	
<i>Erodium moschatum</i> *	Whitestem Filaree	
<i>Eschscholzia californica</i>	California Poppy	
<i>Eucalyptus globulus</i> ssp. <i>globulus</i> *	Tasmanian Blue Gum Eucalyptus	X
<i>Eucrypta chrysanthemifolia</i>	Eucrypta	
<i>Euphorbia pepus</i> *	Petty Spurge	
<i>Euthamia occidentalis</i>	Western Goldenrod	
<i>Filago californica</i>	California Filago	
<i>Foeniculum vulgare</i> *	Sweet Fennel	X
<i>Frankenia salina</i>	Alkali Heath	
<i>Fraxinus dipetala</i>	California Flowering Ash	
<i>Fremontodendron californicum</i> ssp. <i>californicum</i>	California Flannel Bush	
<i>Galium nuttallii</i> ssp. <i>nuttallii</i>	San Diego Bedstraw	
<i>Galium angustifolium</i> ssp. <i>angustifolium</i>	Chaparral Bedstraw	
<i>Galium aparine</i>	Goose Grass	
<i>Geranium dissectum</i> *	Dissected Geranium	
<i>Gnaphalium californicum</i>	Green Everlasting	X
<i>Hazardia squarrosa</i> var. <i>obtusata</i>	Sawtooth Goldenbush	X
<i>Helianthemum scoparium</i>	Peak Rush-rose	
<i>Hemizonia fasciculata</i>	Fascicled Tarplant	
<i>Heteromoles arbutifolia</i>	Toyon	X
<i>Heterotheca grandiflora</i>	Telegraph Weed	
<i>Hirschfeldia incana</i> *	Summer Mustard	X
<i>Hordeum depressum</i>	Low Barley	
<i>Hordeum murinum</i> ssp. <i>glaucum</i> *	Summer Barley	X
<i>Juglans californica</i> var. <i>californica</i>	Southern California Black Walnut	X
<i>Juncus patens</i>	Spreading Rush	
<i>Keckiella cordifolia</i>	Heart-leaved Bush Penstemon	
<i>Lactuca serriola</i> *	Prickly Wild Lettuce	
<i>Lamarkia aurea</i> *	Goldentop	

Scientific Name <sup>1</sup>	Common Name <sup>2</sup>	Dominant <sup>3</sup>
<i>Lathyrus vestitus</i> ssp. <i>laetiflorus</i>	Pacific Peavine	
<i>Lathyrus vestitus</i> ssp. <i>vestitus</i>	Pacific Peavine	
<i>Lessingia filaginifolia</i>	Cudweed Aster	
<i>Leymus condensatus</i>	Giant Wildrye	X
<i>Leymus triticoides</i> ?	Creeping Wildrye	
<i>Lolium multiflorum</i> *	Italian Ryegrass	X
<i>Lonicera subspicata</i> var. <i>denudata</i>	Southern Honeysuckle	
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Ynez Mountains Honeysuckle	
<i>Lotus salsuginosus</i> var. <i>salsuginosus</i>	Hosackia	
<i>Lotus scoparius</i>	Deerweed	X
<i>Lupinus concinnus</i>	Bajada Lupine	
<i>Lupinus longifolius</i>	Long-leaved Bush Lupine	
<i>Lupinus nanus</i>	Sky Lupine	
<i>Lupinus succulentus</i>	Fleshy Lupine	
<i>Madia gracilis</i>	Slender Tarplant	
<i>Malacothamnus fasciculatus</i>	Chaparral Mallow	X
<i>Malacothrix saxatilis</i> var. <i>saxatilis</i>	Cliff-aster	X
<i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>	Tenuated Cliff-aster	
<i>Malosma laurina</i>	Laurel Sumac	X
<i>Malva parviflora</i> *	Cheeseweed	
<i>Marah fabaceus</i> var. <i>agrestis</i>	California Man-root	
<i>Marrubium vulgare</i> *	White Horehound	X
<i>Medicago polymorpha</i> *	Burclover	
<i>Melica imperfecta</i>	Melic Grass	
<i>Melilotus alba</i> *	White Sweetclover	
<i>Melilotus indica</i> *	Sourclover	
<i>Mimulus aurantiacus</i>	Bush Monkeyflower	X
<i>Mirabilis californica</i>	California Wishbone Bush	
<i>Nassella pulchra</i>	Purple Needlegrass	X
<i>Navarretia jaredii</i>	Navarretia	
<i>Nicotiana glauca</i> *	Tree Tobacco	
<i>Opuntia littoralis</i>	Coast Prickly-pear	
<i>Oxalis albicans</i> ssp. <i>pilosa</i>	Hairy White Wood Sorrel	
<i>Paeonia californica</i>	California Peony	
<i>Persea americana</i>	American Persea	
<i>Phacelia affinis</i>	Phacelia	
<i>Phacelia cicutaria</i>	Caterpillar Phacelia	
<i>Phacelia ciliata</i> var. <i>ciliata</i>	Ciliate Phacelia	
<i>Phacelia parryi</i>	Parry Phacelia	
<i>Phalaris minor</i> *	Canary Grass	



Scientific Name <sup>1</sup>	Common Name <sup>2</sup>	Dominant <sup>3</sup>
<i>Pholistoma auritum</i> var. <i>auritum</i>	Fiesta Flower	
<i>Picris echioides</i> *	Bristly Ox-tongue	
<i>Piptatherum miliaceum</i> *	Smilo Grass	
<i>Platanus racemosa</i>	Western Sycamore	X
<i>Poa annua</i> *	Annual Bluegrass	
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish Milkwort	
<i>Polypodium californicum</i>	California Polypody	
<i>Polypogon monspeliensis</i> *	Rabbitsfoot Grass	
<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>	Black Cottonwood	
<i>Prunus ilicifolia</i>	Holly-leaf Cherry	
<i>Quercus agrifolia</i>	Coast Live Oak	X
<i>Quercus dumosa</i>	Coastal Scrub Oak	X
<i>Ranunculus californicus</i>	California Buttercup	
<i>Raphanus sativus</i> *	Wild Radish	
<i>Rhamnus crocea</i>	Spiny Redberry	X
<i>Rhamnus ilicifolia</i>	Hollyleaf Redberry	
<i>Rhus integrifolia</i>	Lemonadeberry	X
<i>Ribes malvaceum</i> var. <i>malvaceum</i>	Chaparral Currant	
<i>Ribes speciosum</i>	Fuschia-flowered Gooseberry	X
<i>Rosa californica</i>	California Wild Rose	
<i>Rubus ursinus</i>	California Blackberry	
<i>Rumex crispus</i> *	Curly Dock	
<i>Salix lasiolepis</i>	Arroyo Willow	X
<i>Salsola tragus</i> *	Russian Thistle	
<i>Salvia apiana</i>	White Sage	X
<i>Salvia leucophylla</i>	Purple Sage	X
<i>Salvia mellifera</i>	Black Sage	X
<i>Salvia spathaceae</i>	Hummingbird Sage	
<i>Sambucus mexicana</i>	Blue Elderberry	X
<i>Sanicula arguta</i>	Sanicle	
<i>Sanicula bipinnata</i>	Poison Sanicle	
<i>Sanicula crassicaulis</i>	Pacific Sanicle	
<i>Satureja douglasii</i>	Yerba Buena	
<i>Schinus molle</i> *	Peruvian Pepper Tree	
<i>Schismus arabicus</i> *	Arabian Grass	
<i>Scrophularia californica</i> ssp. <i>floribunda</i>	Many-flowered Figwort	
<i>Senecio mikanioides</i> *	Cape Ivy	
<i>Senecio vulgaris</i> *	Common Groundsel	
<i>Sidalcea malvaeflora</i> ssp. <i>californica</i>	California Globe Mallow	
<i>Silene gallica</i> *	Windmill Pink	

Scientific Name <sup>1</sup>	Common Name <sup>2</sup>	Dominant <sup>3</sup>
<i>Silybum marianum</i> *	Milk Thistle	X
<i>Sisyrinchium bellum</i>	Blue-eyed Grass	X
<i>Solanum douglasii</i>	Douglas Nightshade	
<i>Solanum xantii</i> var. <i>xantii</i>	Chaparral Nightshade	
<i>Sonchus asper</i> *	Prickly Sow-thistle	
<i>Sonchus oleraceus</i> *	Common Sow-thistle	
<i>Stachys bullata</i>	Hedge Nettle	
<i>Strelitzia reginae</i>	Bird-of-paradise	
<i>Symphoricarpos mollis</i>	Creeping Snowberry	
<i>Thalictrum fendleri</i>	Meadow-rue	
<i>Torilis nodosa</i> *	Rattlesnake Plant	
<i>Toxicodendron diversilobum</i>	Poison Oak	X
<i>Urtica dioica</i> ssp. <i>holosericea</i>	Hoary Creek Nettle	
<i>Venegasia carpesioides</i>	Canyon Sunflower	
<i>Verbena lasiostachys</i>	Western Verbena	X
<i>Vicia villosa</i> ssp. <i>varia</i>	Hairy Vetch	
<i>Viola pedunculata</i>	Johnny Jump-up	
<i>Vulpia bromoides</i> *	Slender Fescue	
<i>Xanthium strumarium</i>	Cocklebur	
<i>Yucca whipplei</i>	Our Lord's Candle	

## APPENDIX C. VEGETATION DESCRIPTIONS

This appendix provides a complete inventory of the three vegetative units (vegetation types, plant communities, and plant associations) observed at each tower along the SCE Santa Clara-Carpinteria 66 kV transmission line. Generalized information on the vegetation's stand structure, species descriptions and requirements, site characteristics, and associate species contributing to the plant associations are provided in the following subsections.

Site characteristics are described in order to establish a pattern of species occurrences, as well as to determine species adaptations (to fire, flooding, or drought conditions) and environmental requirements (elevation, slope aspect, soil content/texture, moisture level, and chemical or geological variables). The slope aspect is notably important because it can determine other site characteristics such as sun exposure, moisture levels, wind factors, and local temperature levels. These site characteristics define what species are capable of, or are adapted for, growing in each unique site. Slope aspect observed for each plant association are provided in the summary tables at the beginning of each vegetation type subsection in Appendix C.

The natural vegetation in the study area contains four general vegetation types: grassland, coastal sage scrub, chaparral, and woodland. These are described below.

## TYPE 1- GRASSLAND

Grassland consists of predominantly low herbaceous and grassy vegetation that forms a continuous ground cover on open hillsides, or as understory patches below emergent shrubs, shrublands, and woodlands. Many native flowering herb/bulb species (wildflowers), as well as naturalized annual forbs and invasive exotics, are important contributors to grassland. Grassland typically grows in well-developed, deeper, fine textured soils on gentle slopes and flats, coastal terraces, and in disturbed sandy sites. Areas dominated by grasses are often in early succession, and over time, they tend to revert back to shrublands, or even woodlands, if burning and disturbance frequencies are minimal (Zedler et al. 1997). Grassland is recorded a total of 61 times during the field survey, and makes up 25% of the total vegetation observed (second most observed type after Coastal Sage Scrub). Grassland consists of four different plant communities, of which three are not floristically-based. Table C-1 provides an inventory of the four grassland communities and their plant associations, and lists the slope aspect on which each association was observed growing on.

**Table C-1. Grassland Inventory for the SCE Towers Vegetation Survey**

Grassland Communities and Plant Associations	Slope Aspect	Observations / Totals
<i>California Annual Grassland</i> (no dominant grass recorded):	N,NE,E,W, ridge top	7
California Annual Grassland-Laurel Sumac	Ridge top	1
Slender Oat Annual Grassland-California Sagebrush	E	2
Ripgut Grass Annual Grassland	N, S	2
Subtotal		12
<i>Purple Needlegrass Perennial Grassland</i>	N	1
<i>Ruderal Grassland</i> (no dominant herb recorded):	N,S,SE,SW,W, r.t.	19
Black Mustard-Cliff-aster Ruderal Grassland-White Sage	SE	1
Black Mustard-Milk Thistle-Poison Hemlock Ruderal Grassland	N, S, E, W	1
Black Mustard-Milk Thistle Ruderal Grassland	S, SW, ridge top	3
Black Mustard-Poison Hemlock Ruderal Grassland-California Sagebrush	W	1
Black Mustard Ruderal Grassland	S, E, W	14
Black Mustard Ruderal Grassland-California Sagebrush	ridge top	1
Black Mustard Ruderal Grassland-Coyote Brush	NE, W	3
Black Mustard Ruderal Grassland-Purple Sage	S	2
Poison Hemlock Ruderal Grassland	NW, SW	2
Poison Hemlock Ruderal Grassland-Coyote Brush	N	1
Ruderal Grassland-California Sagebrush	W	1
White Horehound-Summer Mustard Ruderal Grassland	SE	1
Subtotal		47
<i>Wildflower Field Grassland</i>	N	1
<b>Total Grassland Observations:</b>		<b>61 = 25 %</b>

## CALIFORNIA ANNUAL GRASSLAND

California Annual Grassland (California Annual Grassland Series according to Sawyer and Keeler-Wolf [1995]) is dominated by alien and native annual grasses (genera including *Avena*, *Bromus*, *Hordeum*, *Lolium*, and *Vulpia*) and herbs. This series occurs on all topographic locations, especially gradual slopes consisting of deep soils, at elevations between sea level and 1,200 meters, and species composition varies among stands. The major factors determining grassland composition include fall temperatures and precipitation, light intensity affected by shading from plants and litter, and microtopography variations. Therefore, the fine scale variation in temporal and spatial structure found in this series suggests that recognition of many species-dominant series is not particularly useful.

Most of the annual grasses found in the study area are primarily Mediterranean in origin, germinate in the fall or early winter with the first rains, and are protected from unseasonal germination by a preference for cool temperatures. Growth is extremely plastic because annual grasses are so well-adapted to California's highly variable rainfall. Floristic richness of California Annual Grassland is also affected to a high degree by land use activity. Although the introduced annual grass species have irreversibly invaded the once native (perennial) grass stands, they are often referred to as naturalized, and are often considered important California Annual Grassland contributors. (Zedler et al. 1997).

California Annual Grassland is recorded at 12 towers, which include seven non-floristic observations, and five observations of the three plant associations (below). These California Annual Grassland floristically-based associations include dominant grasses such as Slender Wild Oat (*Avena barbata*), Wild Oat (*A. fatua*), Ripgut Grass (*Bromus diandrus*), and emergent California Sagebrush (*Artemisia californica*) and Laurel Sumac (*Malosma laurina*) shrubs. Other characteristic grass species typical of California Annual Grassland in the study area include: Soft Chess (*B. hordeaceus*), Foxtail Chess (*B. madritensis* ssp. *madritensis*), Red Brome (*B. m.* ssp. *rubens*), Summer Barley (*Hordeum murinum* ssp. *glaucum*), Italian Ryegrass (*Lolium multiflorum*), and Slender Fescue (*Vulpia bromoides*).

The associate ground layer contributor many native herb and bulb species, as well as naturalized annual forbs, including: Ranchers Fire (*Amsinckia menziesii* var. *intermedia*), mustards (*Brassica* and *Hirschfeldia*), forget-me-nots (*Cryptantha* spp.), Blue Dicks (*Dichelostemma capitatum*), Red-stem Filaree (*Erodium cicutarium*), Green Everlasting (*Gnaphalium californicum*), lupines (*Lupinus* spp.), Curly Dock (*Rumex crispus*), Blue-eyed Grass (*Sisyrinchium bellum*), and Western Verbena (*Verbena lasiostachys*). The more invasive forb components include: thistles (*Carduus pycnocephalus*, *Silybum marianum*, *Sonchus oleraceus*), Tocalote (*Centaurea melitensis*), White Horehound (*Marrubium vulgare*).

The three California Annual Grassland plant associations are:

- California Annual Grassland-Laurel Sumac
- Slender Oat Annual Grassland-California Sagebrush
- Ripgut Grass Annual Grassland



## PURPLE NEEDLEGRASS PERENNIAL GRASSLAND

Purple Needlegrass Perennial Grassland (Purple Needlegrass Series according to Sawyer and Keeler-Wolf [1995] or Southern Coastal Needlegrass Grassland according to Magney [1992]) is dominated by *Nassella pulchra*. This tussock-forming, native, perennial grass grows on all topographic locations in deep, high clay content, fine-textured soils that are moist during winter and very dry during summer. Native and introduced annuals are often found growing within the open gaps of the perennial Purple Needlegrass ground cover. While the non-native annual grasses and forbs typically exceed the bunchgrass in cover, Purple Needlegrass must contribute to at least 10% of the ground cover for the stand to be considered a series. This plant community is found as small open pockets within Coastal Sage Scrub communities or intergrading with chaparral and woodland communities. Stands of this once more extensive grassland occur on coastal terraces and foothills in valleys of California's south coast (Santa Ana Mountains), and in coastal Transverse Ranges, at elevations up to 1,300 meters.

Purple Needlegrass Perennial Grassland was observed at one tower (Survey Site No. 44-N), and no Purple Needlegrass associations are recorded. This plant community occurs as an understory to Coastal Sage Scrub, the annual grass associates contributing to the ground layer are those typical of California Annual Grassland, and the native herb associates include the species described in Wildflower Field (below).

## RUDERAL GRASSLAND

Ruderal Grassland is a plant community that is typically in early successional stages as a result of a severe human disturbance, or because the land is subject to recurrent natural disturbance. This plant community is dominated by annual and perennial, introduced/non-native, pioneering, herbaceous plants that readily colonize disturbed ground. The ability of exotic species to invade disturbed areas arises from their relationship to old-world ancestors that have co-existed with humans for millennia, and thus are more adapted to exploit disturbed land. Ruderal communities may provide a certain degree of erosion control for recently graded areas, but such communities are also a threat to the natural biodiversity because they continually distribute invasive, highly-competitive non-native propagules into otherwise native vegetation. However, if Ruderal Grassland is left undisturbed, it can undergo succession towards more stable, and less weedy, plant communities such as coastal sage or riparian scrub. (Zedler et al. 1997.)

Ruderal Grassland was observed at 47 towers during the study. Ruderal Grassland was recorded more than any other community of the four vegetation types. Nineteen of the 47 observations are recorded as affloristic ruderal communities, and the other 32 consisted of the twelve floristic associations described below. Several of these associations include emergent native shrubs that, at one time, likely dominated the vegetation, including California Sagebrush, Coyote Brush, Cliff-aster (*Malacothrix saxatilis* [a perennial herb]), White Sage (*Salvia apiana*), and Purple Sage (*S. leucophylla*). These native species are competing with the now dominant ruderal/invasive forbs, including Black Mustard (*Brassica nigra* [most common]), Poison Hemlock (*Conium maculatum*),

Summer Mustard (*Hirschfeldia incana*), White Horehound (*Marrubium vulgare*), and Milk Thistle (*Silybum marianum*). Other contributors include grasses typical of California Annual Grassland.

The twelve Ruderal Grassland plant associations identified at one or more of the SCE towers include:

- Black Mustard-Cliff-aster Ruderal Grassland-White Sage
- Black Mustard-Milk Thistle-Poison Hemlock Ruderal Grassland
- Black Mustard-Milk Thistle Ruderal Grassland
- Black Mustard-Poison Hemlock Ruderal Grassland-California Sagebrush
- Black Mustard Ruderal Grassland
- Black Mustard Ruderal Grassland-California Sagebrush
- Black Mustard Ruderal Grassland-Coyote Brush
- Black Mustard Ruderal Grassland-Purple Sage
- Poison Hemlock Ruderal Grassland
- Poison Hemlock Ruderal Grassland-Coyote Brush
- Ruderal Grassland-California Sagebrush
- White Horehound-Summer Mustard Ruderal Grassland

## WILDFLOWER FIELD GRASSLAND

Wildflower Field Grassland (Wildflower Field according to Holland [1986]) is characterized by low-growing, naturalized, annual grasses and a significant component of spring-flowering, native and nonnative forbs (wildflowers). Wildflower Field is an amorphous grab bag of herb-dominated types noted for conspicuous annual wildflower displays, but dominance varies from site to site and from year to year at each particular site. This plant community is found growing on fairly poor (soil) sites that are droughty and low in nutrients. Wildflower Field is typically associated with other grassland communities and may grow as a ground layer in woodlands. Wildflower Field occurs in valleys and on foothills of the California Floristic Province, except for the north coast and desert regions, up to 1,500 meters in elevation.

Wildflower Field is recorded at one tower (Survey Site No. 44-N, north-facing slope of Red Mountain near Casitas Dam), the same site occupied by Purple Needlegrass Perennial Grassland, and no distinct Wildflower Field plant associations were observed. It occurs as understory to Coast Live Oak (*Quercus agrifolia*) Woodland and Coastal Sage Scrub. The native wildflowers of this community in the study area include: White Yarrow (*Achillea millefolium* var. *millefolium*), Goldenstars (*Bloomeria crocea* ssp. *crocea*), Four-spotted Purple Clarkia (*Clarkia purpurea* ssp. *quadrivulnera*), Green Everlasting (*Gnaphalium californicum*), California Buttercup (*Ranunculus californicus*), Hummingbird Sage (*Salvia spathaceae*), Sanicle (*Sanicula* spp.), California Globe Mallow (*Sidalcea malvaeflora* ssp. *californica*), Blue-eyed Grass (*Sisyrinchium bellum*), and Johnny Jump-up (*Viola pedunculata*).

## TYPE 2- COASTAL SAGE SCRUB

Coastal Sage Scrub is a type of shrubland that is dominated by drought-deciduous, low-growing shrubs and subshrubs that are soft-leaved and grayish-green in color. Scrub plant size is relative to the available water supply present onsite; however, these semi-woody plants are generally low-growing because high temperatures and drying winds can cause severe moisture stress. Coastal Sage Scrub is common in California generally along the coastward slopes of the Transverse, Central Coast, and Peninsular Ranges, and is adapted to a Mediterranean climate. Coastal Sage Scrub forms a continuous to open canopy; it occupies dry, gentle to steep, more or less rocky slopes with shallow or heavy soils; and, it generally occurs at lower elevations. (Zedler et al. 1997.)

Coastal Sage Scrub was observed at 104 towers, contributing to 42% of the total vegetation along the transmission line. This vegetation type makes up a significant portion of the total surveyed area, and is the most frequently encountered habitat type for the study. Coastal Sage Scrub consists of ten different plant communities, which represents more communities than the other three vegetation types. Table C-2 provides an inventory of the ten predominant scrub communities, their plant associations, and slope aspect observed during the tower survey.

**Table C-2. Coastal Sage Scrub Inventory for the SCE Transmission Line Vegetation Survey**

Coastal Sage Scrub Communities and Plant Associations	Slope Aspect	Observations/Totals
<i>Black Sage Scrub:</i> Black Sage-Green Everlasting Scrub	S	1
<i>Blue Elderberry Scrub</i>	NE	1
<i>California Sagebrush Scrub:</i>		
California Sagebrush-Coyote Brush-Blue Elderberry Scrub	W	1
California Sagebrush-Coyote Brush-Toyon Scrub	N	1
California Sagebrush-Coyote Brush Scrub	S,E,W, ridge top	4
California Sagebrush-Deerweed Scrub	S	1
California Sagebrush-Giant Wildrye-Blue Elderberry Scrub	N	1
California Sagebrush-Giant Wildrye-Birchleaf Mountain Mahogany Scrub	E	1
California Sagebrush-Giant Wildrye Scrub	N, E	3
California Sagebrush-Lemonadeberry-Toyon Scrub	E	1
California Sagebrush-Sawtooth Goldenbush Scrub	E, W	1
Subtotal		14
<i>Chaparral Mallow Scrub:</i>		
Chaparral Mallow-California Sagebrush-California Bush Sunflower Scrub	S	1
Chaparral Mallow-California Sagebrush-Coyote Brush Scrub	SE	1
Chaparral Mallow-California Sagebrush Scrub	E, W	1
Chaparral Mallow-Coyote Brush-Black Sage Scrub	S	1
Chaparral Mallow-Giant Wildrye-Black Sage Scrub	S	1
Subtotal		5
<i>Coyote Brush Scrub</i> (pure stand, or no co-dominant specified):	S	1
Coyote Brush-Bigpod Ceanothus-Nuttall Scrub Oak-Canary Grass Scrub	S	1

<b>Coastal Sage Scrub Communities and Plant Associations</b>	<b>Slope Aspect</b>	<b>Observations/Totals</b>
Coyote Brush-Black Sage-Greenbark Ceanothus Scrub	W	1
Coyote Brush-Canary Grass Scrub	ridge top	1
Coyote Brush-Giant Wildrye-Blue Elderberry Scrub	NW	1
Coyote Brush-Giant Wildrye-Poison Oak Scrub	SW	1
Coyote Brush-Giant Wildrye-Purple Sage Scrub	N, S	3
Coyote Brush-Giant Wildrye-Scrub	N, W	2
Coyote Brush-Laurel Sumac-Purple Sage Scrub	N, E, W	2
Coyote Brush-Lemonadeberry Scrub	SE	1
Coyote Brush-Poison Oak Scrub-Grasses	E	1
Coyote Brush-Sawtooth Goldenbush Scrub	N	1
Coyote Brush-Sweet Fennel-Greenbark Ceanothus Scrub	ridge top	1
Subtotal		17
<b>Deerweed Scrub:</b>		
Deerweed-Bush Monkeyflower Scrub	N	1
Deerweed-California Buckwheat-Cudweed Aster Scrub	E	1
Deerweed-California Bush Sunflower-Black Mustard Scrub	SE	1
Subtotal		3
<b>Giant Wildrye Scrub:</b>		
Giant Wildrye-Black Mustard-California Bush Sunflower Scrub	E	1
Giant Wildrye-Chaparral Mallow-Bigpod Ceanothus Scrub	S, SW	1
Giant Wildrye-Lemonadeberry Scrub	E	1
Giant Wildrye-Sawtooth Goldenbush-Summer Mustard Scrub	ridge top	1
Giant Wildrye-Toyon Scrub	NW	1
Giant Wildrye Scrub-Annual Grasses-Blue Gum Eucalyptus	S, W, ridge top	1
Subtotal		6
<b>Mixed Sage Scrub:</b>		
California Sagebrush-Black Sage-Chaparral Mallow Scrub	NE	1
California Sagebrush-Black Sage-Green Everlasting Scrub	S	1
California Sagebrush-Purple Sage-Black Mustard Scrub	S	1
California Sagebrush-Purple Sage-Bush Monkeyflower Scrub	NE	1
California Sagebrush-Purple Sage-Chaparral Mallow Scrub	E	1
California Sagebrush-Purple Sage-Coyote Brush Scrub	NW, W, ridge top	2
California Sagebrush-Purple Sage-Deerweed-California Bush Sunflower Scrub	S, E, W, ridge top	2
California Sagebrush-Purple Sage-Giant Wildrye Scrub	N, NW, S, E, W	11
California Sagebrush-Purple Sage-Lemonadeberry Scrub	S	1
California Sagebrush-Purple Sage-Sawtooth Goldenbush Scrub	NW, W	2
California Sagebrush-Purple Sage Scrub		12
Subtotal		35
<b>Poison Oak Scrub (pure stand):</b>		
Poison Oak-Sawtooth Goldenbush Scrub	N	1
Poison Oak-Sawtooth Goldenbush Scrub	ridge top	2
Poison Oak-Toyon-Blue Elderberry Scrub	N	2
Subtotal		5
<b>Purple Sage Scrub (pure stand, or no co-dominant specified):</b>		
Purple Sage-Birchleaf Mountain Mahogany-Toyon Chaparral	N, NE, W, E, S	8
Purple Sage-Birchleaf Mountain Mahogany-Toyon Chaparral	W	1

Coastal Sage Scrub Communities and Plant Associations	Slope Aspect	Observations/Totals
Purple Sage-Coyote Brush Scrub	E	4
Purple Sage-Giant Wildrye-Blue Elderberry Scrub	E	1
Purple Sage-Giant Wildrye Scrub	NE	1
Purple Sage-Greenbark Ceanothus Scrub	SE	1
Purple Sage-Lemonadeberry-Giant Wildrye-Bush Monkeyflower Scrub	N	1
Subtotal		17
<b>Total Coastal Sage Scrub Observations:</b>		<b>104 = 42 %</b>

## BLACK SAGE SCRUB

Black Sage Scrub (Black Sage Series according to Sawyer and Keeler-Wolf [1995]) is dominated by *Salvia mellifera*, a native, soft-leaved, aromatic, green shrub with clustered white to pale blue or lavender flowers. It is common in Coastal Sage Scrub and lower chaparral communities at elevations below 1,200 meters (Hickman 1993). *S. mellifera* resprouts both between and after recurring fires, but post-fire resprouting is sensitive to fire intensity (Zedler et al. 1997). Black Sage Scrub is often considered part of the Coastal Sage Scrub collection of series, and forms a continuous or intermittent low canopy, growing over a variable ground layer, on steep dry slopes with shallow soils.

Black Sage-Green Everlasting Scrub is the only Black Sage Scrub plant association observed, found at one tower during the field survey (Survey Tower No. 105-N). This association includes Green Everlasting (*Gnaphalium californicum*) as an important ground layer contributor, growing with the open Black Sage canopy. *G. californicum* is a native, aromatic, glandular, annual herb with pearl-like flowers. It readily occupies open dry sites and commonly grows as a Coastal Sage Scrub understory.

As a result of habitat clearing below the tower, the site is in succession towards Coastal Sage Scrub and/or Bigpod Ceanothus Chaparral (*Ceanothus megacarpus* var. *megacarpus* [described later; observed as dominant habitat surrounding the clearing]). Black Sage has formed an initial open canopy, enabling *G. californicum* to dominate the gaps between the sage shrubs. The associated species for this plant association are: California Sagebrush, California Brickellbush (*Brickellia californica*), Sawtooth Goldenbush (*Hazardia squarrosa*), Toyon (*Heteromeles arbutifolia*), Chaparral Mallow (*Malacothamnus fasciculatus*), Laurel Sumac, and Bush Monkeyflower (*Mimulus aurantiacus*).

## Blue Elderberry Scrub

Blue Elderberry Scrub (Mexican Elderberry Series according to Sawyer and Keeler-Wolf [1995]) is dominated by *Sambucus mexicana*, a common, native, large shrub/small tree with moderately



large leaves/leaflets, cream-colored flowers, and bluish-black berries. Blue Elderberry occurs at elevations between sea level and 3,000 meters (Hickman 1993). Blue Elderberry is listed in the National Inventory of Wetland Plants (NIWP [Reed 1988]) with a wetland indicator status of FAC, or a facultative species (equally likely to occur in wetlands as in nonwetlands).

Blue Elderberry Scrub forms the intermittent to closed canopy, of less than eight meters tall, over an herbaceous ground layer. This series occurs in intermittently flooded or seasonally saturated soils of freshwater wetlands such as streambanks, floodplains, and open riparian forests at elevations below 300 meters. *S. mexicana* is common in many series, often in upland habitats growing as a small emergent tree over Coastal Sage Scrub and chaparral, and as an understory to woodlands. Blue Elderberry Scrub only includes stands with large Blue Elderberry populations.

Blue Elderberry Scrub was observed only once (Survey Tower No. 57-N) along the transmission line. The important shrub layer associates found growing with Blue Elderberry include: Coyote Brush, Black Mustard (*Brassica nigra*), Sawtooth Goldenbush, and White Sage. The ground layer associates are annual grasses (genera including *Bromus* and *Lolium*), Green Everlasting, and Cliff-aster.

## California Sagebrush Scrub

California Sagebrush Scrub (California Sagebrush Series [Sawyer and Keeler-Wolf 1995]) is dominated by *Artemisia californica*, a native, aromatic, slender-stemmed shrub with thread-like grayish leaves. It is a typical shrub of Coastal Sage Scrub and chaparral types of xeric foothills, especially near the coast, at elevations below 800 meters (Hickman 1993).

California Sagebrush Scrub is often considered part of the Coastal Sage Scrub collection of series. It forms a continuous to intermittent canopy consisting of Coyote Brush, California Buckwheat (*Eriogonum fasciculatum*), Deerweed (*Lotus scoparius*), Laurel Sumac, Bush Monkeyflower, and sages as local shrub associates growing over a variable ground layer. Non-native annual grasses, an occasional native bunchgrass (*Nassella* spp.), and native or introduced herbs, are common in canopy gaps. California Sagebrush Series occurs on steep, south-facing slopes and in infrequently flooded, low-gradient alluvial floodplain deposits. This plant community often occurs on shallow alluvial- or colluvial-derived soils, and grows at elevations below 1,200 meters.

The Federally listed (threatened) California Gnatcatcher (*Polioptila californica*) occupies California Sagebrush stands provided by Coastal Sage Scrub habitat. Since scrub communities continue to suffer severe losses due to spreading urbanization, the California Gnatcatcher is vulnerable to habitat depletion (Zedler et al. 1997).

California Sagebrush was found a total of 14 times in the study area, within nine distinct plant associations (listed below). The most commonly observed co-dominants or important canopy associates are Coyote Brush and Giant Wildrye (*Leymus condensatus*), while other important associates include: Birchleaf Mountain Mahogany (*Cercocarpus betuloides* var. *betuloides*),

Sawtooth Goldenbush, Toyon, Deerweed, Lemonadeberry, Purple Sage (*Salvia leucophylla*), and Blue Elderberry.

The California Sagebrush plant associations include:

- California Sagebrush-Coyote Brush-Blue Elderberry Scrub
- California Sagebrush-Coyote Brush-Toyon Scrub
- California Sagebrush-Coyote Brush Scrub
- California Sagebrush-Deerweed Scrub
- California Sagebrush-Giant Wildrye-Blue Elderberry Scrub
- California Sagebrush-Giant Wildrye-Birchleaf Mountain Mahogany Scrub
- California Sagebrush-Giant Wildrye Scrub
- California Sagebrush-Lemonadeberry-Toyon Scrub
- California Sagebrush-Sawtooth Goldenbush Scrub

Several other canopy contributors were recorded for the California Sagebrush associations, including: Chamise (*Adenostoma fasciculatum*), California Bush Sunflower (*Encelia californica*), California Buckwheat, Toyon, Chaparral Mallow (*Malacothamnus fasciculatus*), Laurel Sumac, Black Sage (*Salvia mellifera*), and Poison Oak (*Toxicodendron diversilobum*). The ground layer generally consists of California Annual grassland grasses and forbs, including the wildflowers White Yarrow (*Achillea millefolium*), Goldenstars (*Bloomeria crocea*), and Blue Dicks (*Dichelostemma capitatum*).

## Chaparral Mallow Scrub

Chaparral Mallow Scrub is dominated by *Malacothamnus fasciculatus*. This native, slender-branched, hairy to white-tawny subshrub has palmately-lobed leaves and spike-like clusters of pale pinkish-purple flowers. Chaparral Mallow occurs in scrub and chaparral types at elevations below 600 meters (Hickman 1993). Chaparral Mallow Scrub forms an intermittent to closed canopy over a variable ground layer, on predominantly south-facing slopes with heavy shallow soils.

Chaparral Mallow Scrub was observed at five towers. Each observation was recorded as one of the five different Chaparral Mallow plant associations (below). The co-dominants/important Chaparral Mallow canopy associates include: California Sagebrush, Coyote Brush, California Bush Sunflower, Giant Wildrye, and Black Sage.

The five Chaparral Mallow plant associations are:

- Chaparral Mallow-California Sagebrush-California Bush Sunflower Scrub
- Chaparral Mallow-California Sagebrush-Coyote Brush Scrub
- Chaparral Mallow-California Sagebrush Scrub
- Chaparral Mallow-Coyote Brush-Black Sage Scrub
- Chaparral Mallow-Giant Wildrye-Black Sage Scrub

Other species observed growing within Chaparral Mallow plant associations include: Ceanothus (*Ceanothus* spp.), California Bush Sunflower, Deerweed, Laurel Sumac, Spiny Redberry (*Rhamnus crocea*), Lemonadeberry (*Rhus integrifolia*), Blue Elderberry, and Poison Oak. The ground layer consists of Golden Yarrow (*Eriophyllum confertiflorum*), Green Everlasting, Purple

Needlegrass (*Nassella pulchra*), Many-flowered Figwort (*Scrophularia californica*), and Blue-eyed Grass.

## Coyote Brush Scrub

Coyote Brush Scrub (Coyote Brush Series according to Sawyer and Keeler-Wolf [1995]) is dominated by *Baccharis pilularis*, a bright green, glabrous, native broad-leaved evergreen shrub with toothed, 3-veined leaves. It occurs in scrub and oak woodland communities on stabilized dunes of coastal bars, river mouths, coastline spits, coastal bluffs, open slopes, and ecotonal areas with grasslands (Hickman 1993). Coyote Brush Scrub forms a continuous or intermittent canopy (less than two meters tall) growing over a variable ground layer. Coyote Brush Series occurs at elevations from sea level to 1,000 meters.

Coyote Brush Scrub was observed at 17 towers as one pure stand of Coyote Brush and 16 observations of the twelve different but distinct Coyote Brush plant associations. Coyote Brush Scrub forms the most individual associations over any other recorded Coastal Sage Scrub community along the SCE transmission line. The Coyote Brush plant associations include several co-dominant and important associates such as: California Sagebrush, Black Mustard, Bigpod Ceanothus (*Ceanothus megacarpus* var. *m.*), Greenbark Ceanothus (*C. spinosus*), Sweet Fennel (*Foeniculum vulgare*), Sawtooth Goldenbush, Giant Wildrye, Laurel Sumac, Canary Grass (*Phalaris minor*), Nuttall Scrub Oak (*Quercus dumosa* [special-status species]), Lemonadeberry (*Rhus integrifolia*), Blue Elderberry, sages (*Salvia* spp.), and Poison Oak.

The twelve Coyote Brush associations along the SCE transmission line are:

- Coyote Brush-Bigpod Ceanothus-Nuttall Scrub Oak-Canary Grass Scrub
- Coyote Brush-Black Sage-Greenbark Ceanothus Scrub
- Coyote Brush-Canary Grass Scrub
- Coyote Brush-Giant Wildrye-Blue Elderberry Scrub
- Coyote Brush-Giant Wildrye-Poison Oak Scrub
- Coyote Brush-Giant Wildrye-Purple Sage Scrub
- Coyote Brush-Giant Wildrye-Scrub
- Coyote Brush-Laurel Sumac-Purple Sage Scrub
- Coyote Brush-Lemonadeberry Scrub
- Coyote Brush-Poison Oak Scrub-Grasses
- Coyote Brush-Sawtooth Goldenbush Scrub
- Coyote Brush-Sweet Fennel-Greenbark Ceanothus Scrub

Other Coyote Brush shrub canopy contributors include: Chamise, Birchleaf Mountain Mahogany, buckwheats (*Eriogonum cinereum*, *E. fasciculatum*), Toyon, Deerweed, Chaparral Mallow, Bush Monkeyflower, Coast Live Oak (*Quercus agrifolia*), Fuschia-flowered Gooseberry (*Ribes speciosum*), and Chaparral Nightshade (*Solanum xantii* var. *xantii*). The ground layer consists of typical Coastal Sage Scrub understory species (*Achillea millefolium*, *Eriophyllum confertiflorum*, *Solanum douglasii*, *Stachys bullata*, and *Verbena lasiostachys*). Coyote Brush Scrub also contains a variety of showy-flowered, less common herbs such as Goldenstars, Catalina Mariposa Lily

(*Calochortus catalinae* [special-status species]), Lanceleaf Live Forever (*Dudleya lanceolata*), and California Peony (*Paeonia californica*).

## Deerweed Scrub

Deerweed Scrub is dominated by *Lotus scoparius*, a native drought-deciduous perennial herb or subshrub with branched clustered stems, yellow-reddish flowers, and well-spaced elliptic leaflets. Deerweed is a common species in scrub and chaparral types, and occurs on roadsides, coastal sands, desert slopes, flats, and washes at elevations below 1,500 meters (Hickman 1993). This scrub community was observed as occupying the more recently cleared areas beneath several towers. These disturbed xeric sites appear to be successional towards a more species-rich Coastal Sage Scrub.

Deerweed Scrub was observed along the SCE transmission line as the three distinct plant associations, with each association occurring at a different tower. Deerweed Scrub forms an intermittent low canopy with the co-dominant/important associate shrubs California Bush Sunflower, California Buckwheat, and Bush Monkeyflower growing with the associate herbs Black Mustard and Cliff-aster.

The Deerweed plant associations along the SCE transmission line include:

- Deerweed-Bush Monkeyflower Scrub
- Deerweed-California Buckwheat-Cudweed Aster Scrub
- Deerweed-California Bush Sunflower-Black Mustard Scrub

Other species of Deerweed Scrub associations are: California Sagebrush, Hoary Ceanothus (*Ceanothus oliganthus*), Golden Yarrow, California Poppy (*Eschscholzia californica*), Toyon, Giant Wildrye, White Sage, Blue Elderberry, Many-flowered Figwort (*Scrophularia californica* ssp. *floribunda*), and Poison Oak.

## Giant Wildrye Scrub

Giant Wildrye Scrub is dominated by *Leymus condensatus*. Giant Wildrye is a native, large, green, glabrous, shrub-like perennial grass with tall stems. *L. condensatus* grows on dry slopes under oak woodlands or with Coastal Sage Scrub, at elevations below 1,500 meters (Hickman 1993).

Although Giant Wildrye is a grass, it is a common Coastal Sage Scrub species and dominates the shrub layer of several plant associations observed in the study area; therefore, this plant is herein characterized this shrub-like grass as forming an intermittent *shrub* canopy growing over a grassy and herbaceous ground layer.

Giant Wildrye Scrub forms six plant associations along the SCE transmission line (each observed once), including several important associates: Bigpod Ceanothus, California Bush Sunflower, Sawtooth Goldenbush, Toyon, Chaparral Mallow, and Lemonadeberry. Giant Wildrye associations also include the introduced mustards (*Brassica nigra*, *Hirschfeldia incana*), grasses of

California Annual Grassland, and emergent Tasmanian Blue Gum (*Eucalyptus globulus* ssp. *globulus*).

The six Giant Wildrye associations observed along the SCE transmission line include:

- Giant Wildrye-Black Mustard-California Bush Sunflower Scrub
- Giant Wildrye-Chaparral Mallow-Bigpod Ceanothus Scrub
- Giant Wildrye-Lemonadeberry Scrub
- Giant Wildrye-Sawtooth Goldenbush-Summer Mustard Scrub
- Giant Wildrye-Toyon Scrub
- Giant Wildrye Scrub-Annual Grasses-Blue Gum Eucalyptus

## Mixed Sage Scrub

Mixed Sage Scrub (Mixed Sage Series according to Sawyer and Keeler-Wolf [1995]) is the most typical Coastal Sage Scrub plant community. This upland plant community consists of a mixture of scrub species, including one to three species of sage (*Salvia* spp.). Three aromatic sages, typical of Coastal Sage Scrub or chaparral on dry south-facing slopes, are contributors of Mixed Sage Scrub (Hickman 1993): White Sage (*S. apiana*), with long tomentose stems, densely hairy-gray leaves, and white/lavender flowers (<1,500 meters); Purple Sage (*S. leucophylla*), with grayish, puckered, densely branched-hairy leaves, and rose-lavender flowers (between 50 and 800 meters); and, Black Sage (*S. mellifera*), with greenish, glandular-hairy, puckered leaves and white, pale blue/lavender flowers (<1,200 meters) (Sawyer and Keeler-Wolf 1995).

Mixed Sage Series consists of an equal representation of one to three sages and California Sagebrush, plus a mixture of typical Coastal Sage Scrub species, including California Bush Sunflower, California Buckwheat, Bush Monkeyflower, and prickly-pears (*Opuntia* spp.). Emergent shrubs of Laurel Sumac, Lemonadeberry, and Blue Elderberry may also be present. This series forms a continuous or intermittent canopy (<2 meters tall) over a variable ground layer, and grows on sandy, rocky, shallow soils of upland slopes at elevations below 1,200 meters. No single species or pair of species can dominate stands of this series; instead, three or more species must equally share commonness and cover.

Mixed Sage Scrub is the dominant Coastal Sage Scrub plant community along the SCE transmission line. It was recorded at 35 towers as one of eleven distinct Mixed Sage Scrub plant associations. The most commonly observed important Mixed Sage Scrub canopy contributor was Giant Wildrye, while other important contributors include: Coyote Brush, California Bush Sunflower, Green Everlasting, Sawtooth Goldenbush, Giant Wildrye, Deerweed, Chaparral Mallow, Bush Monkeyflower, and Lemonadeberry.

The eleven Mixed Sage Scrub associations along the SCE transmission line include:

- California Sagebrush-Black Sage-Chaparral Mallow Scrub
- California Sagebrush-Black Sage-Green Everlasting Scrub
- California Sagebrush-Purple Sage-Black Mustard Scrub
- California Sagebrush-Purple Sage-Bush Monkeyflower Scrub
- California Sagebrush-Purple Sage-Chaparral Mallow Scrub



- California Sagebrush-Purple Sage-Coyote Brush Scrub
- California Sagebrush-Purple Sage-Deerweed-California Bush Sunflower Scrub
- California Sagebrush-Purple Sage-Giant Wildrye Scrub
- California Sagebrush-Purple Sage-Lemonadeberry Scrub
- California Sagebrush-Purple Sage-Sawtooth Goldenbush Scrub
- California Sagebrush-Purple Sage Scrub

Other Mixed Sage Scrub canopy associates include: Big Saltbush (*Atriplex lentiformis* ssp. *breweri*), California Brickellbush (*Brickellia californica*), buckwheats (*Eriogonum* spp.), Silver Bush Lupine (*Lupinus albifrons*), Laurel Sumac, Spiny Redberry, Chaparral Currant (*Ribes malvaceum*), Fuchsia-flowered Gooseberry, Chaparral Nightshade, Poison Oak, and emergent ceanothus, Birchleaf Mountain Mahogany, Toyon, and Blue Elderberry.

The Mixed Sage Scrub ground layer includes many native herbs: yarrows (*Achillea millefolium*, *Eriophyllum confertiflorum*), Antisell Three-pod Milkvetch (*Astragalus trichopodus* var. *phoxus*), Goldenstars, Catalina Mariposa Lily, Morning-glory (*Calystegia macrostegia*), Lay-and-Collie Indian Paintbrush (*Castilleja affinis* ssp. *affinis*), Blue Dicks, Lanceleaf Live Forever, Green Everlasting, Purple Needlegrass, California Peony, California Buttercup (*Ranunculus californicus*), Blue-eyed Grass, Western Verbena (*Verbena lasiostachys*), and Hoary Creek Nettle (*Urtica dioica* ssp. *holosericea*).

## Poison Oak Scrub

Poison Oak Scrub is dominated by *Toxicodendron diversilobum*, a winter-deciduous poisonous shrub or vine with resinous leaves (becoming bright red in autumn), yellow-green flowers, and leathery creamy-white fruit. The toxic resin-covered leaves, stems, and fruit cause severe contact dermatitis. The widespread Poison Oak occurs in chaparral and oak woodlands of canyon slopes at elevations below 1,650 meters (Hickman 1993). It also commonly occurs along riparian corridors.

Poison Oak Scrub was observed at five towers during the survey. One site consisted of a pure stand; two sites consisted of Poison Oak-Sawtooth Goldenbush Scrub, which includes Sawtooth Goldenbush as a co-dominant; and one site with Poison Oak-Toyon-Blue Elderberry Scrub, in which Toyon and Blue Elderberry are important associate species. The Poison Oak Scrub plant associations of the SCE transmission line form an intermittent shrub canopy consisting of several typical Coastal Sage Scrub species.

## Purple Sage Scrub

Purple Sage Scrub (Purple Sage Series according to Sawyer and Keeler-Wolf [1995]) is dominated by *Salvia leucophylla*, a drought-deciduous, aromatic, shrub that prefers dry, open, south-facing slopes between 50 and 800 meters in elevation (Hickman 1993). Purple Sage is often an important shrub with California Sagebrush. Purple Sage typically forms a continuous to intermittent canopy over a variable ground layer. Purple Sage Scrub grows on steep north-facing slopes in colluvial-

derived, rocky soils. It is considered part of the Coastal Sage Scrub series collection, and Purple Sage stands typically create mosaics with Coast Live Oak Woodland and Southern California Black Walnut Woodland.

Purple Sage Scrub was observed at 17 towers and is an important component of Coastal Sage Scrub within the study area. Purple Sage Scrub at eight of the 17 towers consisted of little or no canopy associates (pure stands), and nine of the towers sties consisted of six different Purple Sage Scrub plant associations. Of the six plant associations, Coyote Brush and Giant Wildrye were the most common co-dominants or important contributors. However, several other important native shrub species contributed to the canopy of Purple Sage Scrub, including: California Sagebrush, Greenbark Ceanothus, Birchleaf Mountain Mahogany, Toyon, Bush Monkeyflower, Lemonadeberry, and Blue Elderberry.

The six Purple Sage Scrub associations observed along the SCE transmission line include:

- Purple Sage-Birchleaf Mountain Mahogany-Toyon Chaparral
- Purple Sage-Coyote Brush Scrub
- Purple Sage-Giant Wildrye-Blue Elderberry Scrub
- Purple Sage-Giant Wildrye Scrub
- Purple Sage-Greenbark Ceanothus Scrub
- Purple Sage-Lemonadeberry-Giant Wildrye-Bush Monkeyflower Scrub

Other associates of the Purple Sage canopy include: California Bush Sunflower, buckwheat (*Eriogonum* spp.), Green Everlasting, California Black Walnut (*Juglans californica* var. *californica* [special-status species]) Heart-leaved Bush Penstemon (*Keckiella cordifolia*), Deerweed, Laurel Sumac, Purple Needlegrass, Coast Prickly-pear (*Opuntia littoralis*), Fish Milkwort (*Polygala cornuta* ssp. *fishiae* [special-status species]), Coast Live Oak, Fuschia-flowered Gooseberry, Chaparral Nightshade, and Poison Oak.

## TYPE 3- CHAPARRAL

Chaparral is a type of shrubland dominated by evergreen shrubs with small, thick, leathery, dark green, sclerophyllous leaves. The shrubs are relatively tall and dense, and are adapted to periodic wildfires by stump sprouting or germination from a dormant seed bank. The evergreen shrubs included in chaparral are also adapted to drought by deep extensive root systems, while their small thick leaf structure prevents permanent damage from moisture loss (Zedler et al. 1997). Many shrubs typical of Coastal Sage Scrub also grow intermixed as associates with chaparral species. Chaparral typically occurs on moderate to steep south-facing slopes with dry, rocky, shallow soils. It is more abundant at higher elevations where temperatures are lower and moisture supplies are more ample. Chaparral vegetation was recorded at 45 transmission line towers, contributing to 18% of the total habitats surveyed during the botanical assessment. Chaparral is third in rank of the four vegetation types observed during the survey, and only consists of three distinct plant communities. Table C-3 provides an inventory of chaparral communities and plant associations found during the study.

**Table C-3. Chaparral Inventory for the SCE Towers Vegetation Survey**

Chaparral Communities and Plant Associations	Slope Aspect	No. of Towers
<i>Bigpod Ceanothus Chaparral</i> (pure stand, or no co-dominant specified)	S	3
Bigpod Ceanothus-Black Sage Chaparral	N, S, E, W, ridge top	1
Bigpod Ceanothus-Mountain Mahogany-California Sagebrush Chaparral	SW	2
Bigpod Ceanothus-Mountain Mahogany-Nuttall Scrub Oak Chaparral	N	1
Bigpod Ceanothus-Mountain Mahogany-Lemonadeberry Chaparral	N	1
Bigpod Ceanothus-California Buckwheat-Black Sage Chaparral	S	1
Bigpod Ceanothus-California Buckwheat Chaparral	S	1
Bigpod Ceanothus-California Sagebrush Chaparral	SW, SE	2
Bigpod Ceanothus-California Sagebrush-Lemonadeberry Chaparral	S	1
Bigpod Ceanothus-Chaparral Mallow-Black Sage Chaparral	S	3
Bigpod Ceanothus-Chaparral Mallow-Blue Elderberry Chaparral	S	1
Bigpod Ceanothus-Chaparral Mallow-California Sagebrush Chaparral	S	1
Bigpod Ceanothus-Chaparral Mallow-Green Everlasting Chaparral	S	1
Bigpod Ceanothus-Chaparral Mallow-Purple Sage Chaparral	S, SE	2
Bigpod Ceanothus-Chaparral Mallow Chaparral	S, E	3
Bigpod Ceanothus-Giant Wildrye-California Sagebrush Chaparral	S	1
Bigpod Ceanothus-Giant Wildrye-Coyote Brush Chaparral	E	1
Bigpod Ceanothus-Giant Wildrye Chaparral	SE	1
Bigpod Ceanothus-Laurel Sumac-Blue Elderberry Chaparral	S	1
Bigpod Ceanothus-Lemonadeberry Chaparral	S	1
Bigpod Ceanothus-Nuttall Scrub Oak-Chamise-Manzanita Chaparral	N, S	1
Bigpod Ceanothus-Nuttall Scrub Oak-Coyote Brush Chaparral	S	1
Bigpod Ceanothus-Nuttall Scrub Oak-Laurel Sumac Chaparral	S	1
Bigpod Ceanothus-Toyon-Chamise-Poison Oak Chaparral	NE	1

Chaparral Communities and Plant Associations	Slope Aspect	No. of Towers
Subtotal		33
<i>Lemonadeberry Chaparral</i> (pure stand, or no co-dominant specified)	SE, ridge top	2
Lemonadeberry-Blue Elderberry Chaparral	S	1
Lemonadeberry-Chaparral Mallow-Spiny Redberry Chaparral	SE	1
Lemonadeberry-Giant Wildrye-Bigpod Ceanothus Chaparral	S	1
Lemonadeberry-Giant Wildrye-Purple Sage Chaparral	SW	1
Lemonadeberry-Laurel Sumac-Coyote Brush Chaparral	SW	1
Lemonadeberry-Laurel Sumac Chaparral	N, ridge top	1
Subtotal		8
<b><i>Mixed Ceanothus Chaparral:</i></b>		
Mixed Ceanothus-California Sagebrush Chaparral	SW	1
Mixed Ceanothus-Nuttall Scrub Oak-Lemonadeberry-Chamise Chaparral	S	1
Mixed Ceanothus-Nuttall Scrub Oak-Purple Sage Chaparral	N	1
Mixed Ceanothus-Toyon Chaparral	S	1
Subtotal		4
<b>Total Chaparral Observations:</b>		<b>45 = 18 %</b>

### Bigpod Ceanothus Chaparral

Bigpod Ceanothus Chaparral (Bigpod Ceanothus Series according to Sawyer and Keeler-Wolf [1995]) forms tall dense stands that are dominated by *Ceanothus megacarpus* var. *megacarpus*. Bigpod Ceanothus is an evergreen shrub (<4 meters tall) with firm, one-ribbed, dull green leaves, white to pale lavender flowers, and horn-tipped fruit. Bigpod Ceanothus occurs on dry slopes in canyons near the coast, at elevations below 750 meters (Hickman 1993). Bigpod Ceanothus Chaparral is preadapted to periodic wildfires by producing a large seedbank each year, is long-lived absent fires; however, does not resprout after a wildfire (Holland 1986). Bigpod Ceanothus Chaparral typically forms a continuous to intermittent tall canopy, consisting of few associate species, growing over a sparse ground layer (emergent trees may be present). Percent cover by Bigpod Ceanothus must be at least 60 % to be included in this series. This chaparral occurs on xeric upland slopes, usually fairly near the coast, and grows in shallow, rocky, poorly differentiated soils (Holland 1986).

Bigpod Ceanothus Chaparral was recorded at 33 towers, which is the most observations of a chaparral community, and it forms more individual plant associations (23) than any other community of any other vegetation type observed along the SCE transmission line. Three of the 33 tower sites occurred as pure stands while the other 30 consisted of one or more of the 23 distinct plant associations. The predominant Bigpod Ceanothus association contributors include: Chamise, Santa Ynez Mountains Eastwood Manzanita (*Arctostaphylos glandulosa* ssp. *mollis*), Birchleaf Mountain Mahogany, Toyon, Giant Wildrye, Chaparral Mallow, Laurel Sumac, Nuttall Scrub Oak, and Lemonadeberry. The important Coastal Sage Scrub species include: California

Sagebrush, Coyote Brush, California Buckwheat, Green Everlasting, sages (*Salvia leucophylla*, *S. mellifera*), Blue Elderberry, and Poison Oak.

The 23 Bigpod Ceanothus Chaparral plant associations found along the transmission line include:

- Bigpod Ceanothus-Black Sage Chaparral
- Bigpod Ceanothus-Birchleaf Mountain Mahogany-California Sagebrush Chaparral
- Bigpod Ceanothus-Birchleaf Mountain Mahogany-Nuttall Scrub Oak Chaparral
- Bigpod Ceanothus-Birchleaf Mountain Mahogany-Lemonadeberry Chaparral
- Bigpod Ceanothus-California Buckwheat-Black Sage Chaparral
- Bigpod Ceanothus-California Buckwheat Chaparral
- Bigpod Ceanothus-California Sagebrush Chaparral
- Bigpod Ceanothus-California Sagebrush-Lemonadeberry Chaparral
- Bigpod Ceanothus-Chaparral Mallow-Black Sage Chaparral
- Bigpod Ceanothus-Chaparral Mallow-Blue Elderberry Chaparral
- Bigpod Ceanothus-Chaparral Mallow-California Sagebrush Chaparral
- Bigpod Ceanothus-Chaparral Mallow-Green Everlasting Chaparral
- Bigpod Ceanothus-Chaparral Mallow-Purple Sage Chaparral
- Bigpod Ceanothus-Chaparral Mallow Chaparral
- Bigpod Ceanothus-Giant Wildrye-California Sagebrush Chaparral
- Bigpod Ceanothus-Giant Wildrye-Coyote Brush Chaparral
- Bigpod Ceanothus-Giant Wildrye Chaparral
- Bigpod Ceanothus-Laurel Sumac-Blue Elderberry Chaparral
- Bigpod Ceanothus-Lemonadeberry Chaparral
- Bigpod Ceanothus-Nuttall Scrub Oak-Chamise-Manzanita Chaparral
- Bigpod Ceanothus-Nuttall Scrub Oak-Coyote Brush Chaparral
- Bigpod Ceanothus-Nuttall Scrub Oak-Laurel Sumac Chaparral
- Bigpod Ceanothus-Toyon-Chamise-Poison Oak Chaparral

Several other shrub species were found within the Bigpod Ceanothus canopy include: California Brickellbush, California Bush Sunflower, Ash Coast Buckwheat (*Eriogonum cinereum*), Chaparral Bedstraw (*Galium angustifolium* ssp. *angustifolium*), Sawtooth Goldenbush, Toyon, Heart-leaved Bush Penstemon, Santa Ynez Mountains Honeysuckle (*Lonicera subspicata* var. *subspicata*), Deerweed, Chaparral Mallow, Bush Monkeyflower, oaks (*Quercus agrifolia*, *Q. berberidifolia*), Coast Prickly-pear, Spiny Redberry, Chaparral Nightshade, Canyon Sunflower (*Venegasia carpesioides*), and Our Lord's Candle (*Yucca whipplei*).

The ground layer is composed of a variety of native, showy-flowered herbs including: Antisell Three-pod Milkvetch, Golden Yarrow, Green Everlasting, Peak Rush-rose (*Helianthemum scoparium*), Fascicled Tarplant (*Hemizonia fasciculata*), Cliff-aster, Caterpillar Phacelia (*Phacelia cicutaria*), Pacific Sanicle (*Sanicula crassicaulis*), Many-flowered Figwort, Blue-eyed Grass, and Hedge Nettle (*Stachys bullata*); the native perennial vines Morning-glory (*Calystegia macrostegia*) and Pipestem Clematis (*Clematis ligusticifolia*); the native perennial grasses Wheat Grass (*Elymus stebbinsii*) and Purple Needlegrass; and, the ruderal Tocalote (*Centaurea melitensis*), Sweet Fennel, White Horehound (*Marrubium vulgare*), Tree Tobacco (*Nicotiana glauca*), and Milk Thistle (*Silybum marianum*).



## Lemonadeberry Chaparral

Lemonadeberry Chaparral (Sumac Series according to Sawyer and Keeler-Wolf [1995]) is dominated by *Rhus integrifolia*, a large aromatic, evergreen, glandular shrub with leathery shiny-green leaves, white to pinkish petals, and glandular-hairy reddish fruit. Lemonadeberry grows on north-facing slopes of canyons at elevations below 900 meters (Hickman 1993). The sole or dominant plant taxon of this series may either be Laurel Sumac or *R. integrifolia*. These shrubs may occur together as shrub-canopy co-dominants; however, Lemonadeberry Chaparral was observed as the dominant species in the shrub canopy along the SCE transmission line. Lemonadeberry forms an intermittent to continuous canopy over a variety of scrub associates and a sparse grassy ground layer. This series occurs on steep upland slopes, with shallow coarse soils, and at elevations near sea level up to 400 meters. Sumac (/Lemonadeberry) Series is often overlooked by combining it with mixed chaparral; however, many characteristic chaparral genera (*Adenostoma*, *Arctostaphylos*, *Ceanothus*, *Quercus*) are absent from, or are uncommon in, Sumac Series.

Lemonadeberry Chaparral was observed at eight towers. Two observations are recorded as pure stands while the other six observations consisted of six distinct Lemonadeberry Chaparral plant associations (each observed once). The Lemonadeberry Chaparral associations include several shrub canopy associates growing over scattered ground layer herbs typical of Coastal Sage Scrub communities. Lemonadeberry Chaparral co-dominants/important canopy associates include: Coyote Brush, Bigpod Ceanothus, Giant Wildrye, Chaparral Mallow, Laurel Sumac, Spiny Redberry, Purple Sage, and Blue Elderberry.

The six Lemonadeberry plant associations observed along the SCE transmission line are:

- Lemonadeberry-Blue Elderberry Chaparral
- Lemonadeberry-Chaparral Mallow-Spiny Redberry Chaparral
- Lemonadeberry-Giant Wildrye-Bigpod Ceanothus Chaparral
- Lemonadeberry-Giant Wildrye-Purple Sage Chaparral
- Lemonadeberry-Laurel Sumac-Coyote Brush Chaparral
- Lemonadeberry-Laurel Sumac Chaparral

## Mixed Ceanothus Chaparral

Mixed Ceanothus Chaparral is co-dominated by two or three species of *Ceanothus*. The three *Ceanothus* species recorded at the towers are evergreen shrubs of dry slopes (Hickman 1993), and were observed as forming a continuous (dense) tall canopy over a sparse ground layer. The species of *Ceanothus* contributing to this chaparral are: Bigpod Ceanothus, Hoary Ceanothus (*C. oliganthus* var. *oliganthus*), and Greenbark Ceanothus (*C. spinosus*).

Mixed Ceanothus Chaparral was recorded at four towers along the transmission line, with each observation consisting of a different plant association. These associations are similar to Bigpod Ceanothus associations, except the percent ground cover is represented by an equal representation of two or three species of Ceanothus rather than just by Bigpod Ceanothus alone. The co-

dominants and important canopy contributors of Mixed Ceanothus Chaparral include: Chamise, California Sagebrush, Toyon, Nuttall Scrub Oak, Lemonadeberry, and Purple Sage.

The four Mixed Ceanothus Chaparral plant associations along the transmission line are:

- Mixed Ceanothus-California Sagebrush Chaparral (*C. megacarpus* & *C. spinosus*)
- Mixed Ceanothus-Nuttall Scrub Oak-Lemonadeberry-Chamise Chaparral (all 3 species of *Ceanothus*)
- Mixed Ceanothus-Nuttall Scrub Oak-Purple Sage Chaparral (all 3 species of *Ceanothus*)
- Mixed Ceanothus-Toyon Chaparral (*C. megacarpus* & *C. spinosus*)

Other Mixed Ceanothus Chaparral shrub canopy associates include: Santa Ynez Mountains Eastwood Manzanita, Coyote Brush, Birchleaf Mountain Mahogany, California Buckwheat, Sawtooth Goldenbush, Heart-leaved Bush Penstemon, Santa Ynez Mountains Honeysuckle, Deerweed, Chaparral Mallow, Bush Monkeyflower, Coast Live Oak, Spiny Redberry, Black Sage, Blue Elderberry, and Our Lord's Candle.

The ground layer growing among shrub canopy openings includes: White Yarrow, Lay-and-Collie Indian Paintbrush, Golden Yarrow, San Diego Bedstraw (*Galium nuttallii* ssp. *nuttallii*), Purple Needlegrass, Canary Grass, Hummingbird Sage (*Salvia spathaceae*), Many-flowered Figwort, and Blue-eyed Grass.

## TYPE 4- WOODLAND

Woodland describes a vegetation type dominated by woody trees and tall tree-like shrubs, forming an open to closed canopy growing over a scattered variety of low-growing shrubs and a grassy ground layer. Some woodland communities may not contain a shrub stratum, and may only form a tall canopy over annual or perennial grasslands. The understory of woodland is directly related to the density of the woodland canopy and its percent canopy cover. Permanent shade created by dense woodlands typically inhibits the growth of stratified canopy layers.

Woodland was observed at 36 towers and contributes to 15% of the total vegetated landscape along the SCE transmission line botanical assessment, and woodland was observed the least out of the four vegetation types. The four woodland plant communities observed along the transmission line include two winter-deciduous riparian woodlands, a winter-deciduous riparian and/or upland woodland, and an evergreen upland woodland of slopes and canyons. A summary of these four woodland communities, their plant associations, and slope aspect are included in Table C-4.

**Table C-4. Woodland Inventory for the SCE Towers Vegetation Survey**

Woodland Communities and Plant Associations	Slope Aspect	No. of Towers
<i>Arroyo Willow Woodland</i> (no co-dominant specified)	N	1
Arroyo Willow Woodland-Coyote Brush	flat/W	1
Subtotal		2
<b><i>California Sycamore Woodland:</i></b>		
California Sycamore-Coast Live Oak Woodland	N	1
California Sycamore-Poison Oak-Black Sage Woodland	flat/S	1
California Sycamore-Southern California Black Walnut Woodland	S	1
Subtotal		3
<b><i>Coast Live Oak Woodland</i></b> (no co-dominant specified)	N,NE,NW,S,E,W	13
Coast Live Oak-Arroyo Willow Woodland	flat/W	1
Coast Live Oak-Bigpod Ceanothus Woodland	NE	1
Coast Live Oak-Lemonadeberry Woodland	W	1
Coast Live Oak-Southern California Black Walnut-Greenbark Ceanothus Woodland	N, E, W	2
Coast Live Oak-Southern California Black Walnut Woodland	N, NW, W	4
Coast Live Oak-Toyon-Birchleaf Mountain Mahogany Woodland	N	1
Coast Live Oak-Toyon Woodland	N	1
Coast Live Oak Woodland-California Sagebrush	NW	1
Coast Live Oak Woodland-Giant Wildrye	W	1
Subtotal		26

Woodland Communities and Plant Associations	Slope Aspect	No. of Towers
<i>Southern California Black Walnut Woodland</i> (no co-dominant recorded)	N	1
Southern California Black Walnut-Chaparral Mallow Woodland	W	1
Southern California Black Walnut-Coast Live Oak Woodland	NE, SE	2
Southern California Black Walnut-Greenbark Ceanothus Woodland	N, W	1
Subtotal		6
<b>Total Woodland Observations:</b>		<b>36 = 15 %</b>

### Arroyo Willow Woodland

Arroyo Willow Woodland (Arroyo Willow Series according to Sawyer and Keeler-Wolf [1995]) forms riparian habitat that is dominated by *Salix lasiolepis*. Arroyo Willow is a winter-deciduous shrub or small tree with shiny dark green leaves (lower surface white tomentose) (Hickman 1993). The NIWP (Reed 1988) lists Arroyo Willow with an FACW wetland indicator status (facultative wetland species usually found in wetlands). Arroyo Willow Series occurs in seasonally flooded or saturated freshwater wetland habitats, such as floodplains and low-gradient depositions along rivers and streams, and is abundant in marshes, meadows, and springs, at elevations below 1,800 meters. This woodland community forms a continuous canopy growing over a sparse shrub layer and variable ground layer (depending on canopy thickness).

Arroyo Willow Woodland was observed at two towers (Survey Tower Nos. 64 & 120). Tower 120 consists of Arroyo Willow-Coyote Brush Woodland with Coyote Brush as a co-dominant. The tree canopy associates (including tree-like shrubs) contributing to the willow stands include: Toyon, Southern California Black Walnut, California Sycamore (*Platanus racemosa*), Coast Live Oak, Lemonadeberry, and Blue Elderberry.

The shrub stratum below the Arroyo Willow canopy consists of important associates including the special-status species Plummer Baccharis (*Baccharis plummerae* ssp. *plummerae*) and Fish Milkwort (*Polygala cornuta* ssp. *fishiae*), the shrub-like perennial grass Giant Wildrye, and scrub species such as Spiny Redberry, Fuschia-flowered Gooseberry, Purple Sage, and Poison Oak.

The herbaceous ground layer under Arroyo Willow includes a variety of native forbs such as Mugwort (*Artemisia douglasiana*), Morning-glory, Pipestem Clematis, Many-flowered Figwort, Hedge Nettle, Hoary Creek Nettle, and Western Verbena. The non-native ground layer contributors include: Black Mustard, Italian Thistle (*Carduus pycnocephalus*), Tocalote (*Centaurea melitensis*), Poison Hemlock (*Conium maculatum*), Summer Mustard, Sourclover (*Melilotus indica*), and Cape Ivy (*Senecio mikanioides*).

### California Sycamore Woodland

California Sycamore Woodland (California Sycamore Series according to Sawyer and Keeler-Wolf [1995]) is dominated by the monoecious, wind-pollinated, broad-leaved winter-deciduous

*Platanus racemosa*. This native tree has smooth pale bark and large, densely hairy, palmately lobed leaves, and it is a common tree occurring along streamsides and in canyons (Hickman 1993). The NIWP (Reed 1988) lists *P. racemosa* with a wetland indicator status of FACW, or a facultative wetland species.

California Sycamore Series grows in wetland soils, permanently saturated at depth, of freshwater riparian corridors, braided depositional channels of intermittent streams, gullies, springs, seeps, river banks, and terraces adjacent to floodplains subject to high-intensity seasonal flooding. This series also occurs on upland rocky canyon slopes, in alluvial, open cobbly, and rocky soils, at elevations below 2,400 meters. A shrubby thicket of evergreen and deciduous shrubs may grow below the 35-meter, widely spaced, sycamore canopy, and the ground layer is generally grassy.

California Sycamore Woodland was recorded at three towers, and a different plant association occupies each tower. The tree species co-dominating the California Sycamore canopy are Coast Live Oak and Southern California Black Walnut, while Black Sage and Poison Oak grow as important understory shrubs to the tall emergent sycamores. Arroyo Willow is common in these riparian sycamore stands, and intergrading upland shrub species include: California Sagebrush, Coyote Brush, Birchleaf Mountain Mahogany, California Buckwheat, Chaparral Mallow, and Lemonadeberry.

California Sycamore plant associations along the SCE transmission line include:

- California Sycamore-Coast Live Oak Woodland
- California Sycamore-Poison Oak-Black Sage Woodland
- California Sycamore-Southern California Black Walnut Woodland

## Coast Live Oak Woodland

Coast Live Oak Woodland (Coast Live Oak Series according to Sawyer and Keeler-Wolf [1995]) is dominated by *Quercus agrifolia* var. *agrifolia*, a broad-leaved evergreen, wide-topped tree with furrowed dark gray bark and weakly spine-toothed, convex, dark green leaves (Hickman 1993). *Q. agrifolia* is the most widely distributed of the evergreen oaks, and is capable of achieving large size and old age (Zedler et al. 1997). This oak occurs in valleys and on slopes of riparian woodland fringes, scattered in grassland or Coastal Sage Scrub communities, as an element of Mixed Evergreen Forest, or as a contributor to other oak woodlands. Coast Live Oak, as a series, predominantly occurs on steep slopes and on raised stream banks or terraces. Coast Live Oak Woodland (Series) forms a continuous to open canopy (<30 meters tall), has an understory of occasional or common shrubs and an absent or herbaceous ground layer, and requires sandstone or shale-derived soils of elevations below 1,200 meters.

Coast Live Oak Woodland was recorded at 26 towers, representing the most common woodland of the four woodland plant communities encountered along the transmission line. Thirteen tower sites were recorded as exclusively Coast Live Oak Woodland (without co-dominants), while the other 13 are of the nine variable Coast Live Oak Woodland plant associations, including co-dominants and several important associates. The co-dominant species and important tree canopy



contributors of these sites are Greenbark Ceanothus, Toyon, Southern California Black Walnut, and Arroyo Willow. The dominant understory shrubs include: California Sagebrush, Bigpod Ceanothus, Birchleaf Mountain Mahogany, Giant Wildrye, and Lemonadeberry.

The nine Coast Live Oak associations observed along the transmission line are:

- Coast Live Oak-Arroyo Willow Woodland
- Coast Live Oak-Bigpod Ceanothus Woodland
- Coast Live Oak-Lemonadeberry Woodland
- Coast Live Oak-Southern California Black Walnut-Greenbark Ceanothus Woodland
- Coast Live Oak-Southern California Black Walnut Woodland
- Coast Live Oak-Toyon-Birchleaf Mountain Mahogany Woodland
- Coast Live Oak-Toyon Woodland
- Coast Live Oak Woodland-California Sagebrush
- Coast Live Oak Woodland-Giant Wildrye

Coast Live Oak understory also includes other typical Coastal Sage Scrub species: Coyote Brush, Plummer Baccharis, buckwheats (*Eriogonum cinereum*, *E. fasciculatum*), Toyon, Heart-leaved Bush Penstemon, Deerweed, Chaparral Mallow, Laurel Sumac, Bush Monkeyflower, Fish Milkwort, Hollyleaf Cherry (*Prunus ilicifolia*), Spiny Redberry, Fuschia-flowered Gooseberry, California Wild Rose (*Rosa californica*), California Blackberry (*Rubus ursinus*), Purple Sage, Blue Elderberry, Poison Oak, Canyon Sunflower, and Our Lord's Candle.

A ground layer consisting of annual grasses and several showy wildflowers also contribute to the oak woodland understory as well: Goldenstars, Lay-and-Collie Indian Paintbrush, Four-spotted Purple Clarkia, Blue Dicks, Lanceleaf Live Forever, Pacific Peavine (*Lathyrus vestitus*), Fleshy Lupine (*Lupinus succulentus*), Navarretia (*Navarretia jaredii*), California Buttercup, Hummingbird Sage, California Globe Mallow (*Sidalcea malvaeflora* ssp. *californica*), Blue-eyed Grass, Douglas Nightshade (*Solanum douglasii*), Hedge Nettle, Western Verbena, and Johnny Jump-up.

## **Southern California Black Walnut Woodland**

Southern California Black Walnut Woodland (California Walnut Series according to Sawyer and Keeler-Wolf [1995]) is dominated by *Juglans californica* var. *californica*, a broad-leaved winter-deciduous, monoecious, tree that blooms from March to May. It has gray-brown bark, toothed leaflets, and spheric, leathery-husked, strong-smelling fruit (walnuts). *J. californica* is an uncommon endemic, ranging from coastal southern California from Santa Barbara County to Los Angeles County, found on canyon slopes at elevations between 50 and 900 meters (Hickman 1993). It is listed in the NIWP (Reed 1988) with a FAC (facultative species) wetland indicator status. *J. californica* is a CNPS List 4 (limited distribution) and has an R-E-D (Rare-Endangerment-Distribution) code of 1-2-3 (Rare, but low potential for extinction-Endangered in a portion of its range-Endemic to California) (Skinner and Pavlik 1994). Southern California Black Walnut Woodland is a much fragmented, declining natural community, and it is threatened by urbanization and grazing, which inhibit natural reproduction (Skinner and Pavlik 1994).

California Walnut Series forms an open to closed canopy (<10 meters tall) growing over a common or infrequent shrub stratum and a sparse or grassy ground layer. This woodland requires deep, shale-derived, intermittently flooded/saturated soils of freshwater riparian corridors, floodplains, incised canyons, seeps, and stream or river banks at elevations between 150 and 900 meters.

Southern California Black Walnut Woodland was observed at six towers along the SCE transmission line. Three walnut woodland plant communities are recorded without co-dominant species, and the other three were recorded as each of the different walnut plant associations listed below. Coast Live Oak may grow as a tree canopy co-dominant, while Greenbark Ceanothus and Chaparral Mallow occur as dominant understory shrubs.

The three Southern California Black Walnut Woodland plant associations along the SCE transmission line are:

- Southern California Black Walnut-Chaparral Mallow Woodland
- Southern California Black Walnut-Coast Live Oak Woodland
- Southern California Black Walnut-Greenbark Ceanothus Woodland

The less dominant walnut understory shrubs include: California Sagebrush, Coyote Brush, Hoary Ceanothus, Toyon, Giant Wildrye, Southern Honeysuckle, Deerweed, Fish Milkwort, Spiny Redberry, Fuschia-flowered Gooseberry, Purple Sage, and Poison Oak.

The ground layer consists of Goldenstars, Morning-glory, Miners Lettuce (*Claytonia perfoliata*), San Diego Bedstraw, Green Everlasting, Summer Mustard, Purple Needlegrass, Peony, Pacific Sanicle, Many-flowered Figwort, Blue-eyed Grass, Hedge Nettle, and Western Verbena.

## APPENDIX D. SENSITIVE PLANT DESCRIPTIONS

### Plummer Baccharis (*Baccharis plummerae* ssp. *plummerae*)

STATUS		
Federal	State / NDDB	CNPS (Skinner and Pavlik 1994)
None	None / G3G4, S3.2	List 4: Plants of Limited Distribution R-E-D Code: 1-1-3

Plummer Baccharis (*Baccharis plummerae* A. Gray ssp. *plummerae*) is a small, broad-leaved winter-deciduous shrub (<2 meters tall) with fine-curved, hair-covered, wand-like stems and 20 to 45-mm, oblanceolate, toothed, 3-veined (prominent), sessile leaves. The flowers, generally blooming between August and October, are arranged in paniculate heads with a bell-shaped involucre, and are not particularly showy. The flower heads are either staminate (5-6.5 mm long) or pistillate (6-8.5 mm long). Plummer Baccharis is a member of the sunflower family (Asteraceae). (Hickman 1993.)

Plummer Baccharis typically occurs on rocky, well-drained, north-facing slopes in Coastal Sage Scrub and oak woodland plant communities. It ranges from southern coastal Santa Barbara County to coastal Los Angeles County, and the Santa Cruz and Anacapa Islands, below 425 meters in elevation (Hickman 1993, Skinner and Pavlik 1994). The type-locality (collection site from which it was formally described and named) for Plummer Baccharis is in Glen Lock Ravine, on the south slope of the Santa Ynez Mountains, approximately 2.4 km west of Santa Barbara (Smith 1976).

Plummer Baccharis was observed at 16 towers (Main Line Tower Nos. 14-N, 15-N, 44-N, 59-N, 60-N, 65-N, and 83-N; South Branch Tower Nos. 62, 63, 64, 69, 72, 73, 74, 80, and 82) along the Santa Clara-Carpinteria transmission line. This special-status species was mostly observed on north-facing slopes, but also occurs on moister south-facing slopes in shade of emergent trees. The predominant vegetation types inhabited by Plummer Baccharis are Coastal Sage Scrub and Woodland. The dominant species of the Coastal Sage Scrub plant communities, in which *B. plummerae* was observed growing, include: California Sagebrush, Coyote Brush, Toyon, Giant Wildrye, and Purple Sage. The dominant species of the Woodland plant communities, in which *B. plummerae* grows, include: Greenbark Ceanothus, Coast Live Oak, Southern California Black Walnut, Lemonadeberry, and Blue Elderberry.

**Catalina Mariposa Lily (*Calochortus catalinae*)**

STATUS		
Federal	State / NDDB	CNPS (Skinner and Pavlik 1994)
None	None / G3, S3.2	List 4: Plants of Limited Distribution R-E-D Code: 1-2-3

Catalina Mariposa Lily (*Calochortus catalinae* S. Watson) is a perennial herb that resprouts annually from a small bulb. The stems are 20-40 cm long, generally branched above. The basal strap-shaped leaves are 10-30 cm long, usually wither before anthesis (flowering). The inflorescence consists of 1 to 4 bowl-shaped flowers with subtending, opposite bracts 2-10 cm long. Sepals are white with purple spots near the base (20-30 mm long). Petals are nearly glabrous, white, tinged lilac, and purple-spotted near the base (20-50 mm long). The inside of the petals have oblong and densely branched-hairy nectaries. Catalina Mariposa Lily blooms between March and May (Smith 1976). The fruit (capsules) are erect, 2-5 cm long, and not angled as in other Mariposa lilies. *C. catalinae* is a member of the lily family (Liliaceae). (Hickman 1993.)

Catalina Mariposa Lily grows in heavy soils of open grassland, chaparral, and Coastal Sage Scrub communities, at elevations below 700 meters. It ranges from San Luis Obispo County to San Diego County, and on Santa Rosa, Santa Cruz, and Santa Catalina Islands (Skinner and Pavlik 1994). Some known occurrences of *C. catalinae* are in the Conejo Valley (Thousand Oaks and Camarillo), Ventura Hills, and the Upper Ojai Valley. *C. catalinae* is threatened by development.

Catalina Mariposa Lily was observed at nine towers (Main Line Tower Nos. 11-N, 12-N, 16-N, 18-N, 19-N, and 20-N; South Branch Site No. 57; North Branch Tower Nos. 100-Na and 101-Na). This species grows on variable slope faces, within the survey area, which are inhabited predominantly by Coastal Sage Scrub and Grassland types. The dominant species that form the Coastal Sage Scrub communities (primarily Mixed Sage Scrub), in which *C. catalinae* grows, include: California Sagebrush, Coyote Brush, California Bush Sunflower, Sawtooth Goldenbush, Giant Wildrye, Deerweed, and Purple Sage. The dominant species of California Annual Grassland and Ruderal Grassland communities, in which *C. catalinae* grows, include: Slender Oat, mustards, brome grasses, Tocalote, Blue Dicks, Golden Yarrow, Low Barley, Italian Ryegrass, Purple Needlegrass, and Milk Thistle.

## Southern California Black Walnut (*Juglans californica* ssp. *californica*)

STATUS		
Federal	State / NDDDB	CNPS (Skinner and Pavlik 1994)
None	None / G3, S3.2	List 4: Plants of Limited Distribution R-E-D Code: 1-2-3

Southern California Black Walnut (*Juglans californica* S. Watson ssp. *californica*) is a small, broad-leaved, monoecious, winter-deciduous tree (15 meters tall) with one to five trunks. It has pinnately divided leaves with 11-19 lanceolate to ovate toothed leaflets (2-8 cm long). The wind pollinated, greenish flowers, blooming between March and May, have 4-lobed sepals arranged in pendulous clusters before the leaves emerge. This species produces spheric, leathery-husked, strong-smelling fruit (walnuts) 2-3 centimeters in diameter. *J. californica* ssp. *c.* is listed in the NIWP (Reed 1988) with an FAC wetland indicator status (facultative species that is equally likely to occur in wetlands and non-wetlands), and is a member of the walnut family (Juglandaceae). (Hickman 1993.)

*Juglans californica* var. *c.* is uncommon, but can be found on slopes and canyons at elevations between 50 and 900 meters, and it is often associated with riparian habitats (Hickman 1993). It ranges from the Santa Lucia Mountains (where they were cultivated), Santa Barbara County, and along the coastal portions of the Transverse Ranges, south to the northern Peninsular Ranges in northern San Diego County. Some reported occurrences of Southern California Black Walnut are along Santa Paula Creek at Sisar Creek and along the Lower Piru Creek. It is also known from the Santa Monica Mountains at Little Sycamore Canyon, and elsewhere in Ventura County (Magney and Burgess 1996). Southern California Black Walnut Forest (Holland 1986) is a much-fragmented, declining natural community, and it is threatened by urbanization and grazing, which inhibit natural reproduction. (Skinner and Pavlik 1994.)

*Juglans californica* var. *c.* was observed at 17 towers (Main Line Tower Nos. 38-N, 41-N, 44-N, 45-N, 45-1N, 45-N to 51-N, 53-N, 54-N, 77-N, and 79-N; South Branch Tower Nos. 85 and 86). This species grows on variable slope faces within the survey area, which are inhabited predominantly by Woodland and Coastal Sage Scrub types. Dominant species of woodlands (Coast Live Oak Woodland, Coast Live Oak-Southern California Black Walnut Woodland, and California Sycamore-Southern California Black Walnut Woodland), in which *J. californica* grows, include: Ceanothus (*Ceanothus* spp.), Toyon, California Sycamore, Coast Live Oak, Lemonadeberry, and Blue Elderberry. Dominant species contributing to the walnut tree understory include typical Coastal Sage Scrub (Mixed Sage Scrub) and chaparral species, such as California Sagebrush, Coyote Brush, Birchleaf Mountain Mahogany, California Buckwheat, Lemonadeberry, sages, and Poison Oak.



**Fish Milkwort (*Polygala cornuta* var. *fishiae*)**

STATUS		
Federal	State / NDDB	CNPS (Skinner and Pavlik 1994)
None	None / G5T4, S3.3	List 4: Plants of Limited Distribution R-E-D Code: 1-1-2

Fish Milkwort (*Polygala cornuta* Kellogg var. *fishiae* [C. Parry] Jepson) is a small, broad-leaved, winter-deciduous, 25dm-tall shrub, from rhizomes, that often forms dense thickets up to 2 meters wide. The stems are decumbent to erect (6-25 dm long) and covered with leaves that are >2 times as long as wide. The flowers, blooming May through August, are somewhat peaflower-shaped, 7-11.2 mm long, and pale with dark pink buds. Fish Milkwort is a member of the milkwort family (Polygalaceae). (Hickman 1993.)

Fish Milkwort can be found on exposed slopes growing in chaparral, oak woodland, and riparian woodland habitats at elevations between 100 and 1,100 meters. It ranges from Santa Barbara County, in the Outer South Coast Ranges south through the Transverse Ranges to the northern Peninsular Ranges in northern San Diego County. (Hickman 1993).

*P. cornuta* var. *f.* was observed at 13 towers (Main Lie Tower Nos. 45-N, 46-N, 48-N, 51-N, 52-N, 54-N, and 82-N; South Branch Tower Nos. 62, 63, 64, 66, 71, and 80 ). This species grows on variable slope faces inhabited predominantly by Coastal Sage Scrub and woodlands. Four Coastal Sage Scrub communities/associations are inhabited by *P. cornuta*: Mixed Sage Scrub co-dominated by California Sagebrush and Purple Sage; California Sagebrush-Coyote Brush Scrub; Lemonadeberry-Laurel Sumac Scrub; and Poison Oak-Toyon-Blue Elderberry Scrub. The Coast Live Oak Woodlands inhabited by *P. cornuta* include: Coast Live Oak Woodland, Coast Live Oak-Southern California Black Walnut Woodland, and Coast Live Oak-Toyon. *P. cornuta* was also observed in Southern California Black Walnut Woodland.

## Nuttall Scrub Oak (*Quercus dumosa*)

STATUS		
Federal	State / NDDB	CNPS (Skinner and Pavlik 1994)
C2	None / G2, S1.1	List 1B: Plants considered to be rare, threatened, or endangered R-E-D Code: 2-3-2

*Quercus dumosa* Nuttall is a broad-leaved evergreen shrub (1-3 m tall) with sparsely short-hairy, dark reddish-brown slender twigs (becoming glabrous) and oblong/elliptic, obtuse-tipped to abruptly pointed, and toothed-margined leaves (1-2.5 cm long). The upper leaf surface is slightly shiny-green, and the lower is finely tomentose, becoming glabrous, dull pale green. The fruit (acorn) has a cup that is 8-15 mm wide, 5-8 mm deep, and bowl-shaped with tubercled scales, and has a nut that is 15-25 mm long, slender, ovoid, tapered-tipped, and glabrous-shelled (inside). *Q. dumosa* blooms from February to March (Skinner and Pavlik 1994) and is a member of the oak or beech family (Fagaceae). (Hickman 1993.)

*Q. dumosa* grows predominantly in sandy, clay-loam, and sandstone soils of chaparral and Coastal Sage Scrub habitats near the coast. It is known to occur along the South Coast in Orange, Santa Barbara, and San Diego Counties, and Baja, California at elevations below 200 meters. Nuttall Scrub Oak hybridizes with Scrub Oak (*Q. berberidifolia*), which is the widespread scrub type oak from much of cismontane California, previously called *Q. dumosa*, is now *Q. berberidifolia*. Nuttall Scrub Oak is primarily threatened by development. (Hickman 1993; Skinner and Pavlik 1994.)

*Q. dumosa* was observed at 13 towers (Main Line Tower Nos. 97-N to 100-N, 102-N, and 107; North Branch Tower Nos. 90-Na, 92-Na, 98-Na, 99-Na, 102-Na, 103-Na, and 104-Na). This oak grows on mostly south facing slopes and on less shaded north-facing slopes. *Q. dumosa* often only occurs as an occasional shrub, but is also recorded as co-dominating chaparral associations or as an important chaparral contributor. Nuttall Scrub Oak thrives locally in Bigpod Ceanothus Chaparral, dominated by *Ceanothus megacarpus* var. *m*. The important Bigpod Ceanothus-Nuttall Scrub Oak canopy contributors include: Chamise, Santa Ynez Mountains Eastwood Manzanita, Coyote Brush, Birchleaf Mountain Mahogany, Toyon, Giant Wildrye, Chaparral Mallow, Lemonadeberry, and Purple Sage.

**APPENDIX E, Part 1. Natural Diversity Data Base Element Ranking System.**

<b>Global Ranking (G)</b>	
G1	<6 viable element occurrences (populations for species), OR < 1,000 individuals, OR < 809.4 hectares (ha) (2,000 acres [ac]).
G2	6 to 20 element occurrences OR 809.4 to 4,047 ha (2,000 to 10,000 ac).
G3	21 to 100 element occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac).
G4	Apparently secure; this rank is clearly lower than G3, but factors exist to cause some concern (i.e. there is some threat, or somewhat narrow habitat).
G5	Population or stand demonstrably secure to ineradicable due to being commonly found in the world.
GH	All sites are <b>historic</b> ; the element has not been seen for at least 20 years, but suitable habitat still exists.
GX	All sites are <b>extirpated</b> ; this element is extinct in the wild.
GXC	Extinct in the wild; exists in cultivation.
G1Q	The element is very rare, but there is a taxonomic question associated with it.
<p><b>Subspecies Level:</b>                      Subspecies receive a T-rank attached to the G-rank. With the subspecies, the G-rank reflects the condition of the <u>entire species</u>, whereas the T-rank reflects the global situation of just the <u>subspecies or variety</u>.                      * For example: <i>Chorizanthe robusta</i> var. <i>hartwegii</i> is ranked G2T1. The G-rank refers to the whole species range (<i>Chorizanthe robusta</i>), whereas the T-rank refers only to the global condition of the variety (var. <i>hartwegii</i>).</p>	
<b>State Ranking (S)</b>	
S1	Less than 6 element occurrences OR less than 1,000 individuals OR less than 809.4 ha (2,000 ac). S1.1 = very threatened S1.2 = threatened S1.3 = no current threats known
S2	6 to 20 element occurrences OR 3,000 individuals OR 809.4 to 4,047 ha (2,000 to 10,000 ac). S2.1 = very threatened S2.2 = threatened S2.3 = no current threats known..
S3	21 to 100 element occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac). S3.1 = very threatened S3.2 = threatened S3.3 = no current threats known
S4	Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat). <b>NO THREAT RANK.</b>
S5	Demonstrably secure to ineradicable in California. <b>NO THREAT RANK.</b>
SH	All California sites are <b>historic</b> ; the element has not been seen for at least 20 years, but suitable habitat still exists.
SX	All California sites are <b>extirpated</b> ; this element is extinct in the wild.
<b>Notes</b>	
<p>1. Other considerations used when ranking a species or natural community include the pattern of distribution of the element on the landscape, fragmentation of the population/stands, and historical extent as compared to its modern range. It is important to take an aerial view when ranking sensitive elements rather than simply counting element occurrences.</p>	
<p>2. Uncertainty about the rank of an element is expressed in two major ways: by expressing the rank as a range of values (e.g. S2S3 means the rank is somewhere between S2 and S3), and by adding a ? to the rank (e.g. S2?). This represents more certainty than S2S3, but less than S2. (Natural Diversity Data Base 1997.)</p>	

**APPENDIX E, Part 2. California Native Plant Society R-E-D Code**

<b>Rarity (R)</b>	
1	Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time
2	Distributed in a limited number of occurrences, occasionally more if each occurrence is small
3	Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported
<b>Endangerment (E)</b>	
1	Not endangered
2	Endangered in a portion of its range
3	Endangered throughout its range
<b>Distribution (D)</b>	
1	More or less widespread outside California
2	Rare outside California
3	Endemic to California

Source: Skinner and Pavlik 1994.

**APPENDIX F. Summary of vegetation types and special-status species for each tower**

Tower Numbers		Vegetation <sup>5</sup>					Special-status Species	
Survey <sup>6</sup>	SCE <sup>7</sup>	Grassland	Scrub	Chaparral	Woodland	Develop	Plants <sup>8</sup>	Animals <sup>9</sup>
<i>Main Line</i>								
1-N	0-1A		SCB					
2-N	0-1W	GAC	SPS					
3-N	0-1E	GAC	SPS					
4-N	0-2		SCS					GN
5-N	0-3		SCS					GN
6-N	0-4		SPS					
7-N	0-5	GR	SMS					GN
8-N	0-6	GR	SMS					GN
9-N	1-1		SCS, SMS					GN
10-N	1-2		SCS	CBC				GN
11-N	1-3		SMS				Cc	GN
12-N	2-1	GR	SMS				Cc	GN
13-N	2-2		SMS					GN
14-N	WH-A?		SCS				Bpp	GN
15-N	3-1		SMS				Bpp	GN
16-N	3-2	GR	SMS				Cc	GN
17-N	3-3	GR	SMS					GN
18-N	3-4		SMS				Cc	GN
19-N	4-1	GR	SMS				Cc	GN
20-N	4-2		SCS, SMS				Cc	GN
21-N	5-1	GAC	SPS					
22-N	5-2		SCS					GN
23-N	G?	GR						
24-N	5-4	GR						
25-N	5-5	GAC, GR						
26-N	5-6	GR						
27-N	6-1	GR						
28-N	6-2	GR						
29-N	6-3	GR						
30-N	6-4		SMS					GN
31-N	7-2	GR	SMS					GN

<sup>5</sup> See Appendix E for key to these vegetation and developed land codes.

<sup>6</sup> Survey Tower Numbers are the codes assigned to each tower site, after the field work was completed, for line designation, tower sequencing, tower number duplication elimination, and vegetation inventory.

<sup>7</sup> SCE Tower Numbers are either the original numbers/codes as encountered in the field, or, they are temporary codes (with a "?") assigned to towers with missing numbers for initial tower identification.

<sup>8</sup> Key to Special-status Plants:

- Bpp* = *Baccharis plummerae* ssp. *plummerae* (Plummer Baccharis)
- Cc* = *Calochortus catalinae* (Catalina Mariposa Lily)
- Jcc* = *Juglans californica* var. *californica* (Southern California Black Walnut)
- Pcf* = *Polygala cornuta* var. *fishiae* (Fish Milkvetch)
- Qd* = *Quercus dumosa* (Nuttall Scrub Oak)

<sup>9</sup> Key to Special Status Wildlife:

- GN* = *Poliioptila californica* (California gnatcatcher)



Tower Numbers		Vegetation <sup>5</sup>					Special-status Species	
Survey <sup>6</sup>	SCE <sup>7</sup>	Grassland	Scrub	Chaparral	Woodland	Develop	Plants <sup>8</sup>	Animals <sup>9</sup>
32-N	7-3	GR	SMS					GN
33-N	7-4		SMS, SPS					GN
34-N	7-5		SCB					
35-N	8-1	GAC	SCB					
36-N	8-2		SCB					
37-N	8-3	GR	SGW					
38-N	9-1		SGW, SPS				Jcc	
39-N	9-2	GR						
40-N	9-3	GR						
41-N	9-4				WLO		Jcc	
42-N	9-5?		SCB, SPS					
43-N	0-2N	GAC	SPS		WLO			
44-N	1-2N	GPN, GWF			WLO		Bpp, Jcc	
44-1N	0-3		SPO, SPS	CL				
45-N	1-1N		SPS		WBW		Jcc, Pcf	
45-1N	F?				WCS, WLO		Jcc	
46-N	1-4?				WLO		Jcc, Pcf	
47-N	1-5				WLO		Jcc	
48-N	2-1	GR			WBW		Jcc, Pcf	
49-N	2-2	GR			WLO		Jcc	
50-N	2-3		SMS		WBW		Jcc	GN
51-N	2-4				WLO		Jcc, Pcf	GN
52-N	3-1		SCS				Pcf	
53-N	3-1A?				WBW		Jcc	
54-N	3-2	GR	SMS		WLO		Jcc, Pcf	GN
55-N	3-3			CBC				GN
56-N	13-1	GR						
57-N	13-2	GR	SBE, SCB, SPS					
58-N	13-3	GR						
59-N	13-4		SPS		WLO		Bpp	
60-N	13-5	GAC	SMS		WLO		Bpp	GN
61-N	13-6	GAC			WLO			GN
62-N	13-7		SCB			O		
63-N	14-1		SCB			O		
64-N	WH-B?		SD				Bpp	GN
65-N	14-3		SCS					GN
66-N	14-4		SCS, SCM					GN
67-N	14-5		SCB, SMS					
68-N	14-6		SCM					GN
69-N	15-1		SCM					GN
70-N	15-2				WLO			
71-N	15-3		SCM					
72-N	15-4	GR				O		
73-N	16-1	GR				O		
74-N	16-2		SCB			O		
75-N	16-3		SCM			O		GN
76-N	16-4			CBC				
77-N	16-5			CBC			Jcc	
78-N	17-1			CL		O		

Tower Numbers		Vegetation <sup>5</sup>					Special-status Species	
Survey <sup>6</sup>	SCE <sup>7</sup>	Grassland	Scrub	Chaparral	Woodland	Develop	Plants <sup>8</sup>	Animals <sup>9</sup>
79-N	17-2			CBC		O	<i>Jcc</i>	
80-N	8-1	GR				O		
81-N	8-2	GR				O		
82-N	8-3			CL			<i>Pcf</i>	
83-N	8-4				WLO	O	<i>Bpp</i>	
84-N	8-5			CL		O		
85-N	8-6			CBC				
86-N	9-5			CL		O		
87-N	9-8				WLO	O		
88-N	19-2		SMS		WLO			GN
89-N	19-3		SCS			O		GN
90-N	19-4			CBC		O		
91-N	19-5			CBC				
92-N	19-6			CBC			<i>Qd</i>	
93-N	20-1		SCS					GN
94-N	20-2	GPN, GR	SCS, SGW					GN
95-N	20-3		SD	CBC				
96-N	20-4?			CBC				
97-N	20-5		SD	CBC			<i>Qd</i>	
98-N	20-6			CMC	WLO		<i>Qd</i>	
99-N	21-1			CBC			<i>Qd</i>	
100-N	21-2		SCB	CBC			<i>Qd</i>	GN
101-N	21-3		SMS	CBC				
102-N	21-4		SCB				<i>Qd</i>	
103-N	21-5			CBC				
104-N	1-4?			CBC			<i>Qd</i>	
105-N	1-3?		SBS					
106-N	1-2				WLO			
107-N	1-1?			CBC			<i>Qd</i>	
108-N	0-9?		SGW	CBC	WLO			
109-N	0-8?			CBC				
110-N	0-7	GAC	SCS					GN
111-N	0-6					O, CN		
112-N	0-5					O, CN		
113-N	0-4					O, CN		
114-N	0-3					O, CN		
<i>South Branch</i>								
56	4-1		SPS				<i>Cc</i>	
57	4-2	GAC	SCB					GN
58	4-3		SMS					
59	4-4	GAC	SPS					
60	4-5	GAC, GR	SCB, SMS					
61	5-1	GR	SMS					
62	5-2		SPO				<i>Bpp, Pcf</i>	
63	5-3				WLO		<i>Bpp, Pcf</i>	
64	5-4				WAW, WLO		<i>Bpp, Pcf</i>	
65	6-1	GR	SPS					
66	6-2		SMS				<i>Pcf</i>	
67	6-3		SGW, SPS					

Tower Numbers		Vegetation <sup>5</sup>					Special-status Species	
Survey <sup>6</sup>	SCE <sup>7</sup>	Grassland	Scrub	Chaparral	Woodland	Develop	Plants <sup>8</sup>	Animals <sup>9</sup>
68	6-4		SMS					GN
69	6-5		SMS				<i>Bpp</i>	GN
70	6-6		SMS					GN
71	6-7	GR					<i>Pcf</i>	
72	6-8		SGW				<i>Bpp</i>	
73	7-1		SCB				<i>Bpp</i>	
74	7-2	GR	SCB			O	<i>Bpp</i>	
75	7-3	GR		CL		R		
76	7-4					O, R		
77	7-5	GR				O		
78	7-6	GR						
79	8-1				WLO	O, R		
80	8-2		SCB		WLO	O	<i>Bpp, Pcf</i>	
81	8-3?	GR				O, R		
82	8-4?				WLO	O	<i>Bpp</i>	
83	8-5					O		GN
84	8-6		SMS			O		
84-1	9-1						<i>Jcc</i>	
85	D?			CL			<i>Jcc</i>	
86	E?			CL	WBW			
87	3?					O		
88	4?					O		
89	5?					O		
90	6?					O		
91	7?					O		
92	8?					O		
93	9?					O		
94	10?	GR				O, R		
95	11?	GR				R		
96	12?	GR				R		
97	13?	GR				O, R		
98	14?					R		
99	4141437		SPO			R		
100	4141436	GR				O, R		
101	3/SR192?				WCS			
102	4141435					RC		
103	2115769					RC		
104	2115838					RC		
105	2115768					RC		
106	106202					RC		
107	106201					O, R		
108	106199					O		
109	106197					O		
110	106195					CN		
111	106194					CN		
112	106193					O		
113	427491					O		
114	16/SR192?					O, R		
115	2303868					O, R		

Tower Numbers		Vegetation <sup>5</sup>					Special-status Species	
Survey <sup>6</sup>	SCE <sup>7</sup>	Grassland	Scrub	Chaparral	Woodland	Develop	Plants <sup>8</sup>	Animals <sup>9</sup>
116	106187					O, R		
117	2116387					O, R		
117-1	2116387					O, R		
118	192098					O, R		
119	192087					O, R		
120	1920986				WAW	R		
121	1920984				WLO			
122	25/SR192?					O		
123	1920989					O		
124	1723097				WCS			
125	2295420					CN		
126	1723095					CN		
127	1665177					CN		
128	4170613					O		
129	4170616					O		
130	2115767					O		
131	106165					O		
132	106164					O		
133	106163					O		
134	106162					O		
135	106160					O		
136	106159					O		
137	106157					O		
138	1871704					O		
139	106155					O		
140	106154					O		
141	106152					O, CN		
142	1524182					O, CN		
143	1324181					CN		
144	106149					CN		
145	4305748					CN		
146	106146					CN		
147	1061--?					CN		
148	2303869					CN		
149	52/SR192?					O, CN		
150	1238737					O, CN		
151	54/SR192?					O, RC		
152	123874					O, RC, CN		
153	56/SR192?					CN		
154	4170614					RC, CN		
155	4305747					RC, CN		
156	4305746					RC, CN		
157	4305745					CN		
158	1238745					CN		
159	62/SR192?					R, CN		
160	1238747					R, CN		
161	64/SR192?					R, CN		
162	1238749					R, CN		
163	66/SR192?					R, CN		

Tower Numbers		Vegetation <sup>5</sup>					Special-status Species	
Survey <sup>6</sup>	SCE <sup>7</sup>	Grassland	Scrub	Chaparral	Woodland	Develop	Plants <sup>8</sup>	Animals <sup>9</sup>
164	106125					R, CN		
165	1920853					R, CN		
166	106123					CN		
<i>North Branch</i>								
88-Na	10-5			CBC				
89-Na	10-6			CBC	WLO			
90-Na	11-3	GR		CBC			<i>Qd</i>	
91-Na	11-4			CBC				
93-Na	11-6			CBC				
94-Na	11-7			CBC				
95-Na	11-8			CBC				
96-Na	11-9			CMC				GN
97-Na	12-1			CBC				
98-Na	12-2			CBC			<i>Qd</i>	
99-Na	12-3			CMC			<i>Qd</i>	
100-Na	12-4?		SCB				<i>Cc</i>	
101-Na	12-5?		SPO				<i>Cc</i>	
102-Na	12-6		SPO				<i>Qd</i>	
103-Na	C?			CMC			<i>Qd</i>	
104-Na	H?			CBC				

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