ATTACHMENT “C”
(As referenced in Attachment “B”)
(Habitat Assessment)

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Habitat Assessment

Aliso Canyon Turbine Replacement Project
SCE Components

Los Angeles County, California

August 2014

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Habitat Assessment

Aliso Canyon Turbine Replacement Project - SCE Components

Los Angeles County, California

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Acronyms and Abbreviations

ACTR	Aliso Canyon Turbine Replacement Project
APMs	Applicant Proposed Measures
ARCADIS	ARCADIS U.S., Inc.
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
cm	centimeter(s)
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CPUC	California Public Utilities Commission
EIR	Environmental Impact Report
FEIR	Final Environmental Impact Report
GPS	global positioning system
ha	hectare(s)
km	kilometer(s)
kV	kilovolt
m	meter(s)
MBTA	Migratory Bird Treaty Act
MM	mitigation measures
msl	mean sea level
Project	Aliso Canyon Turbine Replacement Project
SCE	Southern California Edison Company
SCG	Southern California Gas Company
TSP	tubular steel poles
USGS	U.S. Geological Survey

1. Introduction

This Southern California Edison Company (SCE) Habitat Assessment summarizes the vegetation types and sensitive ecological resources present or potentially occurring in the Aliso Canyon Turbine Replacement Project, SCE Components (the Project) area in Los Angeles County, California (Figures 1 and 2). As is described in Section 1.1 and Section 1.2 below, this habitat assessment report supplements the environmental studies completed for the Aliso Canyon Turbine Replacement (ACTR) Project proposed by the Southern California Gas Company (SCG). The Project area is generally located in the vicinity of the SCG Aliso Canyon Gas storage facility at Sesnon Boulevard and Limekiln Canyon Road in the City of Northridge, as well as in surrounding portions of the Santa Susana Mountains, San Gabriel Mountains, and the City of Santa Clarita.

1.1 Project Summary

SCG proposes to replace three existing gas-turbine-driven compressors with three new electric-driven, variable-speed compressors at their Aliso Canyon Natural Gas Storage Field in Los Angeles County, California. The ACTR Project was approved by the California Public Utilities Commission (CPUC) on November 14th, 2013 after the completion of an Environmental Impact Report (EIR) and a supplemental California Environmental Quality Act (CEQA) review by the CPUC and its contractor, Ecology and Environment (2013). Pursuant to the review, the CPUC approved the Project with the condition that all Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) included in the EIR be implemented for the SCG elements, as well as the SCE elements (CPUC 2013).

Section 1.2 below describes the major components of the project including both the SCG ACTR work and the required SCE work necessary to complete the ACTR project. This supplemental habitat assessment provides consideration of more detailed project design information for the SCE components of the project than was available at the time of EIR preparation. This habitat assessment also addresses compliance with the APMs and MMs from the final EIR.

1.2 Aliso Canyon Turbine Replacement Project Description

The ACTR Project is located at the Aliso Canyon Natural Gas Storage Field (Storage Field), on unincorporated land north of Porter Ranch, in western Los Angeles County, California. The Storage Field lies in the southeastern portion of the Santa Susanna Mountains. The Storage Field has an inventory of approximately 165 billion cubic feet, and is the largest underground natural gas storage field operated by SCG. As part of the ACTR Project, SCG will construct and operate a new compressor station at the Storage Field, including the following components:

- Three new electric-driven, variable-speed compressors and pipelines to connect the station to existing facilities;
- 12 kilovolt (kV) plant power line;
- Rough grading for the SCE Natural Substation and access road;
- Main office and crew-shift buildings;
- New guardhouse on a widened segment of the existing entry road to the Storage Field;

SCE will construct several project components in order to provide power for the new compressors at the Storage Field. SCE will:

- Construct the new SCE Natural Substation;
- Modify several existing substations;
- Improve the access road for the 66 kV subtransmission line and the Natural Substation;
- Install 66 kV subtransmission line tubular steel poles (TSPs);
- Utilize pulling/tensioning sites for the 66 kV subtransmission line TSPs and the telecom lines;
- Reconductor segments of existing 66 kV subtransmission lines;
- Deconstruct the subtransmission line towers;
- Replace wood poles for telecommunications lines; and
- Install new telecommunications lines.

The areas encompassed by these SCE project components comprise the Project area for the purposes of this document.

1.3 Regulatory Requirements Governing Sensitive Biological Resources

The CPUC, as Lead Agency under CEQA and State CEQA Guidelines, has certified the Final EIR (FEIR) for the SCGACTR Project, including reporting and monitoring mitigation measures that are part of the conditions of project approval. APMs and MMs related to protection of ecological resources are summarized in Table 1. The APMs and MMs have been developed to avoid or reduce environmental impacts from the proposed project.

1.4 Document Organization

This Habitat Assessment identifies sensitive botanical and wildlife resources, sensitive habitats, and other environmental issues of concern occurring or potentially occurring in the Project area. The assessment focuses on the proposed disturbance areas and associated access roads, and

identifies potential ecological impacts associated with the Project and required measures for consideration to avoid and minimize potential project impacts.

- **Section 2** describes the methods used to assess habitat in the Project area.
- **Section 3** describes the overall Project area characteristics and topographic features.
- **Section 4** describes vegetation types in the Project area.
- **Section 5** discusses the observed and/or expected wildlife in the Project area.
- **Section 6** describes the sensitive habitats, plants and wildlife species occurring or potentially occurring in the Project area.
- **Section 7** describes the potential impacts to biological resources associated with the Project.
- **Section 8** describes the various measures that will be undertaken to avoid impacts to biological resources in the Project area.
- **Section 9** briefly summarizes and provides a conclusion to this Habitat Assessment Report.
- **Section 10** provides a list of references cited in this Habitat Assessment Report.

2. Methods

ARCADIS U.S., Inc. (ARCADIS) utilized a variety of study methods to complete this habitat assessment. These are described in more detail below.

2.1 Literature Search

In assessing the pre-disturbance conditions within the Project area to review potential impacts and establish restoration goals, ARCADIS conducted a review of documents addressing the potential presence and distribution of sensitive and protected botanical and wildlife species within the Project and surrounding area, including a search of the California Natural Diversity Database (CNDDB; California Department of Fish and Wildlife [CDFW] 2014) for the U.S. Geological Survey (USGS) 7.5 minute series for Oat Mountain in the Project area, as well as the surrounding topographic quadrangles: Calabasas, Canoga Park, Mint Canyon, Newhall, San Fernando, Santa Susana, Val Verde, and Van Nuys. The California Native Plant Society's (CNPS) Electronic Inventory of Rare

and Endangered Vascular Plants (CNPS 2014) was also queried for species occurrences within the Project area Quadrangle and adjacent quadrangles. The Project area is located primarily in unincorporated Los Angeles County, although a portion of the Project area occurs in the City of Santa Clarita. Other resources utilized for this assessment included the Environmental Impact Report and supporting technical studies as well as various county, state, and federal regulations, review of other recent ecological documents completed in and around the area, and ARCADIS' direct experience in the region and in habitat and rare species restoration.

2.2 Field Surveys

Initial surveys of the Project area to map vegetation types were conducted on February 4, 6, 10, and 11, 2014 by Senior Ecologist Mary Carroll, Project Ecologists Dr. Doug Fischer and Cynthia Fenter, and Biologist Mitch Siemens.

Botanical Surveys: The ARCADIS botanical field surveys focused primarily on the disturbance areas for the proposed Natural Substation and associated subtransmission towers and access routes, along with existing natural habitat adjacent to target areas. At each location, formal field surveys encompassed a larger area than currently proposed for disturbance, extending approximately 100 feet (30 meters [m]) beyond the mapped boundaries for each disturbance area. ARCADIS plant surveys encompass the gathering of information on species composition, abundance, relative distribution, and community composition (including dominants, associates, and uncommon elements), covering all areas in the Project area on foot at least twice. Physiographic features are noted and correlated with plant distribution, with special attention paid to accessible drainages and wetlands, rocky/exposed outcrops, changes in soil type, and native vegetation types existing in the Project area. Locations of potential special-status species were noted on field maps, and using a hand-held Trimble GeoXT 6000 series global positioning system (GPS), coordinates were obtained, along with population size estimates and phenological development.

All plant species found to be in a recognizable condition associated during the ARCADIS surveys were recorded and are listed in Table 2. Nomenclature follows the *Jepson Manual*, Second Edition (Baldwin et al. 2012). In addition, pertinent volumes of the *Flora of North America* were utilized for plant identification (Flora of North America Editorial Committee, eds. 1993+). It is important to note that while surveys were conducted during only one season and the findings are considered thorough and complete, the list of vascular plant species presented in this report may not be comprehensive. Plants that bloom earlier or later in the year or that do not bloom every year may not have been in recognizable condition during the surveys. This does not reflect a deficiency in the fieldwork or the reporting, rather, it is in recognition of the limitations of all biological field surveys.

Vegetation Mapping: ARCADIS mapped and characterized all existing vegetation in the Project area based on direct field observations supplemented by aerial photograph interpretation for inaccessible surrounding areas. Vegetation was mapped at both the community and alliance level and digitized using ArcGIS software, following CNPS/CDFW mapping protocols described in the CNPS *A Manual of California Vegetation* (Sawyer, Keeler-Wolf, and Evens 2009) and the National Vegetation Classification system developed by NatureServe (natureserve.org). The basic plant community types are found at the Macrogroup level and the dominant characteristic plant species form the Alliance and Association names, as shown in Figure 3.

Wildlife Surveys: All wildlife species observed in the Project area or assumed present from sign (e.g., tracks, burrows, scat, and nests) during the surveys are discussed in Section 5 and listed in Table 3. ARCADIS wildlife surveys are intended to identify all wildlife utilizing a site or as many species as can be inferred from direct observation or from various sign. Active searches for wildlife included direct observation, auditory recognition, and diagnostic sign (prints, sounds, burrows, trails, nests, prey remains, foraging and other impacts to vegetation, etc.).

Wildlife surveys emphasize the characterization of existing habitat in terms of suitability and value for both known and potentially occurring sensitive wildlife species and seek to determine the extent to which wildlife species utilize existing habitat for different life cycle and behavioral needs (e.g., breeding, foraging, dispersal, and cover). Although all wildlife species observed or indicated in the field during surveys are recorded, a primary focus of the wildlife surveys is to determine the presence or potential for the presence of sensitive and rare species. The list of wildlife species presented in this report may not be comprehensive. In order to create a comprehensive wildlife census, multiple surveys over multiple years would be required to enable observation of species during the day and at night, during different seasons, and during different weather conditions when some species are more likely to be detected. The current findings are considered thorough and appropriate for this assessment.

Potentially occurring sensitive ecological resources identified during the database and background search are listed in Table 4. Sensitive habitats observed in the Project area during the investigation are shown on Figure 4.

3. Site Characteristics

The Project region encompasses the eastern portion of the Santa Susana Mountains and the western edge of the San Gabriel Mountains, two of several east-west trending mountain ranges comprising the Transverse Ranges of southern California (Figures 1 and 2). Biologically, the Santa Susana Mountains and San Gabriel Mountains link the Project area to the coastal plain near Oxnard and Ventura to the west, to the San Bernardino Mountains to the east, to the Mojave

Desert to the northeast, and to the Liebre Mountains-Tehachapi Mountains-Southern Sierra Nevada to the northwest.

The north slopes of the Santa Susana Mountains and the San Gabriel Mountains in the Project area are located within the Newhall Creek watershed, which includes the South Fork of the Santa Clara River. The Santa Clara River originates in Soledad Canyon between the Sierra Pelona Mountains to the north and the San Gabriel Mountains in Los Angeles County and flows westwards for 116 miles (187 kilometers [km]) to the Pacific Ocean at the Santa Clara River Estuary Natural Reserve in Oxnard, encompassing a watershed over 1,600 square miles (414,400 hectares [ha]) in size. The South Fork of the Santa Clara River drains northwards from Newhall Pass along the eastern margin of a portion of the Project area.

Drainages to the south of the ridgeline of the Santa Susana Mountains in the Project area are part of the Los Angeles River watershed, which encompasses 834 square miles (216,000 ha) and flows for 51 miles (82 km) to its mouth in Long Beach. Headwaters of the Los Angeles River drain the south- and east-facing slopes of the Simi Hills, the south-facing slopes of the Santa Susana Mountains, and the north-facing slopes of the Santa Monica Mountains. These drainages flow easterly through the San Fernando Valley, around the northeast side of the Santa Monica Mountains, and then south to southeast to the mouth of the Los Angeles River in San Pedro Bay near Long Beach. Tributaries in the Project area include Limekiln Canyon, and Mormon Canyon and Browns Canyon.

The Santa Susana Mountains comprise a relatively young mountain range uplifted by tectonic activity centered on a number of fault segments and zones, especially the Santa Susana Fault Zone. Key landform features in the Project area are the east-west trending ridgetop, the eastern end of which is the site of several planned tubular steel pole (TSP) locations, as well as the Project area Syncline and the Pico Anticline to the north. The Santa Susana Fault is located along the southern boundary of the Santa Susana Mountains, dipping steeply below the Project area. The thrust is folded along an east-west axis and is mapped in a complex, overlapping, and lobed pattern (Dibblee 1992). The Santa Susana Mountains encompass Oak Ridge and South Mountain to the west before descending to the Oxnard plain.

The maximum elevation in the Project region is 3,747 feet (1,142 m) above mean sea level (msl), with Mission Point to its east at 2,771 feet (845 m) above msl. Topography varies from steep, rugged slopes and incised drainages to narrow ridgetops and alluvial terraces.

A total of 11 general habitat types were identified in the Project area during the 2014 ARCADIS surveys. These include Venturan coastal sage scrub, chaparral, coast live oak woodland, valley oak and coast live oak savanna, Southern California walnut woodland, southern mixed evergreen

forest, annual grassland, riparian woodland, riparian scrub, planted trees, and ruderal vegetation. These are described in more detail in Section 4, with details on community structure and floristic alliances. Vegetation types are mapped on Figure 3. Photographs provided in Appendix A offer views of the communities observed in the Project area.

More than 150 species of plants were recorded by ARCADIS in February, March and April 2014 (Table 2), along with approximately 120 species of observed or expected wildlife.

4. Vegetation Types in the Project Area

The Project area supports a mosaic of native, weedy, and planted vegetation described more fully in the ensuing sections. The distribution of vegetation types is determined by topography, soils and geology, hydrology, slope exposure, climate, land use history, and fire history.

Seven upland vegetation types were identified on or near the Project area during the ARCADIS surveys, four woodland/forest vegetation communities: coast live oak woodland, valley oak and coast live oak savanna, Southern California walnut woodland, and southern mixed evergreen forest; two shrubland communities: chaparral and Venturan coastal sage scrub; and one grassland community: annual grassland. Upland vegetation types are described in Sections 4.1, 4.2, and 4.3. In addition, three vegetation types associated with moist drainages or streams are present: coast live oak riparian forest, riparian woodland, and riparian scrub, which are summarized in Section 4.4. Finally, human-derived vegetation is present as landscaping and planted trees and as ruderal vegetation (Section 4.5). Bare ground and project infrastructure are also mapped, where pertinent. Figure 3 presents vegetation types mapped in the Project area in 2014, with sensitive habitat types shown in Figure 4.

4.1 Forest, Woodland, and Savanna Vegetation

Woodland and forest vegetation predominates on the moist north-facing slopes of the Project area and in drainages, especially woodlands dominated by one or more species of oak (*Quercus*). Also present are Southern California walnut (*Juglans californica*) and, in more mesic habitats, bigcone-spruce (*Pseudotsuga macrocarpa*).

In general, forest vegetation is comprised of densely spaced trees with a closed canopy and extensive and nearly continuous shade; woodland vegetation is characterized by closely spaced trees with adjacent tree canopies touching but not usually overlapping and moderate shade. Savanna vegetation consists of widely scattered trees amongst other vegetation, such as grassland or shrubland. Some woodlands may not contain a shrub layer, and may only form a canopy over annual or perennial grasslands. The understory of woodlands is directly related to the

density of the woodland and the cover of its canopy, as well as land use history. Typically, if a woodland is dense, then understory species diversity is low. The woodland and forest floristic alliances observed in the Project area include coast live oak woodland/forest *(Quercus agrifolia* Alliance), mixed valley oak and coast live oak woodland and savanna (*Quercus lobata – Quercus agrifolia* Association), Southern California walnut woodland (*Juglans californica* Alliance), and bigcone-spruce-canyon oak forest (*Pseudotsuga menziesii -Quercus agrifolia Association; Pseudotsuga menziesii -Quercus chrysolepis Association*), which are discussed below.

4.1.1 Coast Live Oak Woodland/Forest (*Quercus agrifolia* Woodland Alliance)

Coast live oak woodlands and forests predominate on north-facing slopes and in canyons in the Project area, forming the dominant vegetation on the north-facing slopes and drainages of the Project area. Coast live oak (*Quercus agrifolia*) is an evergreen tree ranging from 40 to 75 feet (12 to 23 m) in height, with a spreading crown, many massive branches, a dense canopy of thick, waxy, spine-toothed, convex leaves, and a massive root system consisting of both deeply penetrating roots and widely spreading lateral roots (Pavlik et al. 1991). Although seemingly ubiquitous in the hills surrounding the Project area, coast live oaks are restricted to an approximately fifty-mile wide swath along the coast from Mendocino County south to northern Baja California. They are completely absent in the Sierra Nevada and other interior ranges; rather, they tend to occur in the maritime belt that receives some fog during the summer months. Coast live oak woodland is most well developed between sea level and 5,000 feet (1,525 m) on north-facing slopes, in canyons, and along rolling foothills and alluvial terraces adjacent to water courses.

These trees can easily live for 300 years or more. Most healthy stands contain mixed age classes of oak trees, saplings, and seedlings. Although considered drought-tolerant due to its ability to survive the hot dry summer months without rain, coast live oak tends to occur in areas that receive at least 15 or more inches (38 or more cm) of rain or have suitable microenvironments with moisture available to its roots at depth. Recent studies describe the water-acquiring capacity of mycorrhizae associated with the roots of coast live oak, especially in non-clay soils, which enhance moisture uptake during dry summer months (Bornyasz, Graham, and Allen 2001); mycorrhizal fungi also aid in nutrient uptake (Pavlik et al. 1991). Scientific studies suggest a positive correlation between oak tree density and deep soils that foster root growth and water uptake year-round (Barbour and Major 1977; Holland and Keil 1995). Coast live oaks often require sandstone or shale-derived soils (Sawyer, Keeler-Wolf, and Evens 2009).

In the Project area, coast live oak trees form a continuous to open 100-foot (30 m) tall canopy in mesic, non-saturated environments: north-facing slopes, upper margins of riparian forest, the bottoms of ephemeral drainages, and on the slopes and ridges where sufficient moisture is present, often growing over an understory of scattered shrubs and an herbaceous ground layer.

Along some moist drainages, concentrated bands of oaks may form the dominant riparian vegetation; this mesic vegetation type is often referred to as coast live oak riparian forest and is discussed further in Section 4.4.3. In deep soils, valley oak (*Quercus lobata*) occurs in association with coast live oak; this association is discussed more in the next section (Section 4.1.2). Southern California walnut is also a common associate and is discussed further in Section 4.1.3. Also present, especially in moist locations near or in drainages, are canyon oak (*Quercus chrysolepis*), bigcone-spruce, and California bay (*Umbellularia californica*).

In dense undisturbed coast live oak woodlands and forests in the Project area, the environment under the oak canopy is very shady. Shade-tolerant shrubs such as toyon (*Heteromeles arbutifolia*), upright snowberry (*Symphoricarpos albus* var. *laevigatus*) and California gooseberry (*Ribes californicum* var. *hesperium*) are common, along with occasional blue elderberry (*Sambucus nigra* subsp. *caerulea*), poison-oak (*Toxicodendron diversilobum*), jim brush (*Ceanothus oliganthus* var. *sorediatus*), chaparral currant (*Ribes malvaceum*), climbing penstemon (*Keckiella cordifolia*), and others, depending on the location. Herbaceous perennials occasionally found in the oak woodland understory include coastal wood fern (*Dryopteris arguta*), California sweet cicely (*Osmorhiza brachypoda*), species of sanicle (*Sanicula bipinnata, Sanicula crassicaulis*), big-fruited wild cucumber (*Marah macrocarpus* var. *macrocarpus*), and others. Native perennial grasses present in oak woodland include California brome (*Bromus carinatus*), blue wildrye (*Elymus glaucus*), nodding needlegrass (*Poa secunda* subsp. *secunda*), and coast range melic (*Melica imperfecta*). Annuals are infrequent in deep shade and more common at the margins of trees and shrubs, such as fiesta flower (*Pholistoma auritum*), baby blue eyes (*Nemophila menziesii* var. *integrifolia*), miner's lettuce (*Claytonia parviflora* and *C. perfoliata*), common bedstraw (*Galium aparine*), and many other species associated with adjacent grassland and savanna vegetation.

Where the understory has been cleared under the oak canopy, weedy non-native annual species predominate, especially ripgut brome (*Bromus diandrus*) and Italian thistle (*Carduus pycnocephalus*). Portions of the Project area adjacent to access roads appear to support coast live oak mitigation plantings, based on the even pattern of distribution of oak trees. These oak-dominated areas are surrounded by non-native annual grasses and were mapped as a non-sensitive vegetation type.

Coast live oaks vary in density from continuous stands on north-facing slopes to scattered trees in grassland habitats on a variety of slope exposures. Coast live oak woodland is characterized as the Coast Live Oak Woodland Community in the legacy CNDDB legacy community classification system (Holland 1986), and as the *Quercus agrifolia* Woodland Alliance in the CNPS Manual of California Vegetation (Sawyer, Keeler-Wolf, and Evens 2009). *Quercus agrifolia* Woodland Alliance has a G5 global rarity ranking (demonstrably secure because of its worldwide occurrence) and an

S4 state rarity ranking (greater than 100 viable occurrences statewide, and/or more than 31,110 acres [12,950 hectares]); some associations within the *Quercus agrifolia* Woodland Alliance have G3 and S3 rankings (21-100 viable occurrences worldwide/statewide, and/or more 6,400-31,110 acres [2,590-12,950 hectares]), according to the CDFW (2010 and 2014).

Approximately 3.3 acres (1.3 ha) of coast live oak woodland occur in Project disturbance areas. Approximately 1.85 acres (0.7 ha) occur within areas of temporary impact and approximately 1.45 acres (0.6 ha) occur within areas of permanent impact.

4.1.2 Valley Oak and Coast Live Oak Savanna (*Quercus lobata* – *Quercus agrifolia* Alliance)

Valley oak (*Quercus lobata*) is endemic to California, where it forms extensive savannas and woodlands in deep alluvial soils and on slopes and ridgetops where sufficient moisture is available. Valley oaks are considered to be the largest North American oak, reaching 100 feet (30 m) in height at maturity, with a rounded crown and massive spreading branches. Smaller branches may droop at the tips and bear winter-deciduous, flat, lobed leaves. The bark is gray and deeply fissured, often with a checkered pattern. The roots of valley oaks are often tiered, with feeder and "sinker" roots that reach different levels in the soil profile typically two to ten feet (0.6 to 3 m) below the soil surface (Thomas 1980). Some roots, especially of young trees, can reach 10 - 60 feet (3 to 18 m) in depth, but most roots spread outwards just below the soil surface, often twice as far as the edge of the canopy (Thomas 1980).

In pre-European California prior to agricultural and urban development, extensive swaths of valley oak woodland and savanna covered interior valley bottoms and slopes, and were especially common in deep alluvial soils adjacent to water courses. From the Sacramento River south through the Great Central Valley and up valley corridors in the Sierra Nevada and Coast and Transverse Ranges, valley oak woodland and savanna was a signature California community indicating deep rich soil in valley bottoms between 100 and 2,000 feet (30 and 610 m) elevation, rarely to as high as 5,000 feet (1,524 m) elevation. Typically, valley oak tree density is highest near water courses and lower slopes. Valley oak has a wetland indicator status of FACU (USACE 2014).

In the Los Angeles County area, valley oaks occur in the Santa Monica Mountains and the Santa Susana Mountains, with outlying individuals historically collected in Santa Monica, Chatsworth reservoir, and Griffith Park (Consortium of California Herbaria 2014). Griffin and Critchfield (1972) specifically note that the southernmost distribution of the main population of valley oak in California terminates in the project vicinity in the San Fernando Valley. Populations near the margins of the central distribution of a species are often of special note and treated as sensitive by biologists due

to the potentially unique genetic makeup of the marginal population, which may be important in species survival during global climate shifts and other environmental changes.

After valley oaks lose their leaves in autumn, light reaches the ground, facilitating germination of winter annuals under the canopy before leaves emerge in spring. Depending on the tree density, valley oaks may occur in woodlands or savannas, with additional trees and shrubs as associates and an understory of grassland or shrubland vegetation.

In the Project area, valley oak woodland and coast live oak woodland frequently intergrade and form mixed stands in moist valleys and in deep soils on slopes and ridgetops, with coast live oak woodland on steeper slopes and valley oak woodland in deeper soils. Associated canopy contributors include Southern California walnut, canyon oak, and blue elderberry. The understory is variable, including many associated shrub species found in coastal sage scrub, as well as shrubs such as upright snowberry, California gooseberry, toyon, and poison-oak. Herbaceous species include native grasses, especially California brome, blue wildrye, and nodding bluegrass, and broadleaf perennials such as California sweet-cicely, Johnny jump-up (*Viola pedunculata*), blue dicks (*Dichelostemma capitatum*), and with many other annual and herbaceous perennials that comprise the California grassland alliance. Non-native species such as ripgut brome are also common, especially in previously disturbed habitats adjacent to roads, well pads, structures, and livestock facilities.

Valley oak woodland and savanna is characterized as the Valley Oak Woodland Community in the CNDDB legacy community classification system (Holland 1986), and as the *Quercus lobata* Woodland Alliance in the CNPS Manual of California Vegetation (Sawyer, Keeler-Wolf, and Evens 2009). *Quercus lobata* Woodland Alliance has a G3 global rarity ranking (21-100 viable occurrences worldwide, and/or more 6,400-31,110 acres [2,590-12,950 ha] worldwide) and an S3 state rarity ranking (greater than 100 viable occurrences worldwide/statewide (21-100 viable occurrences statewide; and/or more 6,400-31,110 acres [2,590-12,950 ha] statewide), according to the CDFW (2010 and 2014).*Quercus lobata – Quercus agrifolia* Association has the same rarity ranking as *Quercus lobata* Woodland Alliance.

No valley oak and coast live oak savanna occurs directly in Project disturbance areas, although this vegetation lines access roads in several locations; this vegetation represents a sensitive habitat type.

4.1.3 Southern California Walnut Woodland (*Juglans californica* Woodland Association)

Southern California walnut woodland is dominated by Southern California black walnut, a deciduous large shrub to small tree in the Walnut Family (Juglandaceae); woodlands dominated by

Southern California black walnut occur primarily on slopes up to 3,000 feet (900 m) above msl between Santa Barbara and San Diego Counties. Southern California black walnut has a spreading habit, often with multiple trunks arising from near the base and numerous long branches; trees can reach 50 feet (15 m) at maturity. The bark is gray brown, with a slight silvery wash on the surface, and deep flattened fissures on older trunks. Southern California walnut woodland is characterized by an open to closed canopy growing with woodland shrub and grassland associates. Like valley oak, Southern California black walnut is winter deciduous, enabling a diverse understory of winter-active shrubs and herbaceous species to develop before the walnuts leaf out in spring. Soils are frequently moist and fine-textured; this walnut species has a wetland indicator status of FAC (USACE 2014).

Southern California walnut woodland in the Project area produces an open canopy consisting of numerous large, mature trees growing over an understory of associated shrubs and herbs; it frequently forms a mosaic with coast live oak woodland and valley oak woodland, depending on which species is dominant. Associated woody species occurring in Southern California walnut woodland in the Project area include coast live oak, valley oak, California gooseberry, upright snowberry, and chaparral currant. Patches of perennial native grasses sometimes occur in the understory of Southern California black walnut, especially one-sided bluegrass, blue wild rye, and California brome. Native annuals such as miner's lettuce, baby blue-eyes, fiesta flower, and common bedstraw are also frequent associates.

Southern California walnut woodland is characterized as the California Walnut Woodland Community in the CNDDB legacy community classification system (Holland 1986), and as the *Juglans californica* Woodland Alliance in the CNPS Manual of California Vegetation (Sawyer, Keeler-Wolf, and Evens 2009). *Juglans californica* Woodland Alliance has a G3 global rarity ranking (21-100 viable occurrences worldwide, and/or more 6,400-31,110 acres [2,590-12,950 ha]) and an S3.2 state rarity ranking (21-100 viable occurrences statewide, and/or more 6,400-31,110 acres [2,590-12,950 ha]; threatened), according to the CDFW (2010 and 2014).

Approximately 0.3 acres (0.1 ha) of Southern California walnut woodland occur in Project disturbance areas, and this vegetation represents a sensitive habitat type. The walnut woodland occurs in an area of temporary impact.

4.1.4 Southern Mixed Evergreen Forest/Oak - Bigcone-spruce Woodland/Forest (*Quercus agrifolia – Quercus chrysolepis – Pseudotsuga macrocarpa* Association)

Mixed evergreen forests are dominated by one or more evergreen waxy-leaved tree species that tolerate occasional wildfires. In northern California, mixed evergreen forests are dominated by Douglas-fir (*Pseudotsuga menziesii*), madrone (*Arbutus menziesii*), tanbark oak (*Lithocarpus*

densiflora), coast live oak, California bay, and above 2,500 feet (762 m), canyon oak; mixed evergreen forests occur inland from redwood forests in drier sites in northern California. In southern California, southern mixed evergreen forests tend to be confined to steep, moist canyons and north-facing slopes, generally above 1,000 feet (304 m) above msl and frequently above 3,000 feet (912 m) above msl. Bigcone-spruce (*Pseudostuga macrocarpa*) replaces the closely-related Douglas-fir in southern mixed evergreen forests, and associated trees include canyon oak, coast live oak, and California bay. Although a range of shrubs and herbs occur as associated species in this community, southern mixed evergreen forest is noted for its lack of a dense herbaceous understory.

Bigcone-spruce is an evergreen conifer with long spreading branches, each bearing drooping branchlets clothed with dark green one-inch to two-inch long (2 to 4 cm) needles. Like many conifers, bigcone-spruce trees are pyramidal when young, but as they age they become strongly tapered and may become lopsided as a result of wind-pruning. They retain large branches low on the trunk, and mature branches bear distinctive cones over 3 inches (9-20 cm) in length that bear elongate three-pronged bracts between scales. The bark is dark brown and deeply fissured in age.

Bigcone-spruce individuals reach 100 to 164 feet (30 to 50 m) in height at maturity, towering over associated trees. This species is noted for its unusual ability to sprout from the trunk after a fire, and fire-blackened trees crowned by green branches are frequent in the in some locations around the project sites. Trees can live to be over 700 years. Bigcone-spruce is narrowly distributed in southern California from Santa Barbara County south through southern Kern, Ventura, Los Angeles, southwestern San Bernardino, western Riverside, Orange, and San Diego Counties.

In the Project area, southern mixed evergreen forest occurs in moist drainages on the north-facing slopes of the Santa Susana and San Gabriel Mountains, along with clusters of trees in sheltered high-elevation sites. In these areas, bigcone-spruce is commonly associated with coast live oak, canyon oak, California bay, and occasional valley oak and Southern California black walnut. The understory is variable, including many of those associated shrub species listed above under the *Quercus agrifolia* Alliance, such as California gooseberry, upright snowberry, toyon, poison-oak, California brome, western wildrye, and California sweet-cicely. Some native herbaceous perennial associates, such as rock phacelia (*Phacelia egena*) and woodland star (*Lithophragma cymbalaria*) were only observed in the southern mixed evergreen forest vegetation type during recent ARCADIS surveys.

Southern mixed evergreen forest is characterized as the Bigcone-spruce – Canyon Oak Community in the CNDDB legacy community classification system (Holland 1986), and as the *Pseudotsuga macrocarpa* Forest Alliance in the CNPS Manual of California Vegetation (Sawyer, Keeler-Wolf, and Evens 2009). *Pseudotsuga macrocarpa* Alliance has a G3 global rarity ranking

(21-100 viable occurrences worldwide, and/or more 6,400-31,110 acres [2,590-12,950 ha]) and an S3.2 state rarity ranking (21-100 viable occurrences statewide, and/or more 6,400-31,110 acres [2,590-12,950 ha]; threatened), according to the CDFW (2010 and 2014).

Approximately 0.1 acres (0.04 ha) of southern mixed evergreen forest occur in Project disturbance areas, and this vegetation represents a sensitive habitat type. The mixed evergreen forest occurs in an area of temporary impact.

4.2 Shrubland Vegetation

Shrubs are defined as woody plants less than 20 feet (6 m) in height at maturity that usually bear multiple trunks. Typical shrublands in southern California include chaparral and coastal sage scrub vegetation, which are common on dry slopes in the Project area.

4.2.1 California Chaparral

Chaparral is characterized by dense, evergreen shrub cover that forms almost impenetrable thickets over vast expanses of mountainous areas in southern California. Leaves of chaparral shrubs tend to be small, thick, leathery, and dark green, and they bear internal thick-walled support cells (sclerids) that prevent mechanical damage due to wilting; this leaf type is termed sclerophyllous. Chaparral vegetation ranges from 3 to 14 feet (1 to 4 m) in height, although low-growing annuals and herbaceous perennials are scattered in sunny openings. These evergreen shrubs are also adapted to drought by deep extensive root systems. California Chaparral typically occurs on moderate to steep south to west-facing slopes with dry, rocky, shallow soils, becoming more abundant at higher elevations where temperatures are lower and moisture supplies are more ample; it also occurs on north- or east-facing slope exposures under some conditions, and species composition tends to vary depending on elevation, soil type, and slope-exposure.

Chaparral shrubs are adapted to periodic wildfires, recolonizing a burned area by stump-sprouting or by germination from a dormant seed bank. Many typical coastal sage scrub species also grow intermixed as associates with chaparral species. The number of native plants that comprise these shrublands in the Los Angeles County region is extraordinary, with over 200 potentially occurring native plant species.

Chamise-dominated chaparral and mixed chaparral are described separately below. Disturbed chaparral is represented by either of these vegetation types with scattered chaparral shrubs and a preponderance of non-native species growing between shrubs, especially non-native grasses.

In all, a total of 5.1 acres (2.1 ha) of chaparral vegetation are present in Project disturbance areas, including 1.4 acres (0.6 ha) of chamise chaparral, 2.7 acres (1.1 ha) of mixed chaparral, and 1.0 acres (0.4 ha) of disturbed chaparral in Project disturbance areas. Approximately 3.5 acres (1.4 ha) of chaparral occur in areas of temporary impact and approximately 1.5 acres (0.6 ha) occur in areas of permanent impact.

4.2.1.1 Chamise Chaparral (Adenostoma fasciculatum Shrubland Alliance)

Chamise chaparral (sometimes called chamisal chaparral) is dominated by the evergreen shrub, chamise (*Adenostoma fasciculatum*), which is the most abundant species in the non-desert shrublands of California. Mature chamise shrubs bear a stump-sprouting basal burl that produces many branches, each covered with gray-brown trunk bark and clustered, small, linear leaves and tiny white flowers at branch tips. Chamise is adapted to California's Mediterranean climate by a dual root system that has both deep and shallow roots, and recovers from fire by both resprouting and seedling recruitment.

Chamise chaparral forms an intermittent to continuous canopy that is often less than 10 feet (3 m) tall and grows over a sparse herbaceous layer, especially in older stands. Chamise can occur on all slope aspects, but is commonly found on the drier south- and west-facing slopes and ridges, growing in very shallow soils (mafic-derived). Associated shrubs in the Project area include bigberry manzanita (*Arctostaphylos glauca*), thickleaf yerba santa *(Eriodictyon crassifolium* var. *nigrescens*), California buckwheat (*Eriogonum fasciculatum* var. *polifolium*), chaparral yucca (*Hesperoyucca whipplei)*, toyon, deerweed (*Lotus scoparius* var. *scoparius*), chaparral mallow (*Malacothamnus fasciculatus*), laurel sumac *(Malosma laurina*), holly-leaved coffeeberry (*Rhamnus ilicifolia*), sugarbush (*Rhus ovata)*, blue elderberry*,* purple sage *(Salvia leucophylla)*, and black sage. Several understory herbs listed above for Coastal Sage Scrub are expected as associates in Chaparral plant communities; see Section 4.2.2 below.

Chamise chaparral is characterized as chamise chaparral in the CNDDB legacy community classification system (Holland 1986), and as the *Adenostoma fasciculatum S*hrubland Alliance in the CNPS Manual of California Vegetation (Sawyer, Keeler-Wolf, and Evens 2009). *Adenostoma fasciculatum* Shrubland Alliance has a G5 global rarity ranking (demonstrably secure because of its worldwide occurrence) and an S5 state rarity ranking (demonstrably secure because of its statewide occurrence), according to the CDFW (2010 and 2014).

Approximately 1.4 acres (0.6 ha) of chamise chaparral occur in Project disturbance areas. Approximately 0.9 acres (0.4 ha) occur within areas of temporary impact and approximately 0.5 acres (0.2 ha) occur in areas of permanent impact.

4.2.1.2 Mixed Chaparral

Chaparral vegetation in the Project area varies considerably, depending on elevation, soil type, and slope exposure, often with a mix of species instead of one dominant shrub. Shrub species dominating in mixed chaparral include jim brush, toyon, sugar bush (*Rhus ovata*), and chamise on moister slopes and at higher elevations; on drier slopes and at lower elevations, hoary ceanothus (*Ceanothus crassifolius*), chamise, yerba santa, California buckwheat, sugar bush, and shrubby sage species (*Salvia*) predominate.

Mixed chaparral is characterized as mixed chaparral in the CNDDB legacy community classification system (Holland 1986), and a variety of shrub associations in the CNPS Manual of California Vegetation (Sawyer, Keeler-Wolf, and Evens 2009). Because no one species dominated large portions of the Project area, there are no specific associations mapped separately. In addition, portions of the Project area showed signs of human disturbance and/or land clearing, and these areas were mapped as disturbed chaparral.

Approximately 2.7 acres (1.1 ha) of mixed chaparral occur in Project disturbance areas. Approximately 1.9 acres (0.8 ha) occur in areas of temporary impact and approximately 0.8 acres (0.3 ha) occur in areas of permanent impact.

4.2.2 California Coastal Scrub (Venturan Coastal Sage Scrub)

California coastal scrub in the Project area is dominated by drought-deciduous, relatively low-growing, soft-leaved, and grayish-green shrubs and subshrubs, typically referred to as coastal sage scrub south of Point Conception. In the Project area, the coastal scrub vegetation is sometimes referred to variously as Venturan coastal sage scrub or Diegan coastal sage scrub.

Venturan coastal sage scrub is dominated by drought-tolerant, soft-leaved shrubs from 3 to 6 feet (1 to 2 m) tall that are summer dormant and winter active, exhibiting considerable growth in the winter and spring months. Dominant shrubs in this vegetation type in the Project area include California sagebrush (*Artemisia californica*), black sage, purple sage, white sage (*Salvia apiana*), California buckwheat, thickleaf yerba santa, chaparral yucca, deerweed (*Acmispon glaber*), chaparral mallow (*Malacothamnus fasciculatus*), laurel sumac *(Malosma laurina*), sugarbush (*Rhus ovata)*, and chaparral sunflower (*Encelia californica*). Many of these species are partially or completely summer deciduous. Bare ground is common beneath and between shrubs, although herbaceous annuals, perennials, and grasses may occupy these openings, especially in wet rainfall years.

Coastal sage scrub is especially abundant on well drained substrates such as sandstones and alluvial deposits, but may also occur in thin shales and on fine-grained clays as well. In general, moisture is available primarily during the winter months, with subsequent drying of surface soils during summer and autumn. Coastal sage scrub plant alliances typically exhibit a patchy distribution along the drier margins of chaparral habitats, and form denser cover at lower elevations or on thin soils.

Fire plays an important role in recycling nutrients in coastal scrub communities, and many native species exhibit crown-sprouting and enhanced seed germination after a fire. Legumes with nitrogen-fixing root nodules are particularly abundant after fires, along with an array of fire-following annuals and perennials.

Coastal sage scrub is considered a community at risk, with approximately 90 percent of the historical area lost to development (urban and agriculture) (Davis et al. 1985, Boyd 1999), and is the preferred habitat type of the federally-endangered California gnatcatcher (*Polioptila californica*). Coastal California gnatcatchers typically occur in or near sage scrub habitat. Coastal sage scrub is patchily distributed throughout the range of the species, and coastal California gnatcatchers are not uniformly distributed within the structurally and floristically variable coastal sage scrub vegetation community. While several studies have reported that coastal California gnatcatcher densities are highest in areas where California buckwheat or chaparral sunflower are co-dominant with California sagebrush, others have reported occupancy at sites where the composition of shrub species varied considerably (Beyers and Wirtz 1997) or where these shrub species were lacking (Atwood 1990). All types of coastal sage scrub vegetation are considered potential coastal California gnatcatcher habitat in this assessment, and mapped coastal California gnatcatcher habitat in the Project area is overlain on critical habitat for the coastal California gnatcatcher in Figure 5, with proposed impacts to Venturan coastal sage scrub vegetation shown in Figure 6.

This community would be classified as Venturan Coastal Sage Scrub in the CNDDB legacy community classification system (Holland 1986). *Artemisia californica* Shrubland Alliance has G5 and S5 rarity rankings (demonstrably secure because of its worldwide/statewide occurrence), according to Sawyer, Keeler-Wolf, and Evens (2009). *Artemisia californica-Salvia mellifera* Shrubland Alliance has G4 and S4 rarity rankings (greater than 100 viable occurrences worldwide/statewide, and/or more than 31,110 acres [12,950 ha]), according to Sawyer, Keeler-Wolf, and Evens (2009). *Salvia apiana* Shrubland Alliance has a G4 global rarity ranking (greater than 100 viable occurrences worldwide/, and/or more than 31,110 acres [12,950 ha] and a S3 state ranking (21-100 viable occurrences statewide, and/or more 6,400-31,110 acres [2,590-12,950 ha]), according to Sawyer, Keeler-Wolf, and Evens (2009). All alliances within this vegetation type are treated as sensitive in this habitat assessment due to the potential presence of California gnatcatcher.

Venturan coastal sage scrub was mapped using three categories: coastal sage scrub dominated by California sagebrush and/or species of sage (Salvia), which serves as high-quality habitat for California gnatcatcher; coastal sage scrub dominated by other species, such as California buckwheat and yerba santa, with relatively lower densities of California sagebrush and sage; and disturbed coastal sage scrub, with large areas on non-native grasses and scattered shrubs.

Approximately 8.06 acres (3.3 ha) of Venturan coastal sage scrub occur in Project disturbance areas, and this vegetation represents a sensitive habitat type. A total of 1.6 acres (0.6 ha) of Venturan coastal sage scrub (not dominated by sagebrush or sage), 6.1 acres (2.5 ha) of sagebrush/sage-dominated Venturan coastal sage scrub, and 0.4 acres (0.2 ha) of disturbed coastal sage scrub is present in disturbance areas. Approximately 6.62 acres (2.4 ha) of coastal sage scrub occur in areas of temporary impact and approximately 1.44 acres (0.5 ha) occur in areas of permanent impact.

4.3 Annual Grassland

Grassland communities are dominated by perennial or annual species of grasses with a range of associated broad-leaved forbs and occasional shrubs and trees. Native grasslands in California tend to be dominated by clumps of tufted or spreading perennial grasses, whereas annual grasslands are often dominated by non-native Mediterranean grasses. Similarly, more native forb species are associated with native grasslands and non-native forbs with annual grasslands. Stands with a higher cover of annual or perennial forbs than grasses are also a component of these herbaceous communities.

In general, annual grassland is dominated by a mixture of non-native, often Mediterranean, annual grasses and native and weedy herbaceous species. The presence of annual grassland often suggests prior clearing of native perennial vegetation (e.g., native grasses such as *Stipa* and/or native shrubs and trees), which then is largely replaced by invasive non-native grasses and forbs, although some native species may persist.

Among the non-native grasses observed in the Project area are invasive annual Mediterranean grasses such as ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), red brome (*Bromus madritensis* subsp. *rubens*), slender wild oats (*Avena barbata*), foxtail barley (*Hordeum murinum*), and annual fescues (*Festuca* species). Associated with these grasses are weedy mustards (*Brassica nigra* and *Hirschfeldia incana*) and filaree (*Erodium cicutarium, E. moschatum*) along with patches of Italian thistle, milk thistle (*Silybum marianum*), hedge-parsley (*Torilis arvensis*), and others. The thistles are most abundant in low-lying drainages and under coast live oak trees that have been cleared of understory vegetation mechanically or by ongoing livestock activity.

Many native annual and perennial grassland herbs have been documented in the Project area, and these are included in Table 2. Native forbs identified to date include baby blue-eyes, fiddleneck (*Amsinckia menziesii* var. *intermedia*), butterfly mariposa lily, blue dicks, lupine species (*Lupinus bicolor, L. excubitus* var. *austromontanus, L. succulentus*), fare-well to spring, red maids (*Calandrinia ciliata*), *Leptosiphon bicolor* and *L. parviflorus*, slender tarweed (*Madia gracilis*), California chicory (*Rafinesquia californica*), and many other native wildflowers scattered in the annual grassland vegetation. In moister soils, rusty popcorn flower and hairy gumplant become more common.

In general, the grassland areas would be classified as Non-Native Grasslands in the CNDDB legacy community classification system (Holland 1986) and as California Annual Grassland Series within the CNPS Manual of California Vegetation (Sawyer, Keeler-Wolf, and Evens 2009). Non-native Grassland has a global rank of G4 (apparently secure, but factors exist to cause some concern; i.e. there is some threat or somewhat narrow habitat) and a state rank of S4 (apparently secure, but factors exist to cause some concern; i.e. there is some threat or somewhat narrow habitat), as listed in the CNDDB (2014).

Approximately 9.5 acres (3.8 ha) of annual grassland occur in Project disturbance areas. Approximately 7.7 acres (3.1 ha) occur within areas of temporary impact and approximately 1.8 acres (0.7 ha) occur with areas of permanent impact.

4.4 Riparian Vegetation

Areas with standing or flowing water or with seasonally or permanently saturated soils commonly support wetland communities. Freshwater wetlands are complex and variable, and their species composition and overall structure are dependent on a number of factors. Water depth, seasonal fluctuations in water levels, rate of water movement, water and sediment chemistry (including salinity, pH, and quantity of organic matter), depth and texture of bottom sediments, amount of sunlight, and water and air temperatures are among the most important variables affecting overall wetland dynamics. Along rivers and streams, fine-grained alluvial soils settle in the bottom of the drainages, and annual inundation after rains provide a significant load of nutrients, soil, and new germination sites.

Wetland communities support an abundant variety of wildlife and often form the most productive habitats among the world's ecosystems. Numerous animal species depend on wetlands for critical parts of their life cycles. The wetland habitat and relatively narrow drainage corridor in the Project area described in the following sections may provide potential nesting and foraging habitat for various resident and migrating passerine birds and likely serves as a movement corridor for opossums, raccoons, skunks, and other common wildlife species.

Wetland communities often represent important habitat for amphibians including but not limited to Pacific treefrogs (–*Pseudacris regilla*) and California toads (*Anaxyrus boreas halophilus*), and may provide protection and cover for fish species including steelhead trout (*Oncorhynchus mykiss*). Willow riparian corridors are commonly frequented by raptors including red-shouldered hawks (*Buteo lineatus*) and Cooper's hawks (*Accipiter cooperii*); depending upon the presence or absence of water and the degree of canopy cover, these corridors may also provide foraging opportunities for wading birds including great and snowy egrets (*Ardea alb*a and *Egretta thula,* respectively) and great blue and green herons (*Ardea herodias* and *Butorides virescens,* respectively).

The following wetland habitats were observed in the Project area, although most occur outside the disturbance areas.

4.4.1 Riparian Woodland/Forest (Southern Mixed Riparian Woodland/Forest)

Southern mixed riparian forest tends to occur along perennial streams and rivers in southern California and is dominated onsite by large winter deciduous trees such as Fremont cottonwood (*Populus fremontii*), western sycamore (*Platanus racemosa*), arroyo willow (*Salix lasiolepis*), shining willow (*Salix lasiandra* var. *lasiandra*), red willow (Salix laevigata), black cottonwood (*Populus trichocarpa*), and other species. Also present are coast live oak, California bay, and occasional bigcone-spruce, along with a diverse assemblage of associated perennial and shrubby species that thrive in soils that are seasonally to permanently wet, forming a multi-layered canopy habitat in the shade of the trees.

In the Project region, southern mixed riparian forest predominates along the South Fork of the Santa Clara River that descends in a northerly direction from Santa Susana Pass roughly parallel to Interstate 5 along with the lower portions of associated drainages, and also occurs along Limekiln Canyon and Aliso Canyon on the south-facing slopes of the Santa Susana Mountains. The Project design specifically avoids these areas. Riparian woodland occurs to the west of TSP 6 and immediately adjacent to TSP 11. A small corner of riparian forest was mapped within the 100-foot (30-m) project buffer near TSP 24.

Scattered to isolated riparian trees occur in the drier upper margins of drainages along the transmission line route on the east side of Interstate 5 between TSP 23 and 34 outside the disturbance areas. No utility infrastructure will be installed in the drainages, but some of the existing access roads cross the upper margins of drainages, such as by TSP 23 and TSP 28, and culverts and other drainage features will be installed to protect the road integrity.

In the CNDDB legacy community classification system (Holland 1986), the vegetation in some of the drainages in the Project area is part of the Southern Mixed Riparian Forest Community. This vegetation best fits into the *Populus fremontii* Woodland Alliance, or the *Salix lasiolepis* Woodland Alliance listed in the CNPS *Manual of California Vegetation* (Sawyer, Keeler-Wolf, and Evens 2009). *Populus fremontii* Woodland Alliance has a G3 global rarity ranking (21-100 viable occurrences worldwide, and/or more 6,400-31,110 acres [2,590-12,950 ha]) and a S3.2 state rarity ranking (21-100 viable occurrences statewide, and/or more 6,400-31,110 acres [2,590-12,950 ha]; threatened), according to the CDFW (2010 and 2014).

No riparian woodland occurs directly in Project disturbance areas, although this vegetation occurs immediately adjacent to disturbance areas in one or more locations; this vegetation represents a sensitive habitat type.

4.4.2 Riparian Scrub (*Salix lasiolepis* Woodland Alliance)

Riparian scrub lines portions of the South Fork of the Santa Clara River, such as near TSP 8, as well as in the drier upper margins of several drainages in the Project area. The dominant species and overstory tree is arroyo willow (*Salix lasiolepis*) and other willow species, which form an intermittent to open canopy less than 32 feet (10 m) tall, growing over a patchy shrub layer of predominantly coyote bush and mulefat (*Baccharis salicifolia*) and variable ground layer. Additional associated species of *Salix lasiolepis* Woodland Alliance onsite include mugwort, coast live oak, and blue elderberry.

In the CNDDB legacy community classification system (Holland 1986), the vegetation in some of the drainages in the Project area is part of the Southern Willow Scrub Community. *Salix lasiolepis* Woodland Alliance has G4 and S4 rarity rankings (greater than 100 viable occurrences worldwide/statewide, and/or more than 31,110 acres [12,950 ha]), according to the CDFW (2010 and 2014).

No riparian scrub occurs directly in Project disturbance areas; this vegetation represents a sensitive habitat type.

4.4.3 Coast Live Oak Riparian Forest (*Quercus agrifolia* Riparian Woodland Alliance)

Many ravines descending from ridges in the Project area support coast live oak riparian forest along the drainages. Although contiguous with coast live oak woodland on nearby slopes, this vegetation can be characterized as coast live oak riparian forest due to the dense cover of oaks along with riparian associates such as arroyo willow, occasional cottonwood and sycamore clusters, mulefat (*Baccharis salicifolia*), mugwort (*Artemisia douglasiana*), California blackberry

(*Rubus ursinus*), poison-oak, and other species that favor mesic habitats. In some areas, especially at higher elevations, canyon oak and bigcone-spruce are present as well.

In the CNDDB legacy community classification system (Holland 1986), the vegetation in some of the drainages in the Project area is part of the Southern Coast Live Oak Riparian Forest Community. Southern Coast Live Oak Riparian Forest has G4 and S4 rarity rankings (greater than 100 viable occurrences worldwide/statewide, and/or more than 31,110 acres [12,950 ha]), according to the CDFW (2010 and 2014). However, it is treated as a sensitive habitat since it supports wetland vegetation.

No coast live oak riparian forest occurs directly in Project disturbance areas; this vegetation represents a sensitive habitat type.

4.5 Jurisdictional Waters

The site does not support perennial water features, however, some of the ephemeral drainages are likely to be considered as jurisdictional Waters of the United States pursuant to the definitions of the federal Clean Water Act. As such, any dredge or fill activities below the Ordinary High Water Mark (OHWM) would be regulated by the Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act, and by the California Regional Water Quality Control Board (RWQCB) under Section 401 of the Clean Water Act (Water Quality Certification). The OHWM is defined in the Corps 1987 Wetlands Delineation Manual as: “That line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural lines impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”

As described in the findings summarized in the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency joint guidance document for Clean Water Act jurisdictional determinations (Clean Water Act Jurisdiction, June 5, 2007, U.S. EPA and the Corps), the drainages on the Site can be described as “Non-navigable tributaries that are not relatively permanent” and as such, would be subject to federal jurisdiction based on a fact-specific analysis by the Corps to determine whether they have a significant biological, chemical or physical nexus with a traditional navigable water. Further consideration of the regulatory standing of these drainages is being addressed by SCE with the Corps.

In general, the drainages support defined bed and bank and meet the CDFW definition for a jurisdictional Water of the State. Section 1602 of the California Fish and Game Code (Lake and Streambed Alteration Program) charges CDFW with executing Streambed Alteration Agreements.

Pursuant to the program, "an entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake…" The CDFW specifies that Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This includes watercourses with a surface or sub-surface flow that supports or has supported riparian vegetation. The area of the under state jurisdiction is defined as the area from top-of-bank to top-of-bank or the outer limit of riparian vegetation, whichever is greater.

Project-related disturbances to Waters of the US, Waters of the State, and the associated riparian resources will require assessment and potentially permit approval by all three of the agencies noted above. It also should be noted that the presence of designated critical habitat for the coastal California gnatcatcher overlaying the drainages, is likely to require additional consideration under Section 7 of the federal Endangered Species Act (ESA). The issuance of a federal permit also requires consideration of Section 106 of the National Historic Preservation Act (NHPA). Both the ESA and NHPA consultations would be led by the Corps.

Table 6 lists the disturbance area within features anticipated to be considered Waters of the State and/or Waters of the US. In total, the following areas of impact are anticipated:

0.4 acres (0.2 ha) - Waters of the State – Permanent Impacts
0.5 acres (0.2 ha) – Waters of the State – Temporary Impacts
0.0 acres – Waters of the US – Permanent Impacts
0.1 acres (0.04 ha) – Waters of the US – Temporary Impacts

SCE is coordinating with the CDFW and the Corps to address and permit impacts to jurisdictional waters.

4.6 Human-Altered Habitats

Human-altered areas are often not vegetated due to commercial, industrial, and residential development; agricultural practices, tree plantings, or other landscaping; livestock grazing; and other disturbances. These areas are delineated and mapped for informational purposes. Areas categorized as human-altered habitats in this assessment include access roads, bare areas, planted trees and landscaping, and ruderal areas.

Human-altered areas often are cleared of native vegetation and may or may not support plants after disturbance, depending on ongoing land use. Habitat succession on cleared lands is a slow process of reestablishing original plant communities, but the initial stages of succession leave disturbed habitats open to invasion by non-native grass and forb species. Ruderal vegetation is generally confined to continuously disturbed, compacted ground such as the margins of roadsides and parking areas. Ruderal species in the Project area include weedy non-native grasses, as well as weedy forbs such as common knotweed (*Polygonum aviculare*), red spurrey (*Spergularia rubra*), summer mustard (*Hirschfeldia incana*), and others.

5. Observed or Expected Wildlife in the Project Area

The Project area provides suitable habitat for a variety of bird species, such as the house finch (*Carpodacus mexicanus*), dark-eyed junco (*Junco hyemalis*), house wren (*Troglodytes aedon*), and oak titmouse (*Baeolophus inornatus*); several raptor species may also utilize the area (Table 3). These include but are not limited to the red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), great horned owl (*Bubo virginianus*), and American kestrel (*Falco sparverious*). Nocturnal raptors such as the barn owl (*Tyto alba*) and western screech owl (*Otus kennicotti*) are also expected to occur in the Project area on a regular basis. The white-tailed kite (*Elanus leucurus*), golden eagle (*Aquila chrysaetos*), merlin (*Falco columbarius*), red-shouldered hawk (*Buteo lineatus*), and prairie falcon (*Falco mexicanus*) may also occur but on a less frequent basis. All raptors and their active nests are protected under the California Fish and Wildlife code (Section 3503.5 and others) and under the federal Migratory Bird Treaty Act (MBTA).

The Project area offers suitable foraging habitat and potential roosting locations for bat species known to occur in the region. In particular, dense tree canopies and large dead tree snags provide potential roosting locations for bats. Several sensitive bat species including the California leaf-nosed bat (*Macrotus californicus*), hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), silver haired bat (*Lasionycteris noctivagans),* spotted bat (*Euderma maculatum*) and western mastiff bat (*Eumops perotis californicus*) are listed in the CNDDB as occurring within the Oat Mountain and/or surrounding quadrangles.

In addition to the sensitive and rare wildlife species, it is important to consider that the Project area including pole locations, access roads, and staging areas provides foraging, breeding, and living space for a number of common wildlife species. While these species are not afforded the legal protection of those species classified as sensitive or rare, they play an integral role both as individual species and collectively in the local ecosystem. Species such as the big-eared woodrat (*Neotoma fuscipes*), long-tailed weasel (*Mustela frenata*), striped skunk (*Mephitis mephitis*), common gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), mountain lion (*Felis concolor*), bobcat (*Lynx rufus*), black-tailed deer (*Odocoileus hemionus*),

western side-blotched lizards (*Uta stansburiana*), gopher snake (*Pituophis catenifer*), California kingsnake (*Lampropeltiscalifforniae*), southern Pacific rattlesnake, (*Crotalus helleri*), Pacific treefrog, California toad, numerous butterfly species, and countless numbers of other invertebrates are examples of common organisms that are likely to occur in the Project area. In addition to protecting the sensitive and listed species, efforts should be made where feasible to protect and promote the ability of the Project area to continue to support the rich diversity of common wildlife species currently occurring there to the greatest extent possible, including maintaining contiguous habitat corridors for species movement.

6. Sensitive Resources Present or Potentially Present in the Project Area

The sections below describe the habitat and species-specific findings of the field surveys.

6.1 Sensitive Habitat

The following plant communities observed onsite have a California state ranking of S3 or higher (S1, S2), which are considered to be “threat” ranks by the CDFW Natural Diversity Database (CDFG 2013). The state ranking system for S3 and above includes the estimated number of existing acres for the sensitive habitat, as well as a threat ranking from .1 (very threatened) to .3 (no current threats known). Sensitive habitats for the purpose of this report are defined as S3.2 and above (S1.1, S1.2, S1.3, S2.1, S2.2, S2.3, S3.1, and S3.2) for habitats with an identified threat.

- Valley Oak Woodland (S2.1 -- 2,000-10,000 acres [809 to 4,050 ha]; very threatened)
- California Walnut Woodland (S2.1 -- 2,000-10,000 acres [809 to 4,050 ha]; very threatened)
- Montane Deciduous Scrub (not given a threat rank by CDFW, but included here due to common association with Southern California black walnut)
- Bigcone-spruce Canyon Oak Forest (S3.2 --10,000-50,000 [4,050-20,235 ha] acres; threatened)
- Native Grassland (S3.1 -- 10,000-50,000 [4,050-20,235 ha] acres; very threatened)

In addition, Southern Coast Live Oak Riparian Forest is being treated as a sensitive habitat due to its occurrence in blue-line drainages and wet canyons in the Project area.

6.2 Observed Sensitive Plant Species

No state or federally listed threatened or endangered botanical species were observed in the Project area during the ARCADIS 2014 surveys. Six sensitive plant species were observed or reported in the immediate Project area: slender mariposa lily (*Calochortus clavatus* var. *gracilis*), club-haired mariposa lily (*C. clavatus* var. *clavatus*), Plummer's mariposa lily (*C. plummerae*), Santa Susana tarplant (*Deinandra minthornii*), Palmer's Grappling Hook (*Harpagonella palmeri*), and Southern California black walnut (*Juglans californica* var. *californica*).

The discussion below addresses the sensitive plant species observed or reported in the Project area. Species that were not observed but that are known from the general area are discussed in Section 6.2.7. The CNDDB and CNPS Electronic Inventory search point to a larger list of plant species whose presence has been reported in the Oat Mountain vicinity and adjacent quadrangles, or that may potentially occur in the habitat present in the Project area. All sensitive species observed or which have been reported in the area using the CNDDB and CNPS Electronic Inventory search are included in Table 4.

6.2.1 Slender Mariposa Lily (*Calochortus clavatus* var. *gracilis*)

Slender mariposa lily is a slender herbaceous perennial in the Lily Family (Liliaceae) that arises from bulbs each winter, reaching one-half to three feet (20 to 100 cm) in height by late spring or early summer. The basal leaves are about four to eight inches long (10 to 20 cm) and often are withered by the time the plant produces flowers in late spring. The flower stalk is slender and, depending on the subspecies, varies in height and form. Each flower consists of three one to one and one-half inch (2 to 4 cm) sepals that are generally red-brown near the base and three one-inch to two-inch (3 to 5 cm) yellow petals that form a bell-shaped flower. Each petal has a distinctive rounded and slightly sunken nectary covered with short knobby hairs; there are associated dark color bands above the nectary along with club-shaped hairs. The linear, angular fruits are two inches or more (6 to 9 cm) long. There are two subspecies of slender mariposa lily reported from the project region, each of them a sensitive subspecies.

Slender mariposa lily produces a straight flowering stem that reaches about 8 to 12 inches (20 to 30 cm) at maturity. Flowers appear between March and May and bear petals that are 1.2 – 1.6 inches (30 – 40 mm) long and sparsely hairy, with a reddish-brown line above the small shallow nectary. The anthers are 0.2 to 0.4 inches (4-7 mm) long. It occurs in grasslands and openings in coastal scrub, chaparral, and woodlands, mostly between1,000 and 5,300 feet (310 and 1,620 m) above msl. The known distribution of slender mariposa lily is confined to the a few locations in the Santa Monica Mountains, the San Gabriel Mountains, the Santa Susana Mountains north to the Liebre Mountains area in Ventura and Los Angeles Counties. It has a CNPS Rare Plant Rank of

1B.2, fairly rare, threatened, or endangered in California. Slender mariposa lily has been observed in Santa Susana Mountains in Wiley Canyon in 2003, in Newhall region in 2003, in Sunshine Canyon in 1997, in City of Santa Clarita in 2010 and on site 2009 and 2013 along the 66-kV subtransmission line (AECOM 2009, AECOM 2013, CCH 2014, LSA 2014).

Twenty-six individuals of slender mariposa lily have been reported north of the Project area at Lyon Canyon and just west of the Old Road (DMEC 2006). It has also been documented in the Browns Canyon area (transplants from Deer Lake Ranch Development in 2005), near "Sunshine Canyon" southwest of the Interstate 5/Highway 14 junction (55 plants in 1995), and near Newhall Creek west of Highway 14 (one plant in 2007), according to CNDDB (2014). Reports from the Newhall Ranch area indicate this species ranges up to 2,800 feet (853 m) above msl in the Santa Susana Mountains.

In 2009 over 1,200 individuals were located near the following proposed TSPs and associated access routes: TSP-37, TSP-41 TSP-42, TSP-43, TSP-44, and TSP-45. Only 31 individuals were located during surveys of the same locations in 2013; low numbers were attributed to subnormal rainfall in 2012 and 2013 (AECOM 2013).

A Mariposa Lily Restoration Plan to mitigate for potential impacts to mariposa lilies during Project Activities has been prepared under separate cover.

6.2.2 Club-haired Mariposa Lily (*Calochortus clavatus* var. *clavatus*)

Club-haired mariposa lily is larger than slender mariposa lily, with a flowering stem from 20 to 40 inches (50 to 100 cm) in length that is coarse and has a zigzag pattern. Petals are 1.6 to 2 inches (40 to 50 mm) long and deep yellow, and anthers are 0.3 to 0.4 inches (8-10 mm) long and deep purple. Plants tend to bloom in May and June. Club-haired mariposa lily occurs in grasslands and openings in coastal scrub, chaparral, and woodlands from Los Angeles County north to Monterey County, as well as San Benito County and is the more common of the two subspecies. It is generally found on rocky and clay soils derived from serpentine, mostly between 245 and 4,000 feet (75 and 1,200 m) above msl. It has a CNPS Rare Plant Rank of 4.3, a plant of limited distribution in California, and is endemic to portions of Central and Southern California.

Both varieties of *Calochortus clavatus* have been reported from the Project area, var. *clavatus* and var. *gracilis* (AECOM 2009, 2013; LSA 2014). All varieties of *Calochortus clavatus* are treated as the sensitive slender mariposa lily (*Calochortus clavatus* var. *gracilis*) in this report. Slender mariposa lily was originally described from plants collected in Pico Canyon in the Santa Susana Mountains and in the nearby San Gabriel Mountains (Ownbey 1940).

6.2.3 Plummer's mariposa lily (*Calochortus plummerae*)

Plummer's mariposa is a bulb-producing member of the Lily Family (Liliaceae) with slender branched stems supporting inrolled leaves that wither as the plants come into bloom from May through July. The showy flowers include narrow tapered sepals and pink to rose petals reaching up to 1 ¼ inches (40 mm) long. A distinctive central band of yellow hairs is visible in the center of the petal above the nectary, which is sometimes fringed by dense orange hairs. The linear capsules follow in late summer and at maturity are about 3 inches (8 cm) long.

Plummer's mariposa lily is a regional endemic in Southern California, found in scrub, chaparral, woodlands, grasslands, and lower montane coniferous forests in Ventura, Los Angeles, Orange, Riverside, and San Bernardino Counties, usually between 300 and 6,300 feet (100 to 1,920 m) elevation. Its range has been significantly reduced by development. It has a CNPS Rare Plant Rank of 4.2, uncommon and fairly endangered in California.

Plummer's mariposa lily has been reported from Lyon Canyon, which occurs north of the Project area at lower elevations and where over 1,100 individuals have been observed (DMEC 2006), north of the Browns Canyon (nine colonies in 2005) and Devil Canyon (dozens to hundreds in 2004) confluence, as well as at the head of Chivo Canyon (five colonies in 2006); the Chivo Canyon population occurred at 2,800 feet (854 m) above msl (CNDDB 2014). It has also been observed nearby in Salt Creek Canyon in 2003, at Santa Susana Pass in 2005, at the confluence of Devil and Brown's Canyons in 2010, and in the Project area in 2009 within the Aliso Canyon Turbine condenser area (AECOM 2009).

6.2.4 Santa Susana Tarplant (*Deinandra minthornii*)

Santa Susana tarplant is glandular shrub in the Sunflower Family (Asteraceae) with many branches, primarily from the plant base. Plants reach two to three feet (0.5 to 1 m) in height and are densely covered with linear, summer-deciduous leaves; axillary leaf clusters arise from the base of most leaves. The bright yellow flowers appear from summer through fall and have strongly keeled phyllaries, eight ray flowers, 18-23 disk flowers, and yellow anthers.

Santa Susana tarplant is endemic to the Santa Susana and Santa Monica Mountains, where it occurs in coastal scrub and chaparral vegetation, often in thin soils or among rocky outcrops between 900 and 2,500 feet (280 to 760 m) above msl. Its range has been significantly reduced by development. It is categorized as state rare (as *Hemizonia minthornii*) and has a CNPS Rare Plant Rank 1B.2 for species that are fairly endangered in California.

It is commonly found in a locally abundant habitat in the Santa Susana Mountains. It has been observed nearby north of Chatsworth near Fern Ann Falls (250 individuals in 1986 prior to transplanting), between Fern Ann Falls and Devil Canyon (no population data), near Hialeah Springs (no population data), near junction of Highway 118 and Santa Susana Avenue (500 individuals in 1985), and south of Highway 118 near West Topanga Canyon Boulevard (no population data), according to CNDDB (2014). It was also mapped by AECOM (2013) along Santa Susana Pass Road, Box Canyon Road, the Box Canyon Motorway Road, the North American Cut-Off, within Sage Ranch Park (Santa Monica Mountains Conservancy), and on Boeing, Rocketdyne and NASA properties near Chatsworth substation. More than 700 plants were observed growing in sandstone rocks and boulders as well as in recently scraped ground, and stringers of individuals followed roadsides at the base of sandstone cliffs (AECOM 2013).

6.2.5 Palmer's Grappling Hook (*Harpagonella palmeri*)

Palmer's grappling hook is a slender annual herb in the Borage Family (Boraginaceae) with branching stems arising from the base of the plant. Plants reach 12 inches (30 cm) in height when flowering; the small white flowers have five fused petals. The most distinctive features of this often-overlooked species are the unequal sepals in fruit, with the two upper sepals fused, arching over one nutlet and covered with five to ten stout spines, each hooked with bristles. At maturity, the fruit consists of two spreading nutlets that are dissimilar and bear small hooks on the surface.

Palmer's grappling hook occurs in grassland and openings in coastal scrub and chaparral vegetation between 65 and 3,100 feet (20 to 955 m) above msl from Los Angeles County south to Baja California and Sonora, Mexico and east to Arizona. It has a CNPS Rare Plant Rank 4.2, a plant of limited distribution that is fairly endangered in California.

It has been reported from Castaic Mesa, Newhall Ranch, according to CNDDB (2014) and CCH (2014) and along Box Canyon Motorway (AECOM 2013).

6.2.6 Southern California Black Walnut (*Juglans californica*)

Southern California black walnut is a deciduous large shrub to small tree in the Walnut Family (Juglandaceae) that is endemic to a small portion of California. It has a spreading habit, often with more than multiple trunks arising from near the base and numerous branches; trees can reach 50 feet (15 m) at maturity. The bark is gray brown, with a slight silvery wash on the surface, and deep flattened fissures on older trunks. The compound leaves are alternately placed on stout twigs, each leaf with 11 to 19 lanceolate to ovate leaflets. These leaves are drought-deciduous, so may drop from mid-summer into late fall. Plants leaf out in spring and were completely leafless at the time of

the ARCADIS March 2010 survey. Flowers appear in spring, often with emerging leaves; male flowers descend in axillary catkins and female flowers produce a nut enclosed in a leathery husk.

Southern California black walnut is closely related to Northern California black walnut (*Juglans hindsii*), which has been cultivated by Native Americans and used as the rootstalk for English walnut (*Juglans regia*) in much of California. Southern California black walnut most commonly occurs in association with oak woodland vegetation, although it is also present in coastal scrub and chaparral vegetation, as well as in riparian habitats along drainages up to 3,000 feet (900 m) above msl. It has a CNPS Rare Plant Rank of 4.2, a plant of limited distribution that is fairly endangered in California. It is a Central and Southern California endemic, restricted to specific habitats from Santa Barbara County south to Orange County and inland along the southern base of the San Bernardino Mountains to Millard Canyon near Banning Pass (CCH 2014). It is also reported from San Luis Creek and Atascadero Creek in San Luis Obispo County (Hoover 1970) and in San Diego County at Bonsall, Cottonwood Canyon, de Luz, and other localities (Beauchamp 1986); these populations may originate from cultivated specimens.

Southern California black walnut is occurs in the Project area, especially on the north-facing slopes to the north of Oat Mountain Way. It is a common component of oak woodland vegetation, Southern California walnut woodland, and riparian vegetation.

6.2.7 Sensitive Plant Species in Surrounding Area That Have Not Been Observed in the Project Area

The following species were not found in the Project area by ARCADIS or others but have been reported as historical or extant occurrences in the Oat Mountain quadrangle and are discussed here due to their potential to occur in the Project area. They are organized by rarity (the most rare first), and then alphabetically by scientific name. Table 4 includes results of the CNDDB and CNPS Electronic Inventory search for species whose presence has been reported in the Oat Mountain and surrounding quadrangles.

6.2.7.1 San Fernando Valley Spineflower (Chorizanthe parryi var. *fernandina)*

San Fernando Valley spineflower is an annual herb in the Buckwheat Family (Polygonaceae) with a low spreading habit reaching 12 in (30 cm) in height when in bloom. Initially, plants produce a basal rosette of oblong hairy leaves that narrow slightly at the base. Flower clusters arise at the end of leafy stalks in late spring and early summer. Unlike some species of *Chorizanthe*, there is no thin membrane along the margins of the awn-tipped involucres. The involucral awns are straight, and the whitish perianth consists of six equal lobes that are slightly hairy. There are nine stamens.

San Fernando Valley spineflower was thought to be extinct until its rediscovery in 1999 and is now known from only three occurrences. Historically, it was found in coastal scrub and grassland vegetation in eastern Ventura County, Los Angeles County, and Orange County.

San Fernando Valley spineflower is listed as a federal candidate species and a state endangered species, and has a CNPS Rare Plant Rank 1B.1 for species that are rare or endangered in California or elsewhere and are seriously endangered in California. It is seriously threatened by residential and commercial development, grazing, and competition with non-native plants. It is endemic to a small portion of southern California, eastern Ventura County, Los Angeles County, and Orange County.

San Fernando Valley spineflower was documented in Chatsworth Park in 1901 at about 1,000 feet (305 m), the only recorded location in the Oat Mountain quadrangle. It presently occurs in the Newhall Ranch area, where over 1,000,000 individuals were reported in 2003 (CNDDB 2014). All reported observations of this rare plant in the project vicinity have been made at elevations below 1,500 feet (457 m).

6.2.7.2 Slender-horned Spineflower (Dodecahema leptoceras)

Slender-horned spineflower is a diminutive annual member of the Buckwheat Family (Polygonaceae) that reaches up to four inches (10 cm) high when in bloom. The basal leaves are linear to oblanceolate and lack hairs, and are one to three inches (2 to 6 cm) long. Unlike the San Fernando Valley spineflower, slender horned spineflower has three flowers per involucres, not one; and six hooked spines at the base of each glandular involucre along with a straight awn at the tip of each of six involucral bracts. The small perianth is white to pink with six hairy lobes. There are nine stamens.

Slender-horned spineflower occurs in coastal scrub, chaparral, and woodland vegetation in Los Angeles, Riverside, and San Bernardino Counties between 650 and 2,500 feet (200 to 760 m) above msl.

Slender-horned spineflower is listed as a federal endangered species, a state endangered species, and has a CNPS Rare Plant Rank 1B.1 for species that are rare or endangered in California or elsewhere and are seriously endangered in California. It is seriously threatened by residential and commercial development, gravel mining, flood control, foot traffic, proposed reservoir construction, recreational activities, and competition with non-native plants. It is endemic to a small portion of southern California in Los Angeles, Riverside, and San Bernardino Counties.

It has been reported from Newhall in 1893 and from Pacoima Wash in San Fernando in 1937; this location has been mistakenly labeled as Limekiln Canyon Wash in the Oat Mountain quadrangle, according to CNDDB (2014). Locations supporting existing populations in Los Angeles County in the general project vicinity include Bee Canyon Wash (1,000 individuals in 1993) and Big Tujunga Wash near Sunland (1,577 individuals in 1998), according to CNDDB (2014).

6.2.7.3 California Orcutt Grass (Orcuttia californica)

California Orcutt grass is a small sparsely hairy annual grass with a prostrate habit that reaches 2 to 7 inches (5 to 20 cm) when flowering in spring through summer. The small green spikelets are crowded at the tips of culms, each two-ranked and compressed, with distinctive five-toothed lemmas.

California Orcutt grass is restricted to vernal pools, seasonal pools that fill with rainfall during the fall, winter, and spring rainy season. It occurs primarily between 50 and 2,200 feet (15 to 660 m) above msl in Ventura County, Los Angeles County, Riverside County, San Diego County and Baja California. It is categorized as CNPS Rare Plant Rank 4.2, a plant of limited distribution that is fairly endangered in California.

California Orcutt grass is listed as a federal endangered species, a state endangered species, and has a CNPS Rare Plant Rank 1B.1 for species that are rare or endangered in California or elsewhere and are seriously endangered in California. It is seriously threatened by agriculture, residential and commercial development, grazing, vehicles, and competition with non-native plants.

There is a report of this rare plant in the Newhall area, but the exact location of this reported population is unknown (CNDDB 2014). The approximate elevation of the Newhall California Orcutt grass population is 1,300 feet (400 m).

6.2.7.4 Peirson's Morning-glory (Calystegia peirsonii)

Peirson's morning-glory is a rhizomatous perennial herb in the Morning-glory Family (Convolvulaceae) that is endemic to Los Angeles County. It produces many stems from the base and along short rhizomes, each reaching 1.3 feet (0.4 m) in length. Leaves lack hairs but are covered with a whitish wax, and are triangular in shape, with distinctly two-tipped basal lobes. White funnel-shaped flowers appear in May and June and have distinctive elliptical bracts about 3 mm (0.1 in) below the flower base.

Peirson's morning-glory occurs in chaparral, coastal scrub, chenopod scrub, creosote bush scrub, Joshua tree woodland, and grassland vegetation between 100 and 5,000 feet (30 to 1,500 m)

above msl in the San Gabriel and Liebre Mountains and Antelope Valley. It is categorized as CNPS Rare Plant Rank 4.2, a plant of limited distribution that is fairly endangered in California. It has been reported from Lyon Canyon near to the Project area (DMEC 2006).

6.3 Sensitive Oak Trees

Pursuant to the requirements of the CPUC FEIR for the Project, oak trees that occur in potential temporary and permanent disturbance areas were mapped by ARCADIS in February and April 2014 and an Oak Tree Mitigation Plan has been prepared.

ARCADIS mapped and characterized individual oak trees throughout the project area to establish a baseline from which to quantify project impacts. More than 600 oak trees with a diameter at breast height of 8 inches (20 cm) or greater were mapped in the general project area including work areas and surrounding buffer areas within or immediately adjacent to Project disturbance areas and associated access roads. This initial assessment was based on the assumption that construction vehicles require 14 feet (4.3 m) of vertical clearance on access roads under overhanging oak trees. The individual tree data are presented in the oak tree mitigation plan under separate cover. Of the mapped oak trees, 56 oak trees occur within permanent impact areas and of these, it is anticipated that 15 may require removal (it is expected that the remaining oaks occurring within the disturbance areas can be avoided during construction). An additional 33 oak trees occur adjacent to or overhanging temporary and/or permanent disturbance areas and may experience impacts to 25% or more of the protected zone of each tree, bringing the total number of expected impacted oak trees to 89 based on the current construction designs and the input from the project team. Additional trees will require limited pruning, limbing, or foliage trimming to allow vehicle access, but with less than 25% anticipated encroachment into the protected zone.

In all cases, tree removal and impacts will be avoided if possible, on a case by case basis. The assessment of oak impacts was based on the assumption that construction vehicles require 14 feet (4.3 m) of vertical clearance on access roads under overhanging oak trees. Impacts along access roads are not anticipated in most cases, since limbing and pruning for vehicle use already occurs on a routine basis for fire protection and by other road users and landowners. The actual number of impacted trees will be tracked and quantified during construction and will depend on equipment size and height, as well as implementation of potential oak tree avoidance measures.

An Oak Tree Mitigation Plan to mitigate for impacts to native oak trees during Project Activities has been prepared for the project.

6.4 Observed or Potentially Occurring Sensitive Wildlife Species

The following is a summary of sensitive wildlife species that are present or have the potential to occur in the Project area based on known ranges and habitat requirements. Many of the sensitive species listed in the CNDDB for the Oat Mountain and surrounding quadrangles and included in Table 4 of this report are not discussed below primarily because suitable/required habitat conditions such as rock outcrops, aquatic environments, or extensive riparian habitat were not found within the survey area.

In addition, ARCADIS reviewed the lists of sensitive bird species for Los Angeles County published by the Los Angeles Chapter of the Audubon Society (Western Tanager 2009; includes 70 taxa) and have included in discussion those sensitive avian species on the list considered to have a moderate to good chance of occurring with some regularity in the Project area. Several species that are not included on the Los Angeles County Sensitive Bird Species list but that are listed on the cautionary Los Angeles County Bird Watchlist (includes a total of 31 taxa), and that were detected during ARCADIS field surveys are also included in discussion below. Please note that many species on the Audubon Society sensitive bird species list for Los Angeles County are not discussed herein because habitat conditions present in the Project area do not match those typically associated with these birds.

As described in Section 2.1, ARCADIS conducted a literature and database review including the biological studies prepared in support of the SCG ACTR project and the Environmental Impact Report.

The sensitivity status of each species described in the following sections is provided through the use of codes, defined as the following:

United States Fish and Wildlife Service

- FE – Federally Endangered Species
- FT – Federally Threatened Species
- FSC – Federal Special Concern Species

California Department of Fish and Wildlife

- CE – California Endangered Species
- CT – California Threatened Species

- CSC – California Species of Concern
- FP – Fully Protected

Los Angeles County Audubon Society

- S – Sensitive Species
- W – Watchlist

The sensitivity status for each species discussed below is indicated in parenthesis at the beginning of each entry with the federal status listed first, the California state status listed second, and in certain instances for avian species; the Los Angeles County Audubon Society status listed third. A dash indicates no listing at this time.

6.4.1 California Gnatcatcher (*Polioptila californica*)

The California gnatcatcher (FT / CSC / -) is a small passerine, having a length of approximately 4.5 inches (11.4 cm) and wingspan of 5.5 inches (14.0 cm), weighing approximately 0.18 ounces (5 g). It has a compact shape with a comparatively long tail and thin bill. It is generally brownish to gray overall with a dark bill color and dark tail showing very little white on the outer edges of the tail feathers. It lacks a distinct eye-ring and the male possesses a black cap which extends below the eye during the breeding season. California gnatcatchers are generally found in coastal scrub and chaparral habitat where they are often observed foraging in pairs throughout the year (Sibley 2000). Insects make up the bulk of the diet of the California gnatcatcher. During breeding season, they build a cup shaped nest typically in the fork of a small shrub where they lay from three to five eggs. Incubation lasts approximately 14 days and young fledge approximately 12 to 14 days after hatching (Ehrlich et. al. 1988).

The final rule on critical habitat for the California gnatcatcher was established in 2007 and occurs over much of the Project area. Protocol level surveys for the California gnatcatcher were conducted in the spring of 2010 at several locations within the Aliso Canyon Gas Storage Facility and including locations along the 66-kV Sub-transmission corridor associated with the Aliso Canyon turbine replacement; the survey results were negative (AECOM 2010). Additional protocol surveys are being conducted in suitable habitat during spring 2014.

The California gnatcatcher is federally listed as Threatened and is a California species of special concern.

Potential Presence in the Project Area: The California gnatcatcher was not observed during general habitat characterization efforts conducted by ARCADIS in March of 2014. Portions of the Project area contain suitable coastal sage scrub and chaparral habitat to support the California gnatcatcher. The results of protocol surveys conducted by AECOM between July and November of 2012 in support of the ACTR project were negative. Additional protocol level surveys for the species are occurring in the spring of 2014 where suitable habitat exists. The California gnatcatcher has a low to moderate likelihood of occurring within the Project area.

6.4.1.1 Designated Critical Habitat – California gnatcatcher

When a species is proposed for listing as endangered or threatened under the ESA, the USFWS must consider whether there are areas of habitat that are essential to the species' conservation. Those areas are proposed for designation as "critical habitat." It is a specific geographic area (or areas) that is considered by the USFWS as essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. As discussed previously, federal agencies are required under Section 7 to consult with the USFWS (and/or National Marine Fisheries Service) on actions they carry out, fund, or authorize to ensure that their actions will not result in take of a listed species or destroy or adversely modify critical habitat. In this way, a critical habitat designation protects areas that are necessary for the conservation of the species. A critical habitat designation has no effect on situations where a federal agency is not involved. An area designated as critical habitat is not a refuge or sanctuary for the species. Listed species and their habitat are protected by the ESA whether or not they are in an area designated as critical habitat. In consultation for those species with critical habitat, federal agencies must ensure that their activities do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. Most activities in critical habitat that require a federal agency to consult with USFWS can proceed as proposed or with reasonable and prudent modifications.

Portions of the project area are within designated critical habitat for the coastal California gnatcatcher (see Figure 5). In most cases, the proposed work activities occur along the margin, and just inside the designated critical habitat. In several small work areas, federal permitting is anticipated pursuant to the Clean Water Act for minor drainage crossing improvements along existing roads. These activities will be addressed during the CWA permitting pursuant to Section 7 of the ESA. Additionally, the EIR for the project includes numerous measures to protect California gnatcatchers and their habitat (including habitat restoration requirements for Venturan coastal sage scrub impacts). As noted above, protocol surveys for California gnatcatchers have been conducted and additional protocol surveys are in progress in April 2014, with no coastal California gnatcatchers observed during any of the surveys to date.

6.4.2 Least Bell's Vireo (*Vireo bellii spp. pusillus*)

The least Bell's vireo (FE / CE / S) is a small (L 4.75 inches [12.10cm]; WS 7 inches [17.8 cm]) mostly plain gray passerine with indistinct wing bars, relatively long tail, and faint broken eye-ring (Sybley 2000). It typically arrives in southern and central California from Mexico in early April, and departs by late August (Lehman 1982). This species prefers to nest in extensive, multi-canopy, riparian corridors, especially those dominated by willow and/or cottonwood trees. A normal clutch consists of four eggs incubated for two weeks, with young fledging in 10-12 days (Franzreb 1987). Parasitism by the brown-headed cowbird and loss of riparian habitat are thought to be the major reasons for the decline of this species.

All types of willow-dominated vegetation are considered potential least Bell's vireo habitat in this assessment, and mapped least Bell's vireo habitat in the Project area is overlain on critical habitat for the least Bell's vireo on Figure 5.The potentially suitable but limited riparian habitat at the Site is more likely to be used as possibly an intermittent stopover and foraging location during migration than as nesting habitat. The species typically nests in much more expansive and dense riparian habitats.

Potential Presence on the Site: The least Bell's vireo was not observed or heard during ARCADIS habitat characterization efforts at the Site. Limited and only marginally suitable nesting habitat for the least Bell's vireo exists on the Site, and it is possible but unlikely that a nesting pair of vireos would occur in this habitat. However, protocol level surveys for the Least Bell's vireo in potentially suitable habitat are occurring in the spring of 2014.

6.4.3 White-tailed Kite (*Elanus leucurus*)

The white-tailed kite (- / FP / S) requires large open fields and relatively undisturbed oak woodland, grassland, and/or coastal sage scrub for successful breeding. Small mammals are the normal prey item of this species. Eggs are laid as early as mid-March and as late as the end of May. White-tailed kite habitat usually requires a stretch of riparian corridor in which to nest (particularly cottonwoods, but including eucalyptus, willows, and live oaks) and adjacent fields in which to hunt. Nests are usually well hidden in the tree canopy (Dixon et al. 1957).

White-tailed kites are known to occur in nearby open areas in the open terrain of grassland, oak woodland, and coastal scrub. Habitat existing in the Project area is considered potential foraging and nesting habitat for the white-tailed kite.

Potential Presence in the Project Area: The white-tailed kite was not observed in the Project area during ARCADIS surveys. The SCE Natural project site including portions of the 66-kV Sub-transmission line corridor has suitable foraging and nesting habitat for the white-tailed kite.

6.4.4 Grasshopper sparrow (*Ammodramus savannarum*)

The grasshopper sparrow (- / CSC / S) is a small secretive sparrow that favors dense grassland habitats in open fields, prairies, pastures, and foothills. It has a thin complete eye-ring, white median crown-stripe and unmarked buffy chin and breast. It has an intricate pattern of rufous spots on the back and has a relatively large head and short tail, as is typical for birds in the genus Ammodramus (Sibley 2000). The grasshopper sparrow typically lays four to five creamy white, dark speckled eggs in a cup-shaped nest constructed on the ground, often at the base of a clump of grass. Incubation lasts from 11 to 12 days, and the young fledge approximately 9 days after hatching. Several pairs may nest together in a loose colony. Grasshopper sparrow populations winter in southeastern portions of the United States as well as in Central and South America; they occur in most of the lower 48 states in appropriate habitat during the spring and summer months. Their numbers have been steadily decreasing throughout their range (Stokes 1996).

Grassland habitat present along the 66-kV Sub-transmission line is considered suitable for the grasshopper sparrow.

Potential Presence in the Project Area: The grasshopper sparrow was not observed during surveys by ARCADIS. Existing habitat containing open uninterrupted grassland along the 66-kV Sub-transmission line appears to be suitable for this species, both as foraging and nesting habitat.

6.4.5 Cooper's Hawk (*Accipiter cooperii*)

The Cooper's hawk (- / CSC / -) is a crow-sized raptor with relatively short-rounded wings and a long tail. It feeds predominantly on small to medium-sized birds, but will also take mammals such as wood rats, small rabbits, and reptiles. The breeding season for the Cooper's hawk begins in mid-March to early April. Nests are typically built in the upper canopy of a dense stand of trees such as live oak or cottonwood. Nests are occasionally built atop a wood rat or squirrel nest (Meng & Rosenfield 1988, Roberson and Tenney 1993). The Cooper's hawk is generally considered a secretive species, but commonly breeds within urban settings.

Potential Presence in the Project Area: The Cooper's hawk was observed during the survey by ARCADIS. The SCE Natural project site including portions of the 66-kV Sub-transmission line corridor provides excellent foraging and nesting habitat for the Cooper's hawk and the species is assumed to be present on a year round basis.

6.4.6 Olive-sided Flycatcher (*Contopus cooperi*)

The olive-sided flycatcher (- / CSC / S {breeding}) is a large flycatcher with a large head, pointed wings, short tail, and obvious dark “vest”. It has a conspicuous white throat and belly. The olive-sided flycatcher is typically found in mixed coniferous forest habitat and is often observed hunting for flying insects from the tallest most conspicuous treetop perch, often a dead tree snag in the middle of a clearing. It has a far reaching diagnostic song often referred to as “quick, three beers” or “whip WEEDEEER” (Sibley 2000). The olive-sided flycatcher is a migratory species occurring in California in the spring and summer. The olive-sided flycatcher builds a cup shaped nest out of twigs, rootlets, lichen, and pine needles. Typically, three to four eggs are laid and incubation lasts for approximately two weeks. Young fledge in 21 to 23 days (Ehrlich et. al. 1988).

Potential Presence in the Project Area: The olive-sided flycatcher was not observed during general habitat characterization efforts conducted by ARCADIS. Limited portions of the Project area support potential foraging and nesting habitat for the olive-sided flycatcher. The olive-sided flycatcher is a migratory species that winters in central and South America and is most likely to be observed as a spring migrant through the Project area.

6.4.7 Oak Titmouse (*Baeolophus inornatus*)

The oak titmouse (- / - / W) is a small passerine with plain drab plumage, plain face and short crest. The oak titmouse inhabits both coniferous forests and open, dry woods. Its constant call and song make it a rather conspicuous vocal species that is often first detected audibly when it is heard issuing repeated phrases as it moves through the forest canopy. This species is a year round resident in California. The oak titmouse is a cavity nester and readily uses nest boxes. They typically lay from 6-8 eggs that hatch in 14 to 16 days and fledge in from 16 to 21 days (Ehrlich et. al. 1988).

Potential Presence in the Project Area: The oak titmouse was observed during general habitat characterization efforts conducted by ARCADIS. Portions of the 66-kV Sub-transmission line corridor supports excellent foraging and nesting habitat for the oak titmouse and the species is expected to be present year round in the Project area.

6.4.8 Turkey Vulture (*Cathartes aura*; breeding)

The turkey vulture (- / - / S {breeding}) is a long-winged, large, dark soaring bird with a somewhat small head and two-toned underwing. Adults have a featherless red head. They are often seen roosting in groups. Turkey vultures feed on carrion that they locate by both site and smell while soaring over the countryside. This species is a year round resident in California. The turkey vulture

typically lays one to three eggs within a cliff pothole or tree hollow. Incubation lasts approximately 40 days and young fledge the nest in approximately 70 days (Ehrlich et. al 1988).

Potential Presence in the Project Area: The turkey vulture was observed during general habitat characterization efforts conducted by ARCADIS. Turkey vultures are common in the project vicinity and could nest in tree hollows within the project site. Signs of breeding activity by this species were not observed by ARCADIS and observed birds were assumed to be foraging over the Project area.

6.4.9 Ferruginous Hawk (*Buteo regalis*)

The ferruginous hawk (FSC / CSC / S) is a large raptor often observed perched on the ground in open fields, on power poles, or in trees while it searches for prey species (usually small to medium sized mammals). It has longer, more pointed wings than the red-tailed hawk, and its wings form more of a dihedral when soaring. It is not uncommon for this species to hunt from a high soar, or to hover for brief periods when hunting. It is generally found in dry, open fields and grasslands. Adults have rufous colored feathers extending down the tarsi to the ankle, crescent shaped white wing patches on the dorsal surface of the wings, and a large gape to the mouth that extends under the eye. The tail is generally off-white or gray with a faint terminal band. In California, the ferruginous hawk occurs during the fall and winter in the central and southern portions of the state and does not breed in California.

Potential Presence in the Project Area: The ferruginous hawk was not observed during general habitat characterization efforts conducted by ARCADIS. The Project area contains potentially suitable foraging habitat for the ferruginous hawk. The ferruginous hawk winters in California and is only expected to occur in the Project area if at all during late fall and winter.

6.4.10 Greater Roadrunner (*Geococcyx californianus*)

The greater roadrunner (- / - / S) is a large (length 23 inches {58.4 cm}) bird with a long tail and shaggy, streaked appearance. It has a short crest that is often raised. The greater roadrunner is agile on the ground where it spends much of its time hunting primarily lizards, snakes, and including some small mammals. It frequents dry open habitat including both rocky desert terrain and grassland (Sibley 2000). This species is a year round resident in California. The greater roadrunner builds an open cup shape nest of sticks typically in a shrub or tree and lays four to six eggs. Incubation lasts about 20 days and young fledge in about 18 days (Ehrlich et. al 1988).

Potential Presence in the Project Area: The greater roadrunner was not observed in the Project area during general habitat characterization efforts conducted by ARCADIS. The Project area is presumed to support potentially suitable foraging and nesting habitat for the greater roadrunner.

6.4.11 Long-eared owl (*Asio otus*; wintering)

The long-eared owl (- / CSC / S {wintering}) is approximately 15 inches (38 cm) long with a wingspan of approximately 36 inches (91 cm). Adults are plain gray on the back with dark streaking and barring on the chest and belly. The face is tawny orange in color with dark vertical streaks through the eye and long ear tufts (Sibley 2000). The long-eared owl hunts while on the wing and preys on small mammals that it catches while patrolling over open fields and grasslands. The long-eared owl frequents mixed deciduous-coniferous forests and coniferous forests and is a year round resident in California. This owl uses abandoned nests from other birds to raise its young. Typically, 4 to 5 eggs are laid with incubation lasting approximately 27 days. Young owls fledge in between 24 and 26 days (Ehrlich et. al 1988).

Potential Presence in the Project Area: The long-eared owl was not observed in the Project area during general habitat characterization efforts conducted by ARCADIS. The Project area could potentially provide suitable foraging and nesting habitat for the long-eared owl if this species were to occur in the Project area.

6.4.12 Western meadowlark (*Sturnella neglecta*)

The western meadowlark (- / - / S) is pale gray-brown overall with whitish flanks and yellow breast with dark breast band. The western meadowlark is heavy bodied, short-tailed and long-billed. It has conspicuous outer tail feathers when in flight (Sibley 2000). It is a year round resident in California. The western meadowlark inhabits open, grassy fields where it feeds on seeds and insects. Typically, five eggs are laid in a cup shaped nest well hidden in the grass. Incubation lasts about two weeks and young fledge in approximately 12 days (Ehrlich et. al 1988).

Potential Presence in the Project Area: The western meadowlark was observed in the Project area during general habitat characterization efforts conducted by ARCADIS. The Project area supports suitable foraging and nesting habitat for the western meadowlark and the species occurs on the site on a year round basis.

6.4.13 Western burrowing owl (*Athene cunicularia*)

The western burrowing owl (- / CSC / S) can be found in dry open grasslands, flat open fields, and desert habitats. Burrowing owls are capable of creating their own burrows, but typically occupy burrows abandoned by ground squirrels, badger and other mammals. They feed on a wide range of animals including insects, small mammals, birds, and reptiles. The breeding season can start as early as late February and is typically over by late August. Up to nine eggs are laid and incubation is complete in 28 to 30 days. Young owls fledge in 44 days (Ehrlich et al. 1988)

Potential Presence in the Project Area: The western burrowing owl or evidence suggesting presence of this species was not observed during general habitat characterization efforts conducted by ARCADIS. ARCADIS found few potential burrows that could provide shelter for burrowing owls and overall, the vegetation cover in the Project area was only marginally suited for the burrowing owl. With the exception of a few isolated locations, habitat occurring in the Project area is not conducive to occupancy by the western burrowing owl.

6.4.14 Golden eagle (*Aquila chrysaetos*)

The golden eagle (- / FP / S) is a large dark brown raptor with a relatively small head, large feet, and golden nape. This species can occur in a variety of habitat types but typically frequents desert mountains, grassland foothills, and woodlands in mountainous areas. Golden feed primarily upon small to medium sized mammals and birds. The golden eagle builds a stick nest on cliff faces or in large trees and lays two eggs that hatch after approximately 44 days of incubation. Young eagles fledge in approximately 70 days (Ehrlich et al. 1988).

Potential Presence in the Project Area: The golden eagle was observed during general habitat characterization efforts conducted by ARCADIS. The golden eagle is likely to occur in the project vicinity at least periodically and the Project area provides suitable foraging and nesting habitat for this species. Golden eagle nest surveys were conducted by Bloom Biological, Inc. (BBI) in the spring of 2013. Five nests were found and all were inactive. One individual golden eagle was observed in the study area. BBI is conducting protocol golden eagle nesting surveys in the spring of 2014. The results of the initial round of surveys described six nests consistent in structure with golden eagle nests. None of the nests were attended by eagles or exhibited signs of nesting activity in 2014 and BBI reported that none appeared to have been used by eagles in the last 4-5 years. No individual golden eagles were observed. A second round of surveys is occurring in April 2014.

6.4.15 Western wood –pewee (*Contopus sordidulus*; breeding)

The western wood-pewee (- / - / W {breeding}) is gray to lite gray overall with a slight crest, relatively long, pointed wings and low contrasting wing bars. This relatively large bird (length 6.25 inches {15.9 cm}) in the family Tyrannidae is often found in and along edges of woods perched conspicuously on an exposed tree limb from which it hunts flying insects (Sibley 2000). The western wood-pewee is a migratory species found in North America in spring and summer and wintering in central and South America. The western wood-pewee builds a cup shaped nest in a tree and typically lays three eggs. Incubation lasts 12 to 13 days and young fledge in approximately 16 days (Ehrlich et al. 1988).

Potential Presence in the Project Area: The western wood-pewee was not detected during general habitat characterization efforts conducted by ARCADIS. Certain locations along the 66-kV Sub-transmission line corridor in the Project area are suitable to support the western wood-pewee and the species could breed in the Project area.

6.4.16 Hutton's vireo (*Vireo huttoni*)

The Hutton's vireo (- / - / W) is a small (length 5 inches {13 cm}) stocky vireo, drab olive in color overall, with a relatively thick bill, white wing bars, round head and eye ring. It is conspicuously active when foraging in trees as it moves through the forest canopy often in a mixed flock of other bird species. The Hutton's vireo is a year round resident in California. The Hutton's vireo builds a cup shaped nest in a tree in which it typically lays three to five eggs. Incubation last two weeks and young fledge in approximately 14 days.

Potential Presence in the Project Area: The Hutton's vireo was observed during general habitat characterization efforts conducted by ARCADIS. Habitat along much of the 66-kV Sub-transmission line corridor is suitable to support the Hutton's vireo and the species could potentially breed in the Project area.

6.4.17 California towhee (*Melozone crissalis*)

The California towhee (- / - / W) is gray-brown overall with cinnamon lores and cinnamon color undertail coverts. It is commonly found in wooded and brushy terrain where it spends a lot of time on the ground and in low shrubs looking for seeds and insects. The California towhee is a year round resident in California. The California towhee builds a cup shaped nest in a tree or shrub in which it typically lays three to four eggs. Incubation last two weeks and young fledge in approximately 14 to 16 days.

Potential Presence in the Project Area: The California towhee was observed during general habitat characterization efforts conducted by ARCADIS. Habitat in the Project area is suitable to support the California towhee and the species most likely breeds in the Project area.

6.4.18 Black-headed grosbeak (*Pheucticus melanocephalus*; breeding)

The black-headed grosbeak (- / - / W {breeding}) is relatively large (length 8.25 inches {21.0 cm}) with a large head and large beak. The adult male has a black head and buffy orange breast and collar. It has obvious white markings on black wings and yellow axillaries or "armpit". The black-headed grosbeak is a migratory species occurring in California in the spring and summer. It typically frequents hardwood forests where it feeds on seeds, berries and insects. It builds a cup

shaped nest in a tree or shrub and typically has between two and five eggs. Incubation lasts approximately 12 to 13 days and young fledge in 11 to twelve days (Stokes 1996).

Potential Presence in the Project Area: The black-headed grosbeak was not observed during general habitat characterization efforts conducted by ARCADIS. Specific locations along the 66-kV Sub-transmission corridor are suitable to support the black-headed grosbeak and the species could potentially breed in the Project area.

6.4.19 Coast Horned Lizard (*Phrynosoma blainvillii*)

The coast horned lizard (- / CSC) is found in a variety of habitats, including grassland, oak woodland, and maritime chaparral. The coast horned lizard requires sandy soils, preferably in the presence of low shrubs that can provide cover from predators. Additional requirements are open areas used for sunning, including dirt roads, and the presence of ants and other insect prey. Eggs are laid in sandy soils from April through June (Stebbins 1985).

Potential Presence in the Project Area: The coast horned lizard was not observed during general habitat characterization efforts conducted by ARCADIS. The Project area has fair to marginal habitat for the coast horned lizard with some areas providing fairly good habitat. Coast horned lizards have been observed by others in the project area.

6.4.20 Silvery Legless Lizard (*Anniella pulchra* [=*Anniella stebbinsi*])

The silvery legless lizard (- / CSC) requires habitat similar to that occurring in portions of the Project area. This species needs loose soil with plant cover, and can be found in chaparral, pine-oak woodland, and streamside growth of sycamores, cottonwoods, and oaks. The silvery legless lizard favors the loose litter under sycamore, oak, and cottonwood trees (Stebbins 1985). The understory of oak thickets along perennial or temporary streambeds and washes represents prime habitat for this species.

Expanses of dense grass occurring at the proposed drilling sites are not particularly suitable for the silvery legless lizard, as it presumably hinders underground movement by the species. However, the silvery legless lizard may be found within the interface of grassland and scrub oak or oak woodland communities where clearings of friable soil occur, along with accumulated leaf litter from oaks and other tree and shrub species. Where these conditions occur in the Project area, they may accommodate the silvery legless lizard.

Potential Presence in the Project Area: The silvery legless lizard was not observed during general habitat characterization efforts conducted by ARCADIS. The Project area including the 66-

kV Sub-transmission line corridor may have areas of potentially suitable habitat for the silvery legless lizard.

6.4.21 Southern Grasshopper Mouse (*Onychomys torridus* subsp. *ramona*)

The southern grasshopper mouse (- / CSC) is common in arid desert habitats of the Mojave Desert and southern Central Valley of California. Alkali desert scrub and desert scrub habitats are preferred, with somewhat lower densities expected in other desert habitats, including succulent shrub, wash, and riparian areas. The southern grasshopper mouse also occurs in coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats. It is uncommon in valley foothill and montane riparian areas and various other habitats (CDFW 1999). It is active year round and typically frequents desert areas, especially scrub habitats with friable soils for digging. The southern grasshopper mouse feeds almost exclusively on arthropods, especially scorpions and orthopteran insects (Horner et al. 1964). Both vertebrates and seeds are minor components of the diet. Populations of this species generally are small, with low densities of individuals in a given area. Litter size averages four young, with as many as six litters per year. Peak breeding is from May to July, but may start in January under ideal conditions (Pinter 1970).

Potential Presence in the Project area: The southern grasshopper mouse was not observed during general habitat characterization efforts conducted by ARCADIS, which is not surprising as the species is typically nocturnal and spends its time in burrows during the day. Focused small mammal trapping surveys were beyond the scope of initial habitat assessment. In general, habitat existing in the Project area is considered to be of marginal to poor quality for the southern grasshopper mouse, which is more commonly found in more arid and less vegetated habitat.

6.4.22 Los Angeles Pocket Mouse (*Perognathus longimembris* subsp. *brevinasus*)

The Los Angeles pocket mouse (- / CSC) is one of eight subspecies of the little pocket mouse (*P. longimembris*) in California (Hall 1981). Its range historically occurred in the coastal basins of southern California but it is thought to have been extirpated from the San Fernando Valley as a result of urbanization; it may no longer occur in the San Bernardino Valley either. It typically favors sparsely vegetated open ground of fine sandy soil, which is ideal for burrowing; The Los Angeles pocket mouse occurs primarily in lower elevation grassland and coastal sage scrub communities (Patten et al. 1992). It is a nocturnal rodent, spending daylight hours in burrows and emerging at night to feed on a variety of vegetation and insect species. In the wild, little pocket mice may produce one or two litters per year, with typical litter sizes of 3-4 pups (BayScience Foundation 2010).

Coastal sage scrub habitat found in the Project area is potentially suitable for the Los Angeles pocket mouse, which is thought to prefer drier and sparsely vegetated communities. Studies of similar species of pocket mice suggest mice avoid dense grass cover because of difficulty locomoting and finding seeds (M. Pavelka 1998-99; cited in Spencer and Schaefer 2000).

Potential Presence in the Project Area: The Los Angeles pocket mouse was not observed during general habitat characterization efforts conducted by ARCADIS, which is not surprising as the species is typically nocturnal and spends its time in burrows during the day. Focused small mammal trapping surveys were beyond the scope of initial habitat assessment. In general, habitat existing in portions of the Project area is considered to be potentially suitable for the Los Angeles pocket mouse.

6.4.23 San Diego Desert Woodrat (*Neotoma lepida* subsp. *intermedia*)

The San Diego desert woodrat (- / CSC) inhabits dry desert and scrub habitat and favors rocky outcrops, rocky cliffs, boulder areas, and slopes. It is buff-colored above, grayish below, with white hind feet. The range of the San Diego desert woodrat overlaps with that of the Dusky-footed woodrat (*Neotoma fuscipes*) in central and southern California. The more common dusky-footed woodrat is larger, with dusky ankles (Whitaker 1996). The San Diego desert woodrat can be differentiated from the dusky-footed woodrat by its tendency to stack sticks and other scrub litter at the front of a burrow or crevice among rocks where it nests. The dusky-footed woodrat builds large stick nest mounds on the ground or low in the branches of a tree within dense scrub or riparian habitat.

Potential Presence in the Project Area: The San Diego desert woodrat was not observed during general habitat characterization efforts conducted by ARCADIS. There is limited potentially suitable habitat in the vicinity of the 66 kV-Sub transmission line corridor having rock outcrops or rocky slopes or cliffs. Woodrat nests observed appeared to be those of the dusky-footed woodrat and were located in habitat expected for this species. There is a low probability that the San Diego desert woodrat occupies the Project area.

6.4.24 Monarch Butterfly (*Danaus plexippus*)

The monarch butterfly does not have federal or state listing status, but is included as a sensitive species in the CNDDB (2013). Winter roost sites have been found from northern Mendocino County to Baja California, Mexico, with several known sites on the central coast. The listing by CNDDB is based on the limited wintering roost sites within the central coast portion of the butterfly's West Coast wintering range. The monarch butterfly can be found in a variety of habitats, especially those supporting milkweed plants (Asclepias species), the primary food source of the

caterpillars. These butterflies frequent grasslands, prairies, meadows, and wetlands, but avoid dense forests. In the winter, monarchs cluster together in large numbers in eucalyptus, cypress, and Monterey pine trees, often on the edges of open areas.

Potential Presence in the Project Area: Monarch butterflies were not observed during the general habitat characterization efforts conducted by ARCADIS. Portions of the Project area support large trees within a wind protected setting that could provide potential roost sites for wintering monarch butterflies. However, the distance of the Project area from the coast likely precludes overwintering by concentrated numbers of adult monarch butterflies. No wintering roosts have been recorded in the Project area. The Project area is more likely to provide habitat for foraging and breeding by this butterfly species.

7. Potential Impacts and Constraints

The following sections describe the general types of impacts to ecological resources potentially occurring in association with disturbance at this site. Both potential impacts and potential impact avoidance and minimization measures are discussed below and in Section 8. Additional survey work may be required to assess potential impacts based on a final plan that defines limits of disturbance, access routes, post-project grades, buffer areas, and other potential issues if they are changed from what was studied for this report. However, for planning purposes, both potential impacts and potential impact avoidance and minimization measures are discussed in the sections that follow.

7.1 Direct Sensitive Species Impacts

No direct impacts to state or federally-listed threatened or endangered species are anticipated as a result of this project.

A total of 12 sensitive wildlife species were observed or have been reported in the Project area: eleven avian species and one reptile. These are: Cooper's hawk, Swainson's hawk, golden eagle, turkey vulture, oak titmouse, olive-sided flycatcher, western wood-pewee, Hutton's vireo, western meadowlark, California towhee, and black-headed grosbeak. Of these, none are listed as state or federally threatened or endangered species. Three are considered California species of concern: Cooper's hawk, nesting oak titmouse, and olive-sided flycatcher. An additional eight avian species are categorized as sensitive bird species in Los Angeles County (Western Tanager 2009): Swainson's hawk, golden eagle, turkey vulture, western wood-pewee, Hutton's vireo, western meadowlark, California towhee, and black-headed grosbeak.

A total of 6 sensitive plant taxa were observed or have been reported in the Project area. Of these, none are listed as state or federally threatened or endangered species. These six plant taxa all have rare plant ranks provided by CNPS. Two taxa have a rare plant rank of 1B.2, plants that are fairly rare, threatened, or endangered in California: slender mariposa lily and Santa Susanna tarplant. Three taxa have a rare plant rank of 4.2, plants that are uncommon and fairly endangered in California that are on a watch list: Plummer's mariposa lily, Palmer's grappling hook, and Southern California black walnut. One taxon has a rare plant rank of 4.3, a plant of limited distribution in California that is on a watch list: club-haired mariposa lily.

Expected direct impacts associated with the project involve the loss of scattered individual native plants, including slender mariposa lily, club-haired mariposa lily, and Southern California black walnut from permanent disturbance areas. In addition, direct impacts include the loss of open foraging ground for wildlife and loss of fossorial wildlife species present during clearing.

7.2 Habitat Impacts

The following vegetation types occur within areas that will experience temporary and/or permanent disturbance during Project activities and have a California state ranking of S3 or higher (S1 and S2), which are considered to be "threat" ranks by the California Department of Fish and Wildlife Natural Diversity Database (CDFW 2010 and 2014, Sawyer, Keeler-Wolf, and Evens 2009). The state ranking system for S3 and above includes the estimated number of existing acres for the sensitive habitat statewide, as well as a threat ranking from .1 (very threatened) to .3 (no current threats known); if no threat ranking is included, the habitat is not considered very sensitive statewide.

- Valley oak woodland and savanna (*Quercus lobata* Woodland Alliance) -- S3 (10,000-50,000 acres statewide, threatened)

- Southern California walnut woodland (*Juglans californica* Woodland Alliance) -- S3.2 (10,000-50,000 acres statewide, threatened)

- Southern mixed evergreen forest (*Pseudotsuga macrocarpa* Forest Alliance) -- S3.2 (10,000-50,000 acres statewide, threatened)

- White-sage-dominated Venturan coastal sage scrub (*Salvia apiana* Shrubland Alliance) -- S3 (10,000-50,000 acres, threatened)

- Riparian woodland (*Populus fremontii* Woodland Alliance) -- S3.2 (10,000-50,000 acres statewide, threatened)

All Venturan coastal sage scrub, oak woodland and savanna, and riparian habitats are designated as sensitive in the FEIR (CPUC 2013).

Anticipated impacts to all habitat types based on current disturbance envelopes are summarized in Table 5 and include a total of 11.8 acres (4.8 ha) of impacts to sensitive habitats, with 8.8 acres (3.6 ha) of temporary impacts and 3.0 acres (1.2 ha) of permanent impacts:

- Coast live oak woodland – 3.3 acres (1.3 ha) total impacts, 1.85 acres (0.7 ha) of temporary impacts and 1.45 acres (0.6 ha) of permanent impacts
- Southern California walnut woodland – 0.3 acres (0.1 ha), all temporary impacts
- Venturan coastal sage scrub (all types) – 8.06 acres (3.3 ha) total impacts, 6.62 acres (2.4 ha) of temporary impacts and 1.44 acres (0.5 ha) of permanent impacts.

7.3 Sensitive Wildlife Impacts

An initial assessment based upon observed conditions, species-specific habitat requirements, and anticipated implementation of preemptive impact avoidance and mitigation measures suggests that no impacts to state or federally listed threatened or endangered species will result from the proposed project activities. The locations of the various tower locations and work areas are not expected to block important dispersal routes or present an impassible barrier to wildlife. In most instances, the tower locations are limited in size and are surrounded by natural open space that is anticipated to provide adequate room for movement from one area to another by wildlife species occurring in the vicinity.

Focused reconnaissance level pre-construction clearance surveys conducted daily will help determine presence or absence of many wildlife species especially avian species immediately prior to construction. However, determining presence or absence of certain other species like the silvery legless lizard may prove difficult, even with more detailed survey efforts, due to the reclusive and fossorial nature of this and other similarly difficult to detect wildlife. For this reason, both pre-construction clearance wildlife surveys and construction monitoring during clearing activities are proposed to increase the chances of identifying the presence of hard to detect sensitive wildlife species and providing protection by means of avoidance or relocation of these species, should they be discovered in the Project area.

Nesting birds present an ecological constraints issue associated with the project. As such, specific impact avoidance measures and methods to protect avian species and their nests are addressed

in two documents directly related to the project, MM BR-7 Avian Protection Plan and MM BR-8 Nesting Bird Management Plan.

Several species of birds are likely to nest on or in close proximity to the proposed work locations. In addition to expected species such as the house finch (*Carpodacus mexicanus*), dark-eyed junco (*Junco hyemalis*), house wren (*Troglodytes aedon*), and oak titmouse (*Baeolophus inornatus*), to name a few, several raptor species may utilize the Project area. These include but are not limited to the red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), great horned owl (*Bubo virginianus*), and American kestrel (*Falco sparverious*). Nocturnal raptors such as the great horned owl (*Bubo virginianus*), barn owl (*Tyto alba*), and western screech owl (*Otus kennicotti*) are also expected to occur in the Project area on a regular basis. The white-tailed kite (*Elanus leucurus*), golden eagle (*Aquila chrysaetos*), merlin (*Falco columbarius*), red-shouldered hawk (*Buteo lineatus*), and prairie falcon (*Falco mexicanus*) may also occur in the Project area but on a less frequent basis. All raptors and their active nests are protected under the California Fish and Wildlife code (Section 3503.5) and under the federal MBTA.

All birds included on the federal list of migratory non-game birds, and their active nests are protected by law under the federal MBTA. This includes all of the birds observed in the Project area with the exception of the rock dove (*Columba livia*), house sparrow (*Passer domesticus*) and European starling (*Sturnus vulgaris*).

The Project area offers suitable foraging habitat and potential roosting locations for bat species known to occur in the region. In particular, dense tree canopies and large dead tree snags may provide potential roosting locations for bats. Several sensitive bat species, including the California leaf-nosed bat (*Macrotus californicus)*, hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), silver haired bat (*Lasionycteris noctivagans*), spotted bat (*Euderma maculatum*) and western mastiff bat (*Eumops perotis californicus*), are recorded in CNDDB (2013) as occurring within the Oat Mountain or surrounding quadrangles. Any bat roosts or indications of concentrated bat activity should be reported to CDFW and protected from disturbance until such time as procedures can be implemented that offer long term protection for these species.

In addition to sensitive and rare species, it is important to consider that the vegetation communities along the 66 kV Sub-transmission line corridor provide foraging, breeding, and living space for a number of common wildlife species. While these species are not afforded the legal protection of those species classified as sensitive or rare, they never the less play an integral role both as individual species and collectively in the local ecosystem. Species like the dusky-footed woodrat (*Neotoma fuscipes*), long-tailed weasel (*Mustela frenata*), striped skunk (*Mephitis mephitis*), common gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), mountain lion (*Felis concolor*), bobcat (*Lynx rufus*), black-tailed deer (*Odocoileus hemionus*),

western side-blotched lizards (*Uta stansburiana*), gopher snake (*Pituophis catenifer*), California kingsnake (*Lampropeltis californiae*), southern Pacific rattlesnake (*Crotalus helleri*), pacific treefrog (*Pseudacris regilla*), California toad (*Anaxyrus boreas halophilus*), and numerous butterfly species and countless numbers of invertebrates are examples of common organisms that are likely to occur in the Project area. In addition to protecting the sensitive and listed species, efforts should be made where feasible to protect and promote the ability of the Project area to continue to support the rich diversity of common wildlife species currently occurring there to the greatest extent possible.

7.4 Indirect Impacts to Vegetation and Wildlife Habitat

Indirect impacts are anticipated to occur as a result of construction or in association with ultimate build-out and long term maintenance associated with the Project. An increase in noise, artificial light, human activity, vehicle traffic, and weed invasion may result from this project. These changes diminish the ability of existing natural habitat to support wildlife, and typically lead to a reduction in the carrying capacity of the habitats, resulting in the decline or potential extirpation of local populations of certain native plant and wildlife species.

The effects of many of the issues described in this section can be ameliorated through development designs such as screening of light from open space areas, appropriate fencing, and other measures, as discussed in Section 8.

8. Potential Impact Avoidance and Minimization Measures

To ensure that impacts to wildlife, native and special status plants, and critical habitat (i.e., coastal California gnatcatcher) would be avoided and minimized to the maximum extent feasible, SCE has committed to the APMs and MMs from the ACTR EIR to apply to the SCE project elements as well. These are presented in the following sections.

8.1 Measures to Protect Wildlife

Construction activities in the Project area may bring construction personnel and equipment within close proximity to wildlife species at one time or another during the construction phase. In general, construction personnel shall avoid interactions with any wildlife species encountered on the job site. In cases where wildlife species may be injured or killed by project activities, construction personnel shall divert work to another area, refer the issue to the attending biologist, and continue working in the area only after potential impacts to wildlife have been avoided.

The following measures (APMs and MMs) will be implemented to mitigate for and avoid substantial adverse direct or indirect effect on special status amphibians, reptiles, birds, and mammals. These measures are summarized in Table 1. Please note that while some of the identified measures are not specifically focused on ecological resources, they are included herein because the practical effect of the measure benefits ecological resources.

- APM AQ-3: Minimization of Disturbed Areas
- APM BR-1a: Pre-construction Surveys
- APM BR-1b:Exclusionary Fencing to Protect Special-status Wildlife and Plants
- APM BR-1c: Nesting Bird Surveys
- APM BR-1d: Construction Monitoring
- APM BR-2: Sensitive Work Zones and Sensitive Resource Avoidance
- APM BR-3: Post-Construction Restoration or Reconductoring
- APM BR-4[1]: Preconstruction Gnatcatcher Surveys
- APM BR-5: Exclusionary Fencing
- APM BR-6: Biological Monitoring
- APM BR-7: Wildlife Relocation and Protection
- APM GE-2: Erosion and Sediment Control
- APM HZ-6: Worker Environmental Awareness Training
- APM HZ-7: Wood Pole Recycling and Disposal
- MM BR-1: Trimming of Vegetation
- MM BR-2: Minimization of Removal of Venturan Coastal Sage Scrub
- MM BR-3: Habitat Restoration Plan for Venturan Coastal Sage Scrub
- MM BR-4: Restriction of Vehicular Traffic

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[1] SCE and SCG are in the process of seeking changes to the requirements of MM BR-5, MM-BR-15 and APM-BR-4 through the Petition For Modification (PFM) process. If approved, the updated requirements in the PFM will supersede those currently in the FEIR.

- MM BR-5: Impacts in Hydrologic Features
- MM BR-6: Avian Safe Building Standards
- MM BR-7:Avian Protection Plans
- MM BR-8: Nesting Bird Management Plans
- MM BR-9: Pre-Construction Surveys for Least Bell's Vireo
- MM BR-10: Nesting Golden Eagle Survey
- MM BIO-11: Cover Steep-walled Trenches or Excavations during Construction

8.2 Measures to Protect Oak Trees

MM BR-15[1]: Restoration of Native Oak Trees will be implemented to mitigate for and avoid substantial adverse direct or indirect effects on oak trees. A mitigation plan for oak trees has been prepared for the project.

8.3 Measures to Protect Native and Special Status Plants

The following measures (APMs and MMs) will be implemented to mitigate for and avoid substantial adverse direct or indirect effect on native and special status plants. Restoration plans for mariposa lilies and a weed management plan are attached as Appendix D and E, respectively.

- APM AQ-3: Minimization of Disturbed Areas
- APM AQ-4: Watering Prior to Grading and Excavation
- APM HZ-6:Worker Environmental Awareness Training
- MM BR-1: Trimming of Vegetation
- MM BR-4: Restriction of Vehicular Traffic
- MM BR-12: Restoration of Plummer's Mariposa Lily and Slender Mariposa Lily
- MM BIO-13: Non-Native and Invasive Plant Species

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[1] SCE and SCG are in the process of seeking changes to the requirements of MM BR-5, MM-BR-15 and APM-BR-4 through the Petition For Modification (PFM) process. If approved, the updated requirements in the PFM will supersede those currently in the FEIR.

8.4 Measures to Protect Critical Habitat

The following measures (APMs and MMs) will be implemented to mitigate for and avoid substantial adverse direct or indirect effect on critical habitat. Habitat restoration plan for Venturan Coastal Sage Scrub is presented as Appendix B.

- APM AQ-3: Minimization of Disturbed Areas
- APM BR-1a: Pre-construction Surveys
- APM BR-1b:Exclusionary Fencing to Protect Special-status Wildlife and Plants
- APM BR-1c: Nesting Bird Surveys
- APM BR-1d: Construction Monitoring
- APM BR-2: Sensitive Work Zones and Sensitive Resource Avoidance
- APM BR-3: Post-Construction Restoration or Reconductoring
- APM BR-4[1]: Preconstruction Gnatcatcher Surveys
- APM BR-5: Exclusionary Fencing
- APM BR-6: Biological Monitoring
- APM GE-2: Erosion and Sediment Control
- APM HZ-6:Worker Environmental Awareness Training
- MM BR-1: Trimming of Vegetation
- MM BR-2: Minimization of Removal of Venturan Coastal Sage Scrub
- MM BR-3: Habitat Restoration Plan for Venturan Coastal Sage Scrub
- MM BR-4: Restriction of Vehicular Traffic
- MM BR-5: Impacts in Hydrologic Features

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[1] SCE and SCG are in the process of seeking changes to the requirements of MM BR-5, MM-BR-15 and APM-BR-4 through the Petition For Modification (PFM) process. If approved, the updated requirements in the PFM will supersede those currently in the FEIR.

- MM BR-14: Minimize Impact on Riparian Habitat

9. Conclusion

No state or federally listed threatened or endangered species were observed in the project area during the ARCADIS 2014 surveys. A total of 13 sensitive wildlife species were observed or have been reported in the Project area: eleven avian species and two reptiles. These are: Cooper's hawk, Swainson's hawk, golden eagle, turkey vulture, oak titmouse, olive-sided flycatcher, western wood-pewee, Hutton's vireo, western meadowlark, California towhee, and black-headed grosbeak. Of these, none are listed as state or federally threatened or endangered species. Three are considered California species of concern: Cooper's hawk, nesting oak titmouse, and olive-sided flycatcher. An additional eight avian species are categorized as sensitive bird species in Los Angeles County (Western Tanager 2009): Swainson's hawk, golden eagle, turkey vulture, western wood-pewee, Hutton's vireo, western meadowlark, California towhee, and black-headed grosbeak. The two reptiles are the coast horned lizard (*Phrynosoma blainvillii*) and the silvery legless lizard (*Anniella pulchra pulchra*).

A total of 6 sensitive plant taxa were observed or have been reported in the Project area. Of these, none are listed as state or federally threatened or endangered species. These six plant taxa all have rare plant ranks provided by CNPS. Two taxa have a rare plant rank of 1B.2, plants that are fairly rare, threatened, or endangered in California: slender mariposa lily and Santa Susanna tarplant. Three taxa have a rare plant rank of 4.2, plants that are uncommon and fairly endangered in California that are on a watch list: Plummer's mariposa lily, Palmer's grappling hook, and Southern California black walnut. One taxon has a rare plant rank of 4.3, a plant of limited distribution in California that is on a watch list: club-haired mariposa lily.

Expected direct impacts associated with the project involve the loss of scattered individual native plants, including slender mariposa lily, club-haired mariposa lily, and Southern California black walnut from permanent disturbance areas. In addition, direct impacts include the loss of open foraging ground for wildlife and loss of fossorial wildlife species present during clearing.

Anticipated impacts to all habitat types based on current disturbance envelopes include a total of 11.8 acres (4.8 ha) of impacts to sensitive habitats, with 8.8 acres (3.6 ha) of temporary impacts and 3.0 acres (1.2 ha) of permanent impacts:

- Coast live oak woodland – 3.3 acres (1.4 ha) total impacts, 1.85 acres (0.7 ha) of temporary impacts and 1.45 acres (0.6 ha) of permanent impacts

- Southern California walnut woodland – 0.3 acres (0.1 ha), all temporary impacts

- Venturan coastal sage scrub (all types) – 8.06 acres (3.3 ha) total impacts, 6.62 acres (2.4 ha) of temporary impacts and 1.44 acres (0.5 ha) of permanent impacts.

ARCADIS mapped and characterized individual oak trees throughout the project area to establish a baseline from which to quantify project impacts. More than 600 oak trees with a diameter at breast height of 8 inches (20 cm) or greater were mapped in the general project area including work areas and surrounding buffer areas within or immediately adjacent to Project disturbance areas and associated access roads. This initial assessment was based on the assumption that construction vehicles require 14 feet (4.3 m) of vertical clearance on access roads under overhanging oak trees. The individual tree data are presented in the oak tree mitigation plan under separate cover. Of the mapped oak trees, 56 oak trees occur within permanent impact areas and of these, it is anticipated that 15 may require removal (it is expected that the remaining oaks occurring within the disturbance areas can be avoided during construction). An additional 33 oak trees occur adjacent to or overhanging temporary and/or permanent disturbance areas and may experience impacts to 25% or more of the protected zone of each tree, bringing the total number of expected impacted oak trees to 89 based on the current construction designs and the input from the project team. Additional trees will require limited pruning, limbing, or foliage trimming to allow vehicle access, but with less than 25% anticipated encroachment into the protected zone..

Although impacts will include relatively small areas of the sensitive habitats as a result of construction activities, plant and wildlife species diversity and richness is not expected to be reduced as a result of the project. Implementation of the recommended impact avoidance, mitigation, and minimization measures is expected to result in avoidance of long-term significant impacts to biotic resources and ecological functions.

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Tables

Table 1.
Applicant Proposed Measures and Mitigation Measures
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
APM AQ-3 Minimization of Disturbed Areas. SCE will ensure that the amount of area disturbed by clearing, grading, earth-moving, or excavation operations is minimized to reduce the amount of fugitive dust that is generated during construction in a manner that meets or exceeds the requirements of the South Coast Air Quality Management District's Rule 403 (Fugitive Dust Regulations).	CPUC monitor: Line item in monthly report	During construction
APM GE-2: Erosion and Sediment Control. SCE will ensure that erosion and sediment control measures will be implemented in each of the project component areas during construction activities to reduce the amount of soil displaced and transported to other areas by storm water, wind, or other natural forces. To minimize site disturbance, SCE or their respective construction contractors will: • Remove only the vegetation that is absolutely necessary to remove (e.g., trim or mow instead of grub where feasible); • Avoid off-road vehicle use outside work zones; and • Instruct all construction personnel on storm water pollution prevention concepts to ensure they are conscious of how their actions affect the potential for erosion and sedimentation.	a. Documentation of training of construction personnel on storm water pollution prevention concepts (see APM HZ-6: Worker Environmental Awareness Training Program), maintained and kept onsite by construction lead b. Final approved Stormwater Pollution Prevention Plans(SWPPPs), maintained and kept on site by construction lead c. CPUC monitor: Line item in monthly report	a. Prior to and during construction b. Prior to and during construction c. During construction
APM AQ-4: Watering Prior to Grading and Excavation. SCE will ensure that pre-grading/excavation activities will include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) will penetrate sufficiently to minimize fugitive dust during grading activities.	CPUC monitor: Line item in monthly report	During construction

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Aliso Canyon Turbine Replacement Project - SCE Components

Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
APM BR-1a: Preconstruction Surveys. Prior to construction and activities that may include vegetation clearing, staging and stockpiling, or other activities with the potential to directly or indirectly affect wildlife, SCE will ensure that preconstruction surveys are conducted by qualified biologists for sensitive biological resources, including special-status wildlife and special-status plant species, in the project component areas, including access roads and staging areas.	a. Biologist (including botanist) qualifications b. Notification of planned surveys c. Survey report, including maps of vegetation communities in the project area (including all native vegetation, riparian vegetation, and vegetation that provides partial habitat for coastal California gnatcatcher). d. CPUC monitor: Line item in monthly report	a. At least one week prior to conducting surveys b. At least one week prior to surveys and per survey windows timing c. Within three weeks after surveys are completed and at least two weeks prior to construction d. during construction
APM BR-1b: Exclusionary Fencing to Protect Special-Status Wildlife and Plants. In the event that special-status wildlife and special-status plants are identified within a proposed project component area or vicinity (survey buffer), buffers will be greater depending on the species and construction activity, as determined by the biologist) between the identified resource and construction activities. Flagging and fencing will be performed or supervised by a qualified biologist to ensure that these activities are conducted without harm to sensitive species, or habitat flagging and fencing will be performed or supervised by a qualified biologist to ensure that these activities are conducted without harm to sensitive species or habitat. The information gathered from these surveys will be used to determine project planning and minimize impacts on sensitive resources from project-related activities. In addition, the results of these surveys will be used to determine the extent to which environmental specialist construction monitors will be required.	a. Biologist qualifications b. Maps showing the proposed fencing areas c. CPUC monitor: Line item in monthly report	a. At least one week prior to fencing activities b. At least three days prior to construction d. During construction

Table 1.
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Aliso Canyon Turbine Replacement Project - SCE Components

Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
APM BR-1c:Nesting Bird Surveys. For nesting birds, a field survey will be conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the construction zone or within a minimum of 100 feet (500 feet for raptors) of the construction zone. In the event of the identification of nesting birds within a proposed project component area or vicinity, a minimum 50-foot exclusionary buffer will be established by temporary flagging or fencing (this distance may be greater depending on the bird species and construction activity, as determined by the biologist) between the nest site and construction activities. Clearing and construction within the fenced area will be postponed or halted (except for vehicle traffic on existing roads), at the discretion of the biological monitor, until the nest is vacated and juveniles have fledged.	a. Biologist qualifications b. Notification of planned surveys c. Survey report d. Maps showing the proposed flagging and fencing areas e. CPUC monitor: Line item in monthly report	a. At least one week prior to conducting surveys b. At least one week prior to surveys and per survey windows timing c. Within three weeks after surveys are completed and at least two weeks prior to construction d. At least three days prior to construction activities that would take place near the fenced area and/or as stipulated in Nesting Bird Management Plants (MM BR-8) e. During construction
APM BR-1d:Construction Monitoring. The biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests will occur. Biological monitoring will be conducted during construction work in areas in close proximity to native habitat to assure project compliance with all APMs and Mitigation Measures.	a. Biologist qualifications b. Brief report of monitoring activities c. CPUC monitor: Line item in monthly report	a. At least one week prior to construction b. As stipulated in Nesting Bird Management Plans (MM BR-8) or by CPUC monitor c. During construction

Table 1.
Applicant Proposed Measures and Mitigation Measures
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
APM BR-2:Designated Work Zones and Sensitive Resource Avoidance. Prior to ground-disturbing activities, SCE will ensure that work zones are clearly staked and flagged. Construction work areas will be identified to ensure that construction activities, equipment, and associated activities are confined to designated work zones and areas supporting sensitive resources (special-status plants and wildlife, and high-value habitats, such as wetlands) are avoided.	a. Qualifications of biologist identifying areas supporting sensitive resources b. Maps showing the proposed staked and flagged areas c. CPUC monitor: Line item in monthly report	a. At least one week prior to staking and flagging activities b. At least one week prior to construction activities that would take place near the areas supporting sensitive resources c. Prior to and during construction
APM BR-3:Post-Construction Restoration for Reconductoring. SCE will ensure that all areas that are temporarily disturbed during 66-kV subtransmission line reconductoring will be restored as close to preconstruction conditions as possible or to the conditions agreed upon between the landowner and SCE following completion of construction of the proposed project.	a. Restoration plan b. Maps and photos of pre-construction conditions along 66-kv subtransmission line route c. Report of restoration activities d. CPUC monitor: Line item in monthly report	a. At least three months prior to construction b. 30 days prior to construction c. Within one month after completion of restoration activities d. After construction

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Aliso Canyon Turbine Replacement Project - SCE Components

Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
APM BR-4:Preconstruction Gnatcatcher Surveys.[1] SCE will ensure that protocol-level pre-construction surveys will be conducted for coastal California gnatcatcher, in project component areas where suitable habitat exists in accordance with the U.S. Fish and Wildlife Service Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines, February 28, 1997. In the event that coastal California gnatcatcher are observed in pre-construction surveys, a buffer of 500 feet from any active nest will be flagged and maintained by a biological monitor. If infeasible to maintain a buffer of 500 feet from an active gnatcatcher nest work within or near these areas will be performed outside of the breeding and nesting season. Areas of 2 or more contiguous acres of suitable coastal California gnatcatcher habitat will be identified at the time of pre-construction surveys, and work within or near these areas will be performed outside of the breeding and nesting season (coastal California gnatcatcher breeding/nesting season is approximately February 15 through August 30). [1]SCE and SCG are in the process of seeking changes to the requirements of MM BR-5, MM-BR-15 and APM-BR-4 through the Petition For Modification (PFM) process. If approved, the updated requirements in the PFM will supersede those currently in the FEIR.	a. Biologist qualifications b. Notification of planned surveys c. Survey report, including maps of areas of 2 or more contiguous acres of suitable coastal California gnatcatcher habitat d. Maps showing the proposed flagging and fencing areas e. Brief report of monitoring activities f. CPUC monitor: Line item in monthly report	a. At least one week prior to conducting surveys b. At least one week prior to surveys and per survey windows timing three weeks after surveys are completed and at least two weeks prior to construction d. At least three days prior to construction activities that would take place near the fenced area and/or as stipulated in Nesting Bird Management Plants (MM BR-8) e. As stipulated in Nesting Bird Management Plans (MM BR-8) or by CPUC monitor f. Prior to and during construction

Table 1.
Applicant Proposed Measures and Mitigation Measures
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
APM BR-5:Exclusionary Fencing. SCE will ensure that exclusionary fencing will be installed around work and laydown/staging areas, where necessary, to prevent inadvertent encroachment into the native habitat adjacent to areas of impact. Brightly colored, protective construction fencing and/or silt fencing will be erected surrounding the work area where it abuts native habitat prior to the start of construction and/or demolition.	a. Qualifications of biologist identifying areas of native habitat b. Maps showing the proposed fenced areas c. CPUC monitor: Line item in monthly report	a. At least one week prior to staking and flagging activities b. At least three days prior to construction activities that would take place near the areas supporting sensitive resources c. Prior to and during construction
APM BR-6:Biological Monitoring. SCE will ensure that biological monitoring will be conducted during construction in all areas within 100 feet of native vegetation that has the potential, or is known, to provide habitat for special status species.	a. Biologist qualifications b. Maps of surveys of native vegetation in the project area (APM BR-1a) showing the proposed fencing areas c. Brief report of monitoring activities d. CPUC monitor: Line item in monthly report	a. At least one week prior to construction b. No more than six months prior to construction c. Monthly or as needed (as determined by CPUC biological monitor) d. During construction
APM BR-7:Wildlife Relocation and Protection. During construction activities, wildlife resources that are not considered to have special status and are determined to be in harm's way may be relocated by SCE and/or their construction contractors to native habitat near the work area but outside the construction impact zone in order to avoid injury or mortality.	CPUC monitor: Line item in monthly report	During construction

Table 1.
Applicant Proposed Measures and Mitigation Measures
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
APM HZ-6:Worker Environmental Awareness Training Prior to construction, SCE will develop and implement Worker Environmental Awareness Training Programs based on the final engineering design, the results of preconstruction surveys, and a list of mitigation measures developed by the CPUC to mitigate significant environmental effects of the proposed project. Prior to start of work, presentations will be prepared by SCE and shown to all workers who will be present on the proposed project component sites during construction. A record of all trained personnel (including logs of training sessions signed by all workers who attended each session) will be kept with the construction foreman. The CPUC will conduct regular (monthly and random) audits to ensure that workers on the project component sites have received the appropriate training. Audits will include worker tests and/or interviews to confirm adequate instruction in construction procedures and mitigation measures. All construction personnel will receive the following: 1. Instruction for compliance with project component site-specific biological or cultural resource protective measures and mitigation measures that are developed after preconstruction surveys; 2. A list of phone numbers for key personnel associated with the proposed project including the archeological and biological monitors, environmental compliance coordinator, and regional spill response coordinator; 3. Instruction on the South Coast Air Quality Management District Fugitive Dust and Ozone Precursor Control Measures and Portable Engine Operating Parameters; 4. Direction that site vehicles must be properly muffled; 5. Instruction on what typical cultural resources look like, and instruction that if cultural resources are discovered during construction, to suspend work in the vicinity of the find and contact the site supervisor and archeologist or environmental compliance coordinator;	a. Documentation of Worker Environmental Awareness Training Program b. Documentation of attendance of CPUC mitigation monitoring for first Worker Environmental Awareness Training Program training session. c. Record Trained personnel and training session log maintained and dept. on site with construction lead. d. CPUC monitor, Line item in monthly report	Prior to and during construction

Table 1.
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
6. Instruction on how to work near any Environmentally Sensitive Areas delineated by archeologists or biologists; 7. Instruction on individual responsibilities under the Clean Water Act, SCE's storm water pollution prevention plans, site-specific best management practices, hazardous materials and waste management requirements, and the location of Material Safety Data Sheets as needed for each proposed project component; 8. Instructions to notify the site supervisor and regional spill response coordinator in the event of hazardous materials spills or leaks from equipment or upon the discovery of soil or groundwater contamination; 9. A copy of the truck routes to be used for material delivery; and 10. Instruction that noncompliance with any laws, rules, regulations, or mitigation measures could result in being barred from participating in any remaining construction activities associated with the proposed project components.		
APM HZ-7: Wood Pole Recycling and Disposal. SCE will ensure that utility pole and other utility wood waste is reused by SCE, returned to the manufacturer, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of a municipal landfill certified by the associated Regional Water Quality Control Board.	CPUC monitor: Line item in monthly report	During construction
MM BR-1:Trimming of Vegetation. In order to minimize the removal of vegetation in areas of habitat for the coastal California gnatcatcher, for the 66-kV subtransmission line, Telecommunications Route #2, and proposed Natural Substation project areas, SCE will ensure that trimming of all native vegetation, riparian vegetation, and vegetation that provides potential habitat for coastal California gnatcatcher will be monitored by a qualified biologist. Trimming of native trees and native arborescent shrubs will be monitored by a qualified arborist.	a. Biologist qualifications b. Maps of surveys of vegetation communities in these project component areas (APM BR-1a) c. Brief report of monitoring activities d. CPUC monitor: Line item in monthly report	a. At least one week prior to construction b. No more than six months prior to construction c. Monthly or as needed d. Prior to and during construction

Table 1.
Applicant Proposed Measures and Mitigation Measures
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BR-2:Minimize Removal of Venturan Coastal Sage Scrub. For the 66-kV subtransmission line, Telecommunications Route #2, and proposed Natural Substation project areas, SCE will minimize the removal of Venturan Coastal Sage Scrub associations, particularly within designated critical habitat for the coastal California gnatcatcher. Prior to construction and for each of these project areas, SCE will:	a. Botanist qualifications b. Maps of surveys of Venturan coastal sage scrub in these project component areas (APM BR1a), submitted as graphics and GIS data.	a. At least one week prior to surveys b. No more than six months prior to construction
1. Ensure that a survey of vegetation and estimate of the total area of intact Venturan Coastal Sage Scrub is completed by a qualified botanist familiar with this vegetation association. 2. Avoid removal of more than 10 percent of intact Venturan Coastal Sage Scrub within a single project area. “Project Areas” are defined as: a. Storage field project components (including the proposed Natural Substation): areas of ground disturbance during construction; b. Access and other roads that would be constructed/modified: 300 linear feet, with a 100-foot buffer on either side of the road; and c. 66-kV line and Telecommunications Route #2: for each pole, a 100-foot radius around the base, plus 100 feet along each extent of the linear ROW beyond the 100-foot radius area. 3. Ensure that areas of intact, contiguous Venturan Coastal Sage Scrub shall not be reduced below a 2-acre threshold.	Maps will include: - Identification of discrete areas of Venturan coastal sage scrub larger than 2 acres - Layer showing designated critical habitat for the coastal California gnatcatcher - Layer showing the 'project areas' as noted for each of these components - Estimates of the area of Venturan coastal sage scrub that will be removed during project construction	c. Monthly or as needed (as areas of Venturan coastal sage scrub are removed) d. Prior to and during construction
In the event that SCE wishes to remove more than 10 percent of intact Venturan Coastal Sage Scrub within a single project area, or where intact, contiguous areas of Venturan Coastal Sage Scrub may be reduced below a 2-acre threshold, SCE will compensate for this loss through the restoration and/or creation of Venturan Coastal Sage Scrub habitat per SCE's Habitat Restoration Plan for Venturan Coastal Sage Scrub, at a minimum ratio of 2:1 (for example, 2 acres of Venturan Coastal Sage Scrub created or restored for every 1 acre impacted).	c. Reporting of areas of Venturan coastal sage scrub removed d. CPUC monitor: Line item in monthly report	

Table 1.
Applicant Proposed Measures and Mitigation Measures
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Aliso Canyon Turbine Replacement Project - SCE Components

Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BR-3:Habitat Restoration Plan for Venturan Coastal Sage Scrub. Prior to construction of the proposed project, and with the coordination and review of USFWS and CDFW, SCE will prepare a habitat restoration plan for Venturan Coastal Sage Scrub associations for the 66-kV subtransmission line, Telecommunications Route #2, and proposed Natural Substation project areas. The restoration plan will be prepared by a qualified botanist familiar with this vegetation association. Per the requirements of MM BR-2, Venturan Coastal Sage Scrub habitat occurring in these work areas will be identified and quantified; surveys (including vegetation maps) and quantification of Venturan Coastal Sage Scrub habitat will be included in the restoration plan. Restoration will occur at a minimum ratio of 0.5:1 (0.5 acres of Venturan Coastal Sage Scrub created or restored for every 1 acre impacted during project construction), and may be completed by:	a. Botanist qualifications b. Venturan coastal sage scrub restoration plan including surveys for the referenced project component areas (MM BR-2) c. Documentation of coordination with USFWS and CDFW d. CPUC monitor: Line item in monthly report	a. Prior to submittal of the Venturan coastal sage scrub restoration plan b. At least three months prior to construction c. At least one month prior to construction d. Prior to, during, and after construction
1. Establishing Venturan Coastal Sage Scrub habitat within the project areas (onsite); 2. Establishing Venturan Coastal Sage Scrub habitat outside the project areas (offsite); or 3. Purchase of credits and/or mitigation lands at a ratio above 0.5:1 from an entity reviewed and approved by the USFWS and/or CDFW.		
Details of the restoration plan will be finalized pending consultation between SCE, USFWS, and CDFW. For Options 1. and 2. (establishing Venturan Coastal Sage Scrub onsite or offsite), the plan will include the following elements: planting/seeding palettes; monitoring and contingency program; monitoring schedule, including duration and performance criteria (a minimum of 80 percent successful plant establishment after a minimum of three years); and any specific measures that will be required to ensure success of the restoration effort.		
MM BR-4:Restriction of Vehicular Traffic. SCE will ensure that, in all project construction areas, vehicular traffic (including movement of all equipment) is restricted to established access roads indicated by flagging and signage. All access roads that are not otherwise assigned official speed limits will be restricted to a speed limit of a maximum of 20 miles per hour.	a. Map showing location of signs posted (APM AQ-5) b. CPUC monitor: Line item in monthly report	a. Prior to construction b. During construction

Table 1.
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BR-5:Impacts on Hydrologic Features. Prior to project construction, for all proposed project components in the vicinity of hydrologic features, SCE will: 1. Complete formal delineations per USACE protocols to confirm and determine the extent of jurisdictional wetlands present in the proposed project areas; 2. Consult with the USACE and CDFW to determine whether CWA Section 404 permits and California Department of Fish and Game Code Section 1600 Streambed Alteration Agreements are necessary for the proposed project, apply for these permits as needed, and determine the area of fill that would require compensation;	a. Formal delineation per USACE protocol of wetlands within the areas of all project components in the vicinity of hydrologic features b. Consultation with USACE and CDFW c. Section 404 permit (USACE)	a. At least three months prior to construction b. Completion prior to construction c. Obtain permit prior to construction
3. Commit to compensatory mitigation for any wetland fill per any required permits and in consultation with USACE and CDFW (wetland fill requiring mitigation will be compensated for at a minimum ratio of 0.5:1, or 0.5 acres of wetland creation or restoration for every 1 acre of wetland fill caused by the proposed project); and 4. Ensure that biological monitors establish and maintain a minimum exclusionary buffer of 50 feet from the delineated extent of all jurisdictional wetland features during project construction. Construction of any proposed project component that requires altering, removing, or filling the bed or bank of seasonal drainages, or other jurisdictional or potentially jurisdictional water features, and/or cannot maintain the 50-foot exclusionary buffer, will be performed only when water is not present in the feature.	if required per consultation d. Section 1600 Streambed Alteration Agreement or letter of no effect (CDFW) e. Maps showing delineated extent of jurisdictional wetland features plus a 50-foot buffer f. Documentation of implementation of compensatory mitigation (per Section 404 permit) g. CPUC monitor: Line item in monthly report	d. Obtain permit or letter prior to construction e. Prior to construction activities that would take place within the project component areas shown on the map f. With 30 days after the completion of construction (and/or per the requirements of Section 404 permit) g. Prior to and during construction
MM BR-6:Avian Safe Building Standards. SCE will design all transmission structures installed as part of the proposed project to be consistent with the Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (APLIC 2006).	a. Proposed measures for compliance with APLIC b. CPUC monitor: Line item in monthly report	a. At least 30 days prior to construction b. Prior to and during construction

Table 1.
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Aliso Canyon Turbine Replacement Project - SCE Components

Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BR- 7:Avian Protection Plans. At least three months prior to construction, SCE will develop and implement avian protection plans according to Avian Protection Plan (APP) Guidelines (APLIC & USFWS 2005). The avian protection plans will include provisions to reduce impacts on avian species during construction and operation of the proposed project, including measures to reduce impacts on nesting birds, and will provide for the adaptive management of project-related issues. The Avian Protection Plans will be reviewed and approved by the CDFW and USFWS prior to construction.	a. Avian protection plans b. CPUC monitor: Line item in monthly report	a. At least 3 months prior to construction b. Prior to and during construction
MM BR-8:Nesting Bird Management Plans. In order to address potential conflicts between construction activities and the activities of nesting birds in the project component areas, SCE will develop and implement Nesting Bird Management Plans in consultation with USFWS, CDFW, and CPUC staff and will submit them to CPUC staff at least three months prior to construction. The Nesting Bird Management Plans will include measures and an adaptive management program to avoid and minimize impacts to special-status and MBTA-protected bird species during nesting periods during project construction. The Nesting Bird Management Plans will include: • Guidelines for determining appropriate and effective buffer distances that will account for specific project settings, bird species, stage of nesting cycle, and construction work type; • Language specifying that the determination of appropriate and effective buffers between construction activities and identified nests will be site- and species-/guild-specific and data-driven, and not based on generalized assumptions regarding all nesting birds; • Language specifying that determinations regarding appropriate and effective buffers between construction activities and identified nests can be made in the project construction area by the CPUC staff-approved biological monitor, if that monitor is appropriately qualified per standards that will be included in the Nesting Bird Management Plans. These standards will include requirements for years of experience conducting biological surveys, years of experience with specific bird species identified within the project area, and educational degree and experience.	a. Nesting Bird Management Plans b. CPUC monitor: Line item in monthly report	a. At least 3 months prior to construction b. Prior to and during construction

Table 1.
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BR-9:Pre-Construction Surveys for Least Bell's Vireo. Prior to construction, SCE will complete protocol-level surveys for least Bell's vireo in areas of suitable or potentially suitable habitat in the proposed project component areas. Surveys will be completed by a permitted biologist(s) according to the survey protocol for least Bell's vireo (USFWS 2001). Whenever least Bell's vireo territory or nest sites are confirmed, SCE will notify the USFWS and CDFW immediately upon return from the field. In the event that any least Bell's vireos or their nests are observed, biologists will establish and maintain a minimum 500-foot exclusionary buffer by installing temporary flagging or fencing between the nest site and construction activities. Federal endangered species recovery permits are not required for least Bell's vireo surveys. State survey permits also may be required from the CDFW.	a. Biologist qualifications b. Notification of planned surveys c. Survey report d. Maps showing the proposed flagging or fencing areas e. Brief report of monitoring activities f. CPUC monitor: Line item in monthly report	a. At least one week prior to conducting surveys b. At least one week prior to surveys and per survey window timing c. Within three weeks after surveys are completed and at least two weeks prior to construction d. At least 3 days prior to construction activities that would take place near the fenced area and/or as stipulated in Nesting Bird Management Plans (see MM BR-8) e. As stipulated in Nesting Bird Management Plans (see MM BR-8) or by CPUC monitor f. Prior to and during construction

Table 1.
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BR-10:Nesting Golden Eagle. Nesting surveys for golden eagles will be completed per the most recent USFWS survey guidelines by SCE prior to project construction and will include areas within 660 feet of proposed project components located within suitable golden eagle nesting habitat. If surveys identify nesting golden eagles within 660 feet of the proposed project component areas, SCE will ensure that all construction activities within 660 feet of the nest occur outside of the nesting season (January through June, subject to adjustment based on field observations). The nest will be monitored from outside the 660-foot buffer by a qualified raptor ecologist with demonstrated experience monitoring eagles and knowledge of normal eagle nesting behavior. In the event that the raptor ecologist observes abnormal behavior or notes any sign of potential disturbance to the nesting birds, the ecologist will ensure that work will be stopped within 1,320 feet of the nest. Work can continue within the buffered area(s) after the raptor ecologist determines that the chicks have fledged and the nest is not active for the season. In the event that golden eagle nests are identified on structures to be removed or modified, the structures will be left in place pending consultation with the USFWS and CDFW.	a. Biologist qualifications b. Notification of planned surveys c. Survey report d. Maps showing the proposed flagging or fencing areas e. Brief report of monitoring activities f. CPUC monitor: Line item in monthly report	a. At least one week prior to conducting surveys b. At least one week prior to surveys and per survey window timing c. Within three weeks after surveys are completed and at least two weeks prior to construction d. At least 3 days prior to construction activities that would take place near the fenced area and/or as stipulated in Nesting Bird Management Plans (see MM BR-8) e. As stipulated in Nesting Bird Management Plans (see MM BR-8) or by CPUC monitor f. Prior to and during construction

Table 1.
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BIO- 11 Cover Steep-walled Trenches or Excavations during Construction. To prevent entrapment of wildlife, SCE will ensure that all steep-walled trenches, auger holes, or other excavations will be covered at the end of each day or completely fenced off at night. For open trenches only, these may instead have earthen wildlife escape ramps within the trench maintained at intervals of no greater than 100 feet. These earthen ramps shall have a maximum slope not to exceed 2:1. SCE's biological monitor/s will inspect all trenches, auger holes, or other excavations a minimum of twice per day during non-summer months and a minimum of three times per day during the summer (hotter) months, and also immediately prior to back-filling. All non-special status wildlife species found will be safely removed and relocated out of harm's way, through the use of suitable tools such as a pool net when applicable. For safety reasons, biological monitors will under no circumstance enter open excavations.	a. Documentation by applicant or SCE monitor twice daily of appropriate trenching protections b. CPUC monitor: Line item in monthly report	a. During construction (ongoing trenching activities) b. During construction

Table 1.
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BR-12:Restoration of Plummer's Mariposa Lily and Slender Mariposa Lily. SCE will complete pre-construction surveys during the appropriate blooming period to identify Plummer's mariposa lily and slender mariposa lily populations in the proposed project component areas at the storage field and in the area of the 66-kV subtransmission line. Plummer's mariposa lily and slender mariposa lily plants will be identified by a qualified biologist and flagged or surrounded with fencing in such a way that disturbance of the populations will be avoided. In the event that populations or individuals of either species cannot be avoided, SCE will develop and implement a restoration plan for both plants which will be reviewed and approved by CDFW prior to project construction. Restoration will occur after construction and to an extent such that "no net loss" (i.e., replacement of destroyed plants at a 1:1 ratio) is ensured for all plants of either species in the proposed project component areas. Restoration may be completed by: 1. Establishing Plummer's mariposa lily and slender mariposa lily plants within the proposed project areas (onsite); 2. Establishing Plummer's mariposa lily and slender mariposa lily plants outside the project areas (offsite); or 3. Purchase of credits and/or mitigation lands at a ratio above 1:1 from an entity reviewed and approved by CDFW.	a. Biologist qualifications b. Notification of planned surveys c. Survey report d. Restoration plan e. Documentation of consultation with CDFW f. Final report of plant restoration g. CPUC monitor: Line item in monthly report	a. At least one week prior to conducting surveys b. At least one week prior to surveys and per survey window timing c. Within three weeks after surveys are completed and at least two weeks prior to construction d. At least one month prior to construction e. At least on month prior to construction f. After biologist has deter-mined that replacement plants at a 1:1 ration have been established and will survive without monitoring or watering
Details of the restoration plan will be pending consultation between SCE and CDFW. For Options 1. and 2. (establishing Plummer's mariposa lily and slender mariposa lily plants onsite or off-site), the plan will include the following elements: planting/seeding palettes; monitoring and contingency program; monitoring schedule, including duration and performance criteria (a minimum of 80 percent successful plant establishment after a minimum of three years); and any specific measures that will be required to ensure success of the restoration effort.		g. Prior to, during and after construction

Table 1.
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BR-13:Non-Native and Invasive Plant Species. SCE will avoid and reduce the spread of non-native and invasive plant species in the proposed project component areas through the following actions: 1. All equipment brought in from offsite that could transport soils, seeds, or other plant propagules (i.e., seeds, spores, tubers, or stems that can reproduce the plant) will be washed at a containment area to prevent introduction of unwanted plant material to the proposed project component areas; 2. All construction vehicles or equipment operating within the proposed project component areas in areas known to have noxious or invasive weeds will similarly be cleaned of any soils or plant materials before transport or re-deployment elsewhere within the proposed project component areas to prevent transferring weeds; 3. All soils, gravel, imported fill, or other construction materials brought from offsite that could inadvertently contain unwanted plant propagules will come from confirmed weed-free sources; 4. All seeds to be used in revegetation and reclamation activities will come from onsite, or from certified weed-free sources; and 5. All temporary disturbance areas not subject to existing infestations of invasive plants, including access roads, transmission line corridors, and towers will be monitored on a quarterly basis for one year after project construction is completed for invasive species establishment, and weed control measures will be initiated immediately upon evidence of invasive species introduction.	a. Documentation by applicant or SCE monitor weekly of appropriate actions b. Report of completion of monitoring of areas disturbed during project construction c. CPUC monitor: Line item in monthly report	a. During construction (weekly) b. One year after completion of project construction c. During and after construction

Table 1.
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BR-14: Minimize Impact on Riparian Habitat. SCE will complete the following: 1. A qualified ecologist will survey and determine the spatial extent of riparian zones within the area of project disturbance in the areas of the storage field, the 66-kV subtransmission line, and telecommunications Route #2; 2. Where riparian vegetation would be impacted by project construction activities, SCE will consult with CDFW to determine if a Lake and Streambed Alteration Agreement pursuant to California Fish and Game Code Section 1600 would be necessary; and 3. In those areas where riparian vegetation is required to be removed, SCE will work with a qualified arborist to determine the minimum amount of vegetation required to be removed in order to accommodate project construction, and the correct trimming procedures to employ.	a. Ecologist and arborist qualification b. Notification of planned surveys c. Consultation with CDFW d. Section 1600 Streambed Alteration Agreement or letter of no effect (CDFW) as needed e. Maps showing spatial extent of riparian zones within the area of project disturbance in the areas of the storage field, the 66-kV subtransmission line, and Telecommunications Rout #2 f. Report of minimization of vegetation removal g. CPUC monitor: Line item in monthly report	a. At least one week prior to conducting surveys b. At least one week prior to surveys and per survey window timing c. Completion prior to construction d. Obtain permit or letter prior to construction e. Prior to construction within the project component area shown on the map f. Within 30 days after the completion of construction g. Prior to and during construction

Table 1.
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
MM BR-15:Restoration of Native Oak Trees.[1] Consistent with City of Santa Clarita, Los Angeles County, and Ventura County policies and guidance addressing trees of the oak genus, SCE will take measures to avoid and minimize impacts to oak trees resulting from project construction activities, and will plant replacement trees in compensation for any trees damaged or removed. SCE will prepare oak tree survey and replacement plans prior to construction, and, after the completion of final engineering design of the project elements, SCE will complete pre-construction surveys, and submit survey results to CPUC staff, to identify all individual trees of the oak genus indigenous to California located in the proposed project component areas. Oak trees will be identified by a qualified arborist, who will record a brief description of each tree (height, width, approximate age, condition, and species). All construction activities that take place within the driplines of oak trees (i.e., the outermost extent of the canopy) that have the potential to damage or result in the removal of oak trees (e.g., more than 25 percent trimming of any individual oak tree canopy during one growing season, excavation or paving near oak trees, oak tree removal) will be monitored by a qualified arborist. Trimming, damage to, or loss of oak trees within the project construction areas shall not occur until the trees are evaluated by a qualified arborist, who shall identify appropriate measures to minimize any tree loss which may include the placement of fencing around the dripline, padding construction vehicles, or the placement of protective covering (matting) under the existing dripline during construction activities. If construction activities would lead to damage or the removal of any oak tree with a trunk of 8 inches or more in diameter at 4.5 feet (“breast height”), the tree will be replaced at a 5:1 ratio. Replacement tree planting will be monitored by a qualified arborist, who will ensure the implementation of the following:	a. Arborist qualifications b. Oak tree survey and replacement plan, including surveys for oaks in the project component areas as necessary and proposed measures for tree replacement planting c. Final report of oak tree replanting d. CPUC monitor: Line item in monthly report	a. Prior to submittal of the oak tree survey and replacement plan b. At least 3 months prior to construction c. After arborist has determined that replacement trees at a 5:1 ration have been established and will survive without monitoring or watering d. Prior to, during, and after construction

Table 1.
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Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)	Compliance Documentation and Consultation	Timing
1. Replacement trees will be initially planted in 15 gallon containers, and then permanently planted in areas deemed suitable by the arborist; 2. Replacement trees will be monitored for 5 years after initial planting for survivability (pursuant to a monitoring schedule established by the arborist); after the 5-year period, the arborist will evaluate whether the trees are capable of surviving without further maintenance; 3. Other measures determined necessary by the arborist to ensure the success of all (100 percent) tree replacement plantings. Tree removal shall not be permitted until replacement trees have been planted or transplanting sites are approved by CPUC staff. [1]SCE and SCG are in the process of seeking changes to the requirements of MM BR-5, MM-BR-15 and APM-BR-4 through the Petition For Modification (PFM) process. If approved, the updated requirements in the PFM will supersede those currently in the FEIR.		

Table 2
Observed Vascular Plant Species
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Scientific Name	Common Name	Habit
PTERIDOPHYTES - FERNS & ALLIES		
Dryopteridaceae - Wood Fern Family		
Dryopteris arguta	**coastal wood fern**	**perennial herb**
GYMNOSPERMS - DIVISION CONIFEROPHYTA (CONE-BEARING PLANTS)		
Pinaceae - Pine Family		
Cedrus deodara	Deodar cedar	tree
Pseudostuga macrocarpa	**Bigcone-spruce, Bigcone-Douglas-fir**	**tree**
ANGIOSPERMS - DIVISION MAGNOLIOPHYTA (FLOWERING PLANTS)		
Class Magnoliopsida - Dicotyledons		
Adoxaceae - Muskroot Family		
Sambucus nigra* subsp. *caerulea	**blue elderberry**	**shrub**
Amaranthaceae - Amaranth Family		
Amaranthus albus	tumbleweed amaranth	annual herb
Anacardiaceae - Sumac Family		
Malosma laurina	**laurel sumac**	**shrub**
Rhus ovata	**sugar bush**	**shrub**
Toxicodendron diversilobum	**poison-oak**	**shrub**
Apiaceae - Celery Family		
Apiastrum angustifolium	**wild celery**	**annual herb**
Lomatium c.f. utriculatum	**common lomatium, bladder-parsnip**	**perennial herb**
Osmorhiza brachypoda	**California sweet-cicely**	**perennial herb**
Sanicula bipinnata	**poison sanicle**	**perennial herb**
Sanicula crassicaulis	**Pacific sanicle**	**perennial herb**
Tauschia arguta	**southern tauschia**	**perennial herb**
Torilis arvensis	hedge-parsley	annual herb
Asclepiadaceae - Milkweed Family		
Asclepias eriocarpa	**Indian milkweed**	**perennial herb**
Asclepias fascicularis	**narrowleaf milkweed**	**perennial herb**
Asteraceae - Sunflower Family		
Agoseris retrosa	**spearleaf mountain dandelion**	**perennial herb**
Artemisia californica	**California sagebrush**	**shrub**
Baccharis pilularis* subsp. *consanguinea	**coyote bush**	**shrub**
Carduus pycnocephalus	Italian thistle	annual herb
Centaurea melitensis	tocalote	annual herb
Cirsium vulgare	bull thistle	annual herb
Cirsium occidentale var. californicum	**California cobweb thistle**	**annual herb**
Cirsium vulgare	bull thistle	annual herb
Corethrogyne filaginifolia	**California cudweed-aster**	**perennial herb**
Encelia californica	**chaparral sunflower**	**shrub**
Erigeron canadensis	**horseweed**	**annual herb**
Erigeron foliosus* subsp. *foliosus	**leafy daisy**	**perennial herb**
Eriophyllum confertiflorum* var. *confertiflorum	**golden yarrow**	**subshrub**
Grindelia c.f. hirsutula	**hairy gumplant**	**perennial herb**
Hypochaeris glabra	smooth cat's ears	annual herb
Hazardia squarrosa	**saw-toothed goldenbush**	**shrub**
Isocoma menziesii* var. *menziesii	**Menzies' goldenbush**	**shrub**
Lactuca serriola	prickly lettuce	annual herb

Table 2
Observed Vascular Plant Species
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Scientific Name	Common Name	Habit
Madia gracilis	**slender tarweed**	**annual herb**
Malacothrix saxatilis* var. *tenuifolia	**cliff-aster**	**perennial herb**
Pseudognaphalium microcephalum	**white everlasting**	**perennial herb**
Rafinesquia californica	**California chichory**	**annual herb**
Silybum marianum	milk thistle	annual herb
Solidago californica	**California goldenrod**	**perennial herb**
Taraxacum officinale	common dandelion	perennial herb
Uropappus lindleyi	**silver puffs**	**annual herb**
Boraginaceae - Borage Family		
Amsinckia menziesii* var. *intermedia	**fiddleneck, rancher's fire**	**annual herb**
Phacelia egena	**rock phacelia**	**perennial herb**
Phacelia ramosissima	**branching phacelia**	**perennial herb**
Pholistoma auritum	**fiesta flower**	**annual herb**
Plagiobothrys nothofulvus	**rusty popcorn flower**	**annual herb**
Brassicaceae - Mustard Family		
Brassica nigra	black mustard	annual herb
Capsella bursa-pastoris	shepherd's purse	annual herb
Erysimum capitatum* subsp. *capitatum	**western wallflower**	**perennial herb**
Hirschfeldia incana	summer mustard	annual herb
Sisymbrium irio	London rocket	annual herb
Thysanocarpus laciniatus	**narrow-leaved lacepod**	**annual herb**
Caprifoliaceae - Honeysuckle Family		
Symphoricarpos albus* var. *laevigatus	**upright snowberry**	**shrub**
Caryophyllaceae - Pink Family		
Silene gallica	windmill pink	annual herb
Stellaria media	common chickweed	annual herb
Chenopodiaceae - Goosefoot Family		
Chenopodium album	lamb's quarters	annual herb
Salsola tragus	Russian-thistle	annual herb
Cucurbitaceae - Cucumber Family		
Cucurbita foetidissima	**calabazilla**	**perennial vine**
Marah macrocarpus* var. *macrocarpus	**chilicothe, wild cucumber**	**perennial vine**
Euphorbiaceae - Spurge Family		
Croton setigerus	**doveweed**	**annual herb**

Table 2
Observed Vascular Plant Species
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Scientific Name	Common Name	Habit
Fabaceae - Pea Family		
***Acmispon americanus* var. *americanus* [*Lotus purshianus*]**	**American clover**	**annual herb**
Acmispon glaber* var. *glaber	**deer weed**	**perennial herb, subshrub**
Acmispon strigosus	**strigose lotus**	**annual herb**
Lathyrus vestitus* subsp. *vestitus	**Pacific sweet pea**	**perennial vine**
Lupinus bicolor	**bicolored lupine, miniature lupine**	**annual herb**
Lupinus excubitus* var. *austromontanus	**grape soda lupine**	**subshrub**
Lupinus succulentus	**succulent lupine**	**annual herb**
Medicago polymorpha	burclover	annual herb
Trifofolium albopurpureum	**rancheria clover**	**annual herb**
Trifolium hirtum	rose clover	annual herb
Trifolium wildldenovii	**tomcat clover**	**annual herb**
Vicia sativa subsp. *nigra*	common vetch	annual herb
Vicia villosa subsp. *varia*	hairy vetch	annual herb
Fagaceae - Oak Family		
Quercus agrifolia* var. *agrifolia	**coast live oak**	**tree**
Quercus berberidifolia	**scrub oak**	**shrub**
Quercus chrysolepis	**canyon oak**	**tree**
Quercus lobata	**valley oak**	**tree**
Quercus wislizenii	**interior live oak**	**tree**
Geraniaceae - Geranium Family		
Erodium cicutarium	red-stemmed filaree	annual herb
Erodium moschatum	white-stemmed filaree	annual herb
Grossulariaceae - Gooseberry Family		
Ribes californicum* var. *hesperium	**California gooseberry**	**shrub**
Ribes c.f. indecorum	**white-flowered currant**	**shrub**
Ribes malvaceum	**chaparral currant**	**shrub**
Juglandaceae - Walnut Family		
Juglans californica* var. *californica	**Southern California black walnut**	**tree**
Lamiaceae - Mint Family		
Marrubium vulgare	common horehound	perennial herb
Salvia apiana	**white sage**	**shrub**
Salvia mellifera	**black sage**	**shrub**
Trichostema lanceolatum	**vinegar weed**	**annual herb**
Lauraceae - Laurel Family		
Umbellularia californica	**California bay**	**tree**
Malvaceae - Mallow Family		
Alcea rosea	hollyhock	perennial herb
Malacothamnus fasciculatus	**chaparral bush mallow**	**shrub**
Malva parviflora	cheeseweed	annual herb
Oleaceae - Olive Family		
Fraxinus dipetala	**foothill ash, flowering ash**	**shrub to small tree**
Onagraceae - Evening-primrose Family		
Clarkia dudleyana	**Dudley's clarkia**	**annual herb**
Clarkia purpurea* subsp. *quadrivulnera	**farewell-to-spring**	**annual herb**
Clarkia unguiculata	**elegant clarkia**	**annual herb**
Epilobium canum	**California-fuchsia**	**perennial herb**

Table 2
Observed Vascular Plant Species
Habitat Assessment
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Scientific Name	Common Name	Habit
Paeoniaceae - Peony Family		
Paeonia californica	**California peony**	**perennial herb**
Papaveraceae - Poppy Family		
Eschscholzia californica	**California poppy**	**annual herb**
Phyrmaceae - Lopseed Family		
Mimulus aurantiacus	**sticky monkeyflower**	**shrub**
Plantaginaceae - Plantain Family		
Keckiella cordifolia	**heart-leaved climbing penstemon**	**shrub**
Plantago lanceolata	English plantain	perennial herb
Penstemon heterophyllus	**foothill penstemon**	**perennial herb**
Polemoniaceae - Phlox Family		
Leptosiphon bicolor	**bicolor linanthus**	**annual herb**
Leptosiphon parviflorus	**variable linanthus**	**annual herb**
Polygonaceae - Buckwheat Family		
Eriogonum elongatum	**long-stemmed buckwheat**	**perennial herb**
Eriogonum fasciculatum var. polifolium	**California buckwheat**	**shrub**
Polygonum aviculare	knotweed	annual herb
Rumex crispus	curly dock	perennial herb
Portulaceae - Purslane Family		
Calandrinia ciliata	**red maids**	**annual herb**
Claytonia parviflora	**small-flowered miner's lettuce**	**annual herb**
Claytonia perfoliata **subsp. *mexicana***	**Mexican miner's lettuce**	**annual herb**
Primulaceae - Primrose Family		
Anagallis arvensis	scarlet pimpernel	annual
Ranunculaceae - Buttercup Family		
Clematis lasiantha	**chaparral clematis**	**perennial vine**
Rhamaceae - Coffeeberry Family		
Ceanothus oliganthus **var. *sorediatus***	**jim brush**	**shrub**
Rhamnus ilicifolia	**holly-leaf coffeeberry**	**shrub**
Rosaceae - Rose Family		
Adenostoma fasciculatum	**chamise**	**shrub**
Drymocallis glandulosa **subsp. *glandulosa***	**sticky cinquefoil**	**perennial herb**
Heteromeles arbutifolia	**toyon**	**shrub**
Prunus virginiana **var. *demissa***	**western choke cherry**	**shrub to small tree**

Table 2
Observed Vascular Plant Species
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Scientific Name	Common Name	Habit
Rubiaceae - Madder Family		
Galium angustifolium	**narrowleaf bedstraw**	**perennial herb, subshrub**
Galium aparine	**common bedstraw, cleavers**	**annual herb**
Galium nuttallii* subsp. *nuttallii	**climbing bedstraw**	**perennial herb**
Sapindaceae - Soapberry Family		
Acer macrophyllum	**big-leaf maple**	**tree**
Saxifragaceae - Saxifrage Family		
Lithophragma cymbalaria	**woodland star**	**perennial herb**
Solanaceae - Nightshade Family		
Datura wrightii	**toluaca, jimsonweed**	**perennial herb**
Solanum xanti* var. *xanti	**purple nightshade**	**shrub**
Urticaceae - Nettle Family		
Urtica urens	dwarf nettle	annual herb
Verbenaceae - Verbena Family		
Verbena lasiostachys	**western verbena**	**perennial herb**
Violaceae - Violet Family		
Viola pedunculata	**Johnny jump-up**	**perennial herb**
Class Liliopsida - Monocotyledons		
Agavaceae - Agave Family		
Chlorogalum pomeridianum* var. *pomeridianum	**soap root lily**	**perennial herb**
Hesperoyucca whipplei	**chaparral yucca**	**shrub**
Iridaceae - Lily Family		
Sisyrinchium bellum	***blue-eyed grass***	**perennial herb**
Liliaceae - Lily Family		
Calochortus* clavatus var. *gracilis	**slender mariposa lily**	**perennial herb**
Poaceae - Grass Family		
Avena barbata	slender wild oat	annual grass
Avena fatua	wild oat	annual grass
Bromus carinatus* var. *carinatus	**California brome**	**annual/ perennial grass**
Bromus diandrus	ripgut brome	annual grass
Bromus hordeaceus	soft chess	annual grass
Crypsis schoenoides	swamp pricklegrass	annual grass
Cynodon dactylon	Bermuda grass	perennial grass
Dactylis glomerata	orchard grass	perennial grass
Elymus condensatus	**giant rye**	**perennial grass**
Elymus elymoides* subsp. *elymoides	**bottlebrush squirreltail**	**perennial grass**
Elymus glaucus* subsp. *glaucus	**blue wildrye**	**perennial grass**
Elymus glaucus* subsp. *virescens	**blue wildrye**	**perennial grass**
Elymus triticoides* subsp. *triticoides	**alkali rye**	**perennial grass**
Festuca bromoides	brome fescue	annual grass
Festuca microstachys* var. *pauciflora	**small fescue**	**annual grass**
Festuca myuros	rattail fescue	annual grass
Festuca perenne	perennial rye	annual grass
Hordeum marinum subsp. *gussoneanum*	Mediterranean barley	annual grass
Hordeum murinum subsp. *glaucum*	smooth barley	annual grass
Hordeum murinum subsp. *leporinum*	foxtail barley	annual grass
Melica imperfecta	**coast range melic**	**perennial grass**
Poa annua	annual bluegrass	annual

Table 2
Observed Vascular Plant Species
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Scientific Name	Common Name	Habit
Poa secunda* subsp. *secunda	**nodding bluegrass**	**perennial grass**
Stipa cernua	**nodding needlegrass**	**perennial grass**
Stipa pulchra	**purple needlegrass**	**perennial grass**
Stipa miliacea	smilo	perennial grass
Themidacaee - Brodiaea Family		
Bloomeria crocea* var. *crocea	**golden stars**	**perennial herb**
Dichelostemma capitatum* subsp. *capitatum	**blue dicks, wild hyacinth**	**perennial herb**

Notes:
Native species are in **bold** print

Table 3. Observed and Expected Wildlife Species in Project Area
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Scientific Name	Common Name	Abundance
Birds		
Family - Accipitridae		
Accipiter cooperii	Cooper's hawk	occasional
Accipiter striatus	Sharp-shinned hawk	occasional
Aquila chryaetos	Golden eagle	occasional
Buteo jamaicensis	Red-tailed hawk	common
Buteo lineatus	Red-shouldered hawk	occasional
Buteo swainsoni	Swainson's hawk	uncommon
Circus cyaneus	Northern harrier	occasional
Pandion haliaetus	Osprey	occasional
Aegithalidae		
Psaltriparus minimus	Bushtit	common
Anatidae		
Anas platyrhynchos	Mallard	occasional
Family - Apodidae		
Aeronautes saxatalis	White-throated swift	occasional
Chaetura vauxi	Vaux's swift	uncommon
Family - Cardinalidae		
Passerina amoena	Lazuli bunting	occasional
Pheucticus melanocephalus	Black-headed grosbeak	occasional
Family - Cathartidae		
Cathartes aura	Turkey vulture	occasional
Family - Columbidae		
Columba fasciata	Band-tailed pigeon	common
Zenaida macroura	Mourning dove	occasional
Family - Corvidae		
Aphelocoma californica	Western scrub jay	common
Corvus brachyrhynchos	American crow	common
Corvus corax	Common raven	common
Cyanocitta stelleri	Steller's jay	occasional
Family - Emberizidae		
Aimophila ruficeps	Rufous-crowned sparrow	occasional
Chondestes gramineus	Lark sparrow	occasional
Junco hyemalis	Dark-eyed junco	occasional
Melospiza melodia	Song sparrow	occasional
Melozone crissalis	California towhee	common
Passerculus sandwichensis	Savannah sparrow	common
Pipilo maculatus	Spotted towhee	occasional
Spizella passerina	Chipping sparrow	occasional
Zonotrichia atricapilla	Golden-crowned sparrow	common
Zonotrichia leucophrys	White-crowned sparrow	occasional
Family - Falconidae		
Falco columbarius	Merlin	uncommon
Falco mexicanus	Prairie falcon	uncommon
Falco sparverius	American kestrel	occasional
Family - Fringillidae		
Carduelis lawrencei	Lawrence's goldfinch	occasional
Carduelis psaltria	Lesser goldfinch	common
Carduelis tristis	American goldfinch	common
Carpodacus mexicanus	House finch	common
Carpodacus purpureus	Purple finch	common
Family - Hirundinidae		
Hirundo rustica	Barn swallow	occasional
Petrochelidon pyrrhonota	Cliff swallow	occasional
Stelgidopteryx serripennis	Northern rough-winged swallow	occasional

Table 3. Observed and Expected Wildlife Species in Project Area
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Scientific Name	Common Name	Abundance
Tachycineta bicolor	Tree swallow	occasional
Tachycineta thalassina	Violet-green swallow	occasional
	Family - Icteridae	
Icterus bullocki	Bullock's oriole	occasional
Icterus cuculattus	Hooded oriole	occasional
Sturnella neglecta	Western meadowlark	common
	Family - Mimidae	
Toxostoma redivivum	California thrasher	common
Mimus polyglottos	Northern mockingbird	common
	Family - Odontophoridae	
Callipepla californica	California quail	common
Oreortyx pictus	Mountain quail	occasional
	Family - Paridae	
Baeolophus inornatus	Oak titmouse	common
	Family - Parulidae	
Dendroica coronata	Yellow-rumped warbler	common
Dendroica nigrescens	Black-throated gray warbler	occasional
Dendroica petechia	Yellow warbler	occasional
Geothlypis trichas	Common yellowthroat	occasional
Vermivora celata	Orange-crowned warbler	common
Vermivora ruficapilla	Nashville warbler	uncommon
Wilsonia pusilla	Wilson's warbler	occasional
	Family - Phalacrocoracidae	
Phalacrocorax auritus	Double-crested cormorant	uncommon
	Family - Picidae	
Colaptes chrysoides	Northern flicker	occasional
Melanerpes formicivorus	Acorn woodpecker	common
Picoides nuttallii	Nuttall's woodpecker	occasional
	Family - Ptilogonatidae	
Phainopepla nitens	Phainopepla	uncommon
	Family - Regulidae	
Regulus calendula	Ruby-crowned kinglet	common
	Family - Sittidae	
Sitta carolinensis	White-breasted nuthatch	common
	Family - Strigidae	
Bubo virginianus	Great horned owl	common
Otus kemmicottii	Western screech owl	occasional
	Family - Sturnidae	
Sturnus vulgaris	European starling	common
	Family - Sylviidae	
Polioptila caerulea	Blue-gray gnatcatcher	occasional
	Family - Thraupidae	
Piranga ludoviciana	Western tanager	occasional
	Family - Timalididae	
Chamaea fasciata	Wrentit	common
	Family - Trochilidae	
Archilochus alexandri	Black-chinned hummingbird	occasional
Calypte anna	Anna's hummingbird	common
Calyte costae	Costa's hummingbird	occasional
Selasphorus spp	Rufous/Allen's hummingbird	common
	Family - Troglodytidae	
Salpinctes obsoletus	Rock wren	occasional
Thryomanes bewickii	Bewick's wren	common
Troglodytes aedon	House wren	common
	Family - Turdidae	
Catharus guttatus	Hermit thrush	occasional

Table 3. Observed and Expected Wildlife Species in Project Area
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Scientific Name	Common Name	Abundance
Sialia mexicana	Western bluebird	occasional
Turdus migratorius	American robin	common
	Family - Tyrannidae	
Contopus cooperi	Olive-sided flycatcher	uncommon
Empidonax difficilis	Pacific-slope flycatcher	occasional
Myiarchus cinerascens	Ash-throated flycatcher	occasional
Sayornis nigricans	Black phoebe	common
Sayornis saya	Say's phoebe	common
Tyrannus verticalis	Western kingbird	occasional
	Family - Tytonidae	
Tyto alba	Barn owl	common
	Family - Vireonidae	
Vireo cassinii	Cassin's vireo	occasional
Vireo gilvus	Warbling vireo	occasional
Vireo huttoni	Hutton's vireo	common
	Mammals	
	Family - Canidae	
Canis latrans	Coyote	common
Urocyon cinereoargenteus	Common gray fox	common
	Family - Cervidae	
Odocoileus hemionus	Mule deer	occasional
	Family - Didelphidae	
Didelphis virginiana	Virginia opossum	occasional
	Family - Felidae	
Felis concolor	Mountain lion	uncommon
Lynx rufus	Bobcat	occasional
	Family - Geomyidae	
Thomomys bottae	Botta's pocket gopher	common
	Family - Muridae	
Neotoma fuscipes	Dusky-footed woodrat	occasional
	Family - Mustelidae	
Mephitis mephitis	Striped skunk	occasional
Taxidea taxus	American badger	uncommon
	Family - Procyonidae	
Procyon lotor	Common raccoon	occasional
	Family - Sciuridae	
Sciurus griseus	Western gray squirrel	occasional
	Family - Soricidae	
Sorex Ornatus	Ornate shrew	uncommon
	Family - Talipidae	
Scapanus latimanus	Broad-footed mole	occasional
	Family - Ursidae	
Ursus americanus	Black bear	uncommon
	Reptiles and Amphibians	
	Family - Anguidae	
Elgaria multicaranata	Southern alligator lizard	common
	Family - Bufonidae	
Bufo boreas	Western toad	occasional
	Family - Colubridae	
Diadophis punctatus	Ring-neck snake	occasional
Lampropeltis getula	Common kingsnake	common
Masticophis lateralis	California whipsnake	occasional
Pituophis catenifer	Gopher snake	common
	Family - Hylidae	
Hyla regilla	Pacific tree frog	common
	Family - Anniellidae	

Table 3. Observed and Expected Wildlife Species in Project Area
Habitat Assessment
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Scientific Name	Common Name	Abundance
Anniella pulchra	Silvery legless lizard	uncommon
Family - Phrynosomatidae		
Phrynosoma coronatum	Coast horned lizard	uncommon
Sceloporus occidentalis	Western fence lizard	common
Uta stansburiana	Side-blotched lizard	common
Family - Teiidae		
Cnemidophorus tigris	Western whiptail	occasional
Family - Viperidae		
Crotalus viridis	Western rattlesnake	occasional
Invertebrates		
Family - Nymphalidae		
Adelpha bredowii	California sister	occasional

Notes: Observations compiled from ARCADIS field surveys in February and March, 2014; observations recorded in the FEIR; and common wildlife species both known to occur or expected to occur at the Site and/or surrounding area.
Common = consistently or normally observed on Site in survey area during appropriate time of year and/or during appropriate weather conditions, **Occassional** = inconsistently observed on Site in survey area during appropriate time of year and/or during appropriate weather conditions, **Uncommon** = Seldom observed on Site in survey area even during appropriate time of year and/or weather conditions, **Scarce** = unusual observation on Site in survey area at any time

Table 4.
Observed or Potential Sensitive Species in Project Area
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Sensitive Species		Status	Habitat	Occurrence of Element on Project Site
Name	**Common Name**	**(USFWS/CDFG/CNPS; L.A.**		
Amphibians				
Anaxyrus californicus	Arroyo toad	FE / -	Riparian, river and stream courses and adjacent areas	Not observed; very limited potentially suitable riverine and wash habitat in the immediate Project area.
Rana draytonii	California red-legged frog	FT / CSC	Ponds, streams, aquatic systems	Not observed; suitable freshwater habitat is absent in the immediate Project area.
Rana muscosa	Sierra Madre yellow-legged frog	FE / - / CSC	foothill and lowland freshwater streams, rivers	Not observed, no suitable aquatic habitat present in the immediate Project area.
Spea hammondii	Western spadefoot toad	- / CSC	grassland, scrub and woodland habitats	Not observed, marginally suitable upland habitat present. No suitable aquatic habitat to support breeding found in the immediate Project area.
Birds				
Accipiter cooperii	**Cooper's hawk**	**- / CSC**	**Oak woodland/ may utilize many habitat types**	**Observed, suitable foraging and nesting habitat present. Species expected to occur on site year round.**
Agelaius tricolor	Tricolored Blackbird	SOC / CSC / S	Ponds, lakes, marshland	Not observed, no suitable marsh or lake habitat present in the immediate Project area.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	- / -	Brush or grass covered rocky hillsides	Not observed, potentially suitable habitat present.
Ammodramus savannarum (breeding)	Grasshopper sparrow	- / CSC / S	Open grassland, fields with low sparse vegetation	Not observed, potentially suitable grassland habitat present in portions of the immediate Project area.
Aquila chrysaetos	**Golden eagle**	**- / - / S**	**Variety of habitats including chaparral, oak woodland, grassland and coastal scrub**	**Observed, suitable foraging habitat present in the immediate Project area**
Artemisiospiza belli belli	Bell's sage sparrow	- / - / W	Chaparral and coastal scrub	Not observed, potentially suitable habitat present
Asio otus (wintering)	Long-eared owl	- / - / S	Woodlands near open fields, grasslands	Not observed, limited habitat of marginal quality present for this species.
Athene cunicularia	Western burrowing owl	FSC, MNBMC / CSC / S	Open grassland, fields with low sparse vegetation, friable soils, and small mammal burrows	Not observed, limited and poor to marginally suitable habitat present.
Baeolophus inornatus	**Oak titmouse**	**- / CSC nesting / W**	**Oak woodland, forest**	**Observed, suitable nesting habitat present. Species expected to occur on site year round.**
Buteo regalis	Ferruginous hawk	- / - / S	Open grasslands, fields, foothills	Not observed, limited habitat of poor to marginal quality present for this species.
Buteo swainsoni	**Swainson's hawk**	**- / T / -**	**Open grasslands, fields, foothills**	**Observed; likely to be observed occasionally passing through the Site during spring and fall migration.**
Cathartes aura (breeding)	**Turkey vulture**	**- / - / S**	**Cliff faces with potholes and tree hollows for nesting**	**Observed, potentially suitable nesting habitat present in the immediate Project area.**
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	FC / SE / S	Willow riparian and riparian systems	Not observed, no suitable habitat present.

Table 4.
Observed or Potential Sensitive Species in Project Area
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Sensitive Species		Status	Habitat	Occurrence of Element on Project Site
Name	**Common Name**	**(USFWS/CDFG/CNPS; L.A.**		
Contopus cooperi (nesting)	**Olive-sided flycatcher**	**- / CSC / S**	**Mixed coniferous - deciduous forest, coniferous forests**	**Observed, suitable habitat present**
Contopus sordidulus (nesting)	**Western wood-pewee**	**- / - / W**	**Mixed coniferous - deciduous forest, coniferous forests**	**Observed, suitable habitat present**
Dendroica petechia brewsteri (breeding)	Yellow warbler	- / CSC / S	Willow riparian and riparian systems	Not observed, marginally suitable habitat present.
Elanus leucurus	White-tailed kite	MNBMC / CSC, nesting (fully protected) / S	Oak woodland, coastal scrub, grasslands, open fields	Not observed, suitable foraging and nesting habitat present.
Eremophila alpestris actia	California horned lark	- / - / W	Grasslands, open fields, foothills	Not observed, suitable foraging and nesting habitat present.
Falco mexicanus (breeding)	Prairie falcon	- / - / S	Deserts, grasslands, scrublands; cliff faces for nesting	Not observed, marginal to poor suitable nesting habitat present on site.
Geococcyx californianus	Greater roadrunner	- / - / S	Deserts, grasslands, open fields	Not observed, potentially suitable habitat present for this species.
Gymnogyps californianus	California condor	E / E / S	Multiple habitat types; cliff faces, rock outcrops and Sequoia trees for nesting	Not observed, potentially suitable foraging habitat present.
Icteria virens	Yellow-breasted chat	- / CSC / S	Willow riparian and riparian systems	Not observed, very limited potentially suitable habitat present.
Lanius ludovicianus	Loggerhead shrike	- / CSC	fields, woodlands, sage scrub and chaparral	Not observed, potentially suitable habitat present.
Melozone crissalis	**California towhee**	**- / - / W**	**Oak woodland, coastal scrub, deciduous s forest**	**Observed, suitable foraging and nesting habitat present**
Pheucticus melanocephalus (breeding)	**Black-headed grosbeak**	**- / - / W**	**Oak woodland, deciduous and coniferous forest, riparian corridors**	**Observed, suitable foraging and nesting habitat present**
Polioptila californica californica	Coastal California gnatcatcher	FT / CSC / S	Coastal sage scrub	Not observed, potentially suitable habitat present in the immediate Project area.
Riparia riparia	Bank swallow	- / T / -	Steep, vertical, exposed banks adjacent to or near flowing stream courses	Not observed; marginally suitable habitat for nesting occurs in the vicinity of the project area.
Sturnella neglecta	**Western meadowlark**	**- / - / S**	**Grasslands, open fields, foothills**	**Observed, the site provides suitable foraging and nesting habitat for this species.**
Vireo bellii pusillus	Least Bell's vireo	FE / SE / S	Willow riparian and riparian systems	Not observed, very limited potentially suitable habitat present.
Vireo huttoni	**Hutton's vireo**	**- / - / W**	**Oak woodland, deciduous and coniferous forest**	**Observed, suitable foraging and nesting habitat present**
		Fish		
Catostomus santaanae	Santa Ana sucker	FT / --	Rivers, streams	Not observed, no suitable habitat present.
Gasterosteus aculeatus williamsoni	Unarmored threespine stickleback	FE / SE	Coastal freshwater rivers and streams	Not observed, no suitable habitat present.

Table 4.
Observed or Potential Sensitive Species in Project Area
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Sensitive Species		Status	Habitat	Occurrence of Element on Project Site
Name	**Common Name**	**(USFWS/CDFG/CNPS; L.A.**		
Gila orcuttii	Arroyo chub	- / CSC	Rivers, streams with slow water movement and mud or sandy bottoms	Not observed, no suitable habitat present.
Invertebrates				
Danaus plexippus	Monarch butterfly	- / -	Open fields, woodlands	Not observed, marginally suitable habitat present.
Socalchemmis gertschi	Gertsch's socalchemmis spider	- / -	L.A. area - Brentwood and Topanga Canyon - limited information	Not observed, potentially suitable habitat present
Mammals				
Antrozous pallidus	Pallid bat	- / CSC	Rock crevices, caves, buildings, mine shafts in grasslands, shrublands, forests, primarily in dry habitats for roosting.	Not observed, marginally suitable habitat present.
Euderma maculatum	Spotted bat	- / CSC	Mountainous regions with ponderosa pines. Rocky cliffs, canyons	Not observed, no suitable habitat present.
Eumops perotis californicus	Western mastiff bat	- / CSC	Coastal sage scrub, chaparral, grasslands, forests and woodlands	Not observed, suitable habitat present.
Lasioncycteris noctivagans	Silver-haired bat	- / -	woodlands, forests	Not observed, suitable habitat present.
Lasiurus cinereus	Hoary bat	- / -	woodlands, forests, desert canyons	Not observed, suitable habitat present.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	- / CSC	Coastal sage scrub and neighboring habitats	Not observed, marginally suitable habitat present.
Macrotis californicus	California leaf-nosed bat	- / CSC	Sonoran and Mojave desert scrub	Not observed, no suitable habitat present.
Neotoma lepida intermedia	San Diego desert woodrat	- / CSC	coastal and desert scrub habitat preferentially including rock outcroppings and boulder covered landscapes	Not observed, marginally suitable habitat present.
Onychomys torridus ramona	Southern grasshopper mouse	- / CSC	Low arid scrub and semi-scrub vegetation	Not observed, marginally suitable habitat present.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	- / CSC	lower elevation grassland, alluvial sage scrub, coastal sage scrub	Not observed, potentially suitable habitat present.

Table 4.
Observed or Potential Sensitive Species in Project Area
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Sensitive Species		Status	Habitat	Occurrence of Element on Project Site
Name	**Common Name**	**(USFWS/CDFG/CNPS; L.A.**		
Reptiles				
Actinemys marmorata pallida	Southwestern pond turtle	FSC / CSC	Ponds, lakes, streams	Not observed; suitable freshwater habitat absent from the immediate Project area.
Anneilla pulchra pulchra	Silvery legless lizard	- / CSC	Coastal dunes, coastal scrub, chaparral, woodlands, riparian margins	Not observed, marginally suitable habitat present.
Aspidoscelis tigris stejnegeri	**Coastal whiptail**	**- / -**	**Coastal dunes, coastal scrub, chaparral, woodlands, riparian margins**	**Observed, suitable habitat present.**
Phyrnosoma coronatum (blainvillii population)	Coast (San Diego) horned lizard	- / CSC	Coastal dunes, coastal scrub, chaparral	Not observed, potentially suitable habitat present.
Thamnophis hammondii	Two-striped garter snake	- / CSC	Ponds, lakes , streams	Not observed; suitable freshwater habitat absent from the immediate Project area.
Plants				
Astragalus brauntonii	Braunton's milk-vetch	FE/--/1B.1	Coastal scrub, chaparral, grasslands, especially in recently burned or disturbed areas underlain by sandstone with carbonate layers.	Not observed; suitable habitat present. Observed approximately 0.7 miles southeast of Chatsworth Substation (CNDDB 2014). Endemic to Los Angeles, Orange, and Ventura Counties.
Berberis nevinii	Nevin's barberry	FE/SE/1B.1	Coastal scrub, chaparral, woodlands, riparian scrub	Not observed; suitable woodland and grassland habitat present. Observed 2.5 miles southeast of the San Fernando Substation in 1935, and 1.5 miles east of fiber optic connection point in 2000 (CNDDB 2014). Endemic to Los Angeles, Riverside, San Bernardino, and San Diego Counties.
California macrophylla	Round-leaved filaree	- / - / 1B.1	Woodlands and grasslands	Not observed; suitable habitat present. Not reported from Oat Mountain quadrangle by CNDDB (2010).
Calochortus clavatus* var. *clavatus	**club-haired mariposa-lily**	**- / - / 4.3**	**Coastal scrub, chaparral, valley and foothill grassland, coastal woodlands; often on serpentinite, clay, rocky soils**	**Presumably present; suitable habitat present (AECOM 2013). Endemic to San Benito, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles Counties.**
Calochortus clavatus* var. *gracilis	**Slender mariposa-lily**	**- / - / 1B.2**	**Coastal scrub, chaparral, grasslands**	**Present. Endemic to Los Angeles and Ventura Counties.**
Calochortus fimbriatus	Late-flowered mariposa lily	- / - / 1B.3	Chaparral, woodlands, ultramafic substrates	Not observed; suitable habitat present and known from locations in Montecito at similar elevations. Regional endemic (Monterey, Kern, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles Counties).
Calochortus plummerae	**Plummer's mariposa lily**	**- / - / 1B.2**	**Coastal scrub, chaparral, valley grassland, coastal woodlands, lower montane coniferous forest**	**Present. Endemic to Ventura, Los Angeles, Orange, Riverside, and San Bernardino Counties.**

Table 4.
Observed or Potential Sensitive Species in Project Area
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Sensitive Species		Status	Habitat	Occurrence of Element on Project Site
Name	**Common Name**	**(USFWS/CDFG/CNPS; L.A.**		
Calystegia peirsonii	Peirson's morning-glory	- / - / 4.2	Coastal scrub, chenopod scrub, chaparral, valley and foothill grasslands, coastal woodlands, lower montane coniferous forest	Not observed; suitable habitat present. Reported from Lyons Canyon to north (DMEC 2006). Endemic to Los Angeles County.
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	FC / SE / 1B.1	Coastal scrub, valley and foothill grassland	Not observed; suitable grassland habitat present. Reported historically (1901) from Chatsworth approximately 1.5 miles northwest of San Fernando Substation. Rediscovered in 1999; now known from only three occurrences (CNDDB 2014). Endemic to Ventura, Los Angeles, and Orange Counties.
Deinandra minthornii	**Santa Susana tarplant**	**- / Rare / 1B.2**	**Coastal scrub, chaparral**	**Observed in Project region by AECOM in 2013. Also present to west near Chatsworth, Hialeah Springs, Fern Ann Falls, and Devil Canyon (CNDDB 2014). Endemic to Santa Susanna and Santa Monica Mountains, Ventura and Los Angeles Counties.**
Dodecahema leptoceras	Slender-horned spineflower	FE/SE/1B.1	Coastal scrub, chaparral, woodlands	Not observed; potential suitable habitat present. Reported from Newhall in 1893; from Pacoima Wash in San Fernando in 1937; this location has been mistakenly labeled as Limekiln Canyon Wash in the Oat Mountain quadrangle according to CNDDB (2010). Endemic to Los Angeles, Riverside, and San Bernardino Counties.
Dudleya blochmaniae subsp. *blochmaniae*	Blochman's dudleya	- / - / 1B.1	Chaparral, coastal scrub, grasslands, often on clay or serpentinite soils in bare rocky places	Not observed; suitable grassland habitat present, but serpentinite soils absent. Single occurrence 1.5 miles southeast of Telecommunications Route #2, date unknown (CNDDB 2014). Occurs primarily below 450 meters from San Luis Obispo Counties south to northern Baja California.
Dudleya cymosa subsp. agourensis	Agoura Hills dudleya	FT / - / 1B.2	Chaparral and woodlands, rocky substrates.	Not observed; suitable habitat present. No CNDDB occurrences within 5 miles of Project area. Known from Calabasas quadrangle (CNDDB 2014).
Dudleya multicaulis	Many-stemmed dudleya	- / - / 1B.2	Coastal scrub, chaparral, and valley and foothill grasslands, often on clay soils	Not observed; grassland habitat present. Observed approximately 2 miles southeast of Telecommunications Route #2 in 1978 (CNDDB 2014). Endemic to Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties.
Harpagonella palmeri	**Palmer's grappling hook**	**- / - / 4.2**	**Coastal scrub, chaparral, grasslands, especially in clay soils**	**Observed in Project region by AECOM in 2013; suitable habitat present. Reported from Newhall (CNDDB, 2010).**
Helianthus inexpectatus	Newhall sunflower	- / - / 1B.1	Marshes, seeps, riparian habitats	Not observed; suitable habitat present. Observed in 2003 in Newhall area at Castaic Spring (CNDDB 2014). Endemic to Los Angeles County.
Helianthus nuttallii subsp. *parishii*	Los Angeles sunflower	- / - / 1A	Freshwater marsh and swamps	Not observed; presumed extinct. Formerly endemic to Los Angeles, Orange, and San Bernardino Counties.

Table 4.
Observed or Potential Sensitive Species in Project Area
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Sensitive Species		Status	Habitat	Occurrence of Element on Project Site
Name	**Common Name**	**(USFWS/CDFG/CNPS; L.A.**		
Horkelia cuneata subsp. *puberula*	Mesa horkelia	- / - / 1B.1	Chaparral, coastal scrub, and woodlands, especially in sandy or gravelly soils	Not observed; suitable habitat present.
Juglans californica* var. *californica	**Southern California black walnut**	**- / - / 4.2**	**Coastal scrub, chaparral, woodlands, riparian habitats**	**Present in woodlands and drainages on Site. Restricted to southern California.**
Lasthenia glabrata subsp. *coulteri*	Coulter's goldfields	- / - / 1B.1	Estuary margins, associated grassland and playa areas.	Not observed; suitable habitat absent.
Lepechinia rossii	Ross' pitcher sage	- / - / 1B.2	Chaparral	Not observed; suitable habitat present in immediate Project area.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	- / - / 1B.2	Chaparral, coastal scrub	Not observed; suitable habitat present in immediate Project area.
Malacothamnus davidsonii	Davidson's bush-mallow	- / - / 1B.1	Coastal scrub, chaparral, woodlands, riparian woodland	Not observed; suitable habitat present in immediate Project area. Observed 1.5 miles east of San Fernando Substation in 1932, and 2 miles east of fiber optic connection point in 1973 (CNDDB 2014). Known from Santa Clara, San Mateo, Monterey, San Luis Obispo, and Los Angeles Counties.
Monardella hypoleuca subsp. *hypoleuca*	White-veined monardella	- / - / 1B.3	Chaparral, woodlands	Not observed; suitable habitat present. Endemic to Santa Barbara, Ventura, and Los Angeles Counties.
Navarretia fossalis	Moran's nosegay	FT / - / 1B.1	Chenopod scrub, playas, vernal pools, and shallow freshwater marshes	Not observed; suitable habitat absent in immediate Project area. Reported from San Luis Obispo, Los Angeles, Riverside, and San Diego Counties south into Baja California.
Navarretia ojaiensis	Ojai navarretia	- / - / 1B.1	Chaparral (openings), coastal scrub (openings), valley and foothill grassland.	Not observed; suitable habitat present in immediate Project area. Endemic to Ventura and possibly Los Angeles Counties.
Navarretia setiloba	Piute Mountains navarretia	- / - / 1B.1	Grasslands, cismontane woodlands, pinyon - juniper woodlands	Not observed; suitable habitat present in immediate Project area. Observed in Mint Canyon in 2005 (CNDDB 2014). Endemic to Kern, Tulare, and Los Angeles Counties.
Nolina cismontana	Peninsular nolina	- / - / 1B.1	Coastal scrub and chaparral, on sandstone or gabbro substrates	Not observed; suitable habitat present in immediate Project area. Endemic to Ventura, Orange, Riverside, and San Diego Counties.
Opuntia basilaris var. brachyclada	Short-joint beavertail	- / - / 1B.2	Chaparral, Mojavean desert scrub, Joshua tree woodland, pinyon juniper woodland	Not observed; suitable habitat largely absent in immediate Project area. Endemic to Los Angeles and San Bernardino Counties.
Orcuttia californica	California Orcutt grass	FE / SE / 1B.1	Vernal pools	Not observed; suitable habitat absent in immediate Project area. Reported from Newhall by CNDDB (2014). Reported from Ventura County south to Baja California.
Senecio aphanactis	chaparral ragwort	- / - / 2.2	Coastal scrub, chaparral, woodlands, sometimes alkaline	Not observed; suitable habitat present. Observed in 1901 2.25 miles northeast of Project area.

Table 4.
Observed or Potential Sensitive Species in Project Area
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Sensitive Species		Status	Habitat	Occurrence of Element on Project Site
Name	**Common Name**	**(USFWS/CDFG/CNPS; L.A.**		
Symphyotrichum greatae	Greata's aster	- / - / 1B.1	Chaparral, woodlands, forests, riparian woodland	Not observed; suitable woodland and riparian habitat present. Observed approximately 5 miles northeast of San Fernando substation in 1918 (CNDDB 2014). Endemic to Ventura, Los Angeles, and San Bernardino Counties, primarily in San Gabriel and Liebre Mountains.

Based on CNPS Inventory of Rare and Endangered Plants (2014) and CNDDB (2014) search results for the Oat Mountain quadrangle, as well as surrounding quadrangles: Calabasas, Canoga Park, Mint Canyon, Newhall, San Fernando, Santa Susana, Val Verde, and Van Nuys. Review of Los Angeles County Audubon Sensitive Bird Species list and Watchlist.

United States Fish and Wildlife Service (USFWS)

FE Federal Endangered
FT Federal Threatened
FC Federal Candidate
SOC Species of Concern as listed by Sacramento Office (USFWS, 2004)
MNBMC Migratory nongame bird of management concern
FSC Federal special concern species
BCC Birds of Conservation Concern

California Department of Fish and Game (CDFG)

CE California Endangered
CT California Threatened
CR California Rare
CSC California Species of Concern

California Native Plant Society (CNPS)

Rare Plant Ranks

Rare Plant Rank 1A: Plants Presumed Extirpated in California and Either Rare or Extinct
Rare Plant Rank 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
Rare Plant Rank 2A: Plants Presumed Extirpated in California, but More Common Elsewhere
Rare Plant Rank 2: Plants Rare, Threatened, or Endangered in California, But More Common
Rare Plant Rank 3: Plants About Which We Need More Information: A Review List
Rare Plant Rank 4: Plants of Limited Distribution: A Watch List

Extensions to List Categories

.1 - Seriously endangered in California (over 80% of occurrences threatened / high
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current

Table 5
Approximate Acreage of Habitats and Associated Project Impacts
Habitat Assessment
Aliso Canyon Turbine Replacement Project - SCE Components

Aliso Canyon Turbine Replacement Project Area	IMPACT TYPES[1] (acres)		TOTAL IMPACT AREAS (acres)	TOTAL HABITAT IN PROJECT AREA, INCLUDING ACCESS ROADS (acres)
	Temporary Impacts	Permanent Impacts		
SENSITIVE HABITATS				
Venturan Coastal Sage Scrub	1.2	0.4	1.6	89.88
Venturan Coastal Sage Scrub - *Artemisia/Salvia* dominated	5.1	1.0	6.1	118.87
Venturan Coastal Sage Scrub - Disturbed	0.4	0.0	0.4	13.97
California Walnut Woodland	0.3	0.0	0.3	10.32
Coast Live Oak Woodland/Forest	1.8	1.4	3.3	87.46
Valley Oak and Coast Live Oak Savanna	0.0	0.0	0.0	28.99
Southern Mixed Evergreen Forest (Bigcone-Spruce Canyon Oak Forest)	0.1	0.0	0.1	17.40
Southern Coast Live Oak Riparian Forest	0.0	0.0	0.0	0.83
Riparian Scrub	0.0	0.0	0.0	0.39
Riparian Woodland	0.0	0.0	0.0	2.46
NON-SENSITIVE HABITATS				
Chamise Chaparral	0.9	0.5	1.4	6.65
Mixed Chaparral	1.9	0.8	2.7	55.55
Disturbed Chaparral	0.7	0.2	1.0	6.97
Annual Grassland and Herbaceous Alliances	7.7	1.7	9.5	87.77
Planted Trees and Landscaping	0.5	0.0	0.5	1.83
Ruderal	0.2	0.0	0.2	0.48
Bare	2.8	3.2	6.0	43.00
Coast Live Oak Woodland Mitigation Plantings	0.0	0.0	0.0	18.82
SENSITIVE HABITAT TOTALS	**8.8**	**3.0**	**11.8**	**370.6**
NON-SENSITIVE HABITAT TOTALS	**14.8**	**6.5**	**21.2**	**221.1**
TOTAL SENSITIVE AND NON-SENSITIVE HABITAT ACRES	**23.6**	**9.4**	**33.0**	**591.7**

Note 1: Impact assessment calculated based on acreage of proposed disturbance areas and access roads (including temporary impacts).

Table 6
Jurisdictional Waters
Aliso Canyon Turbine Replacement Project - SCE Components

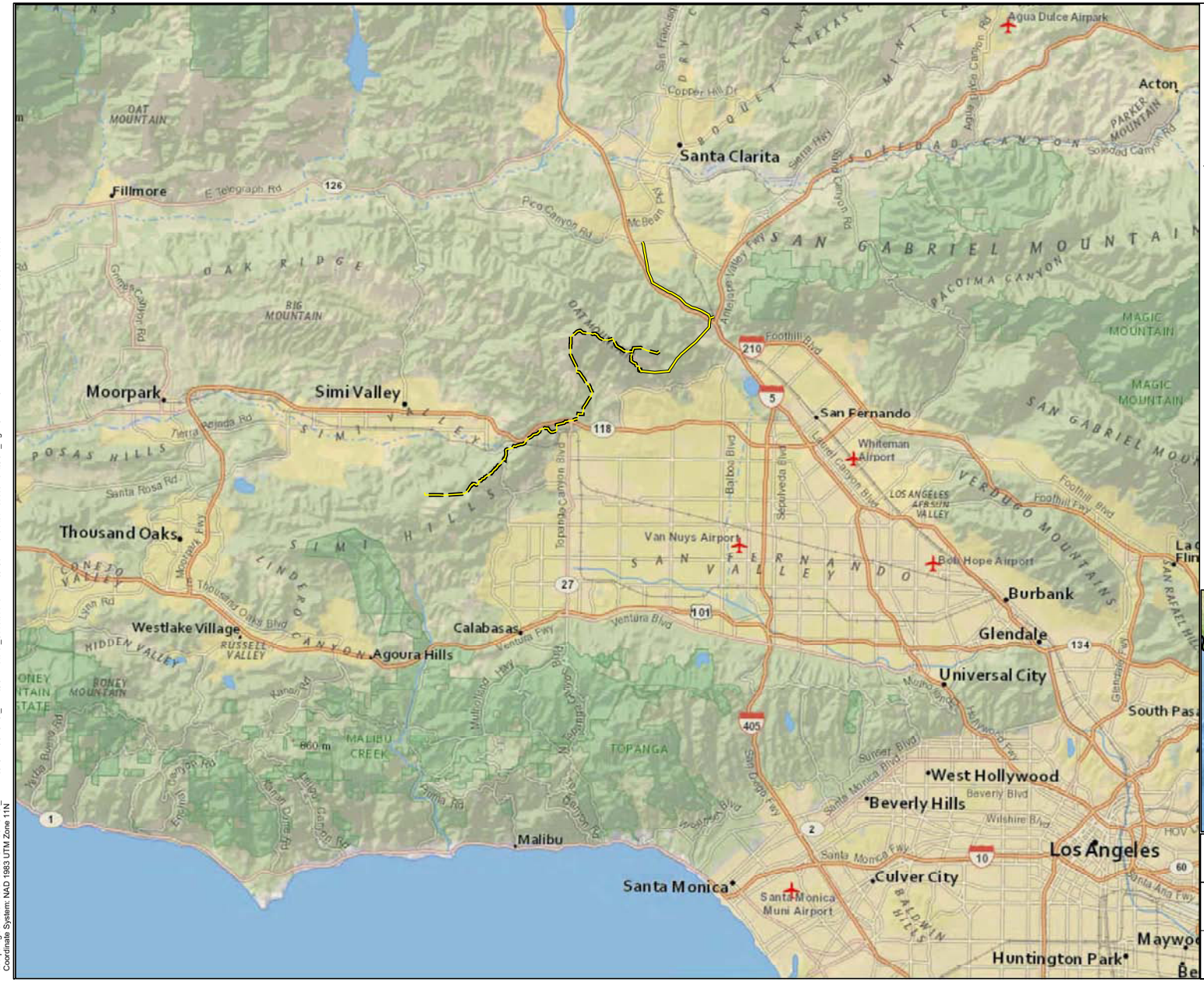
Jurisdicational Area Location	Jurisdictional Waters	Disturbance	Acres	Square Feet	Linear Feet
Drainage Between TSP-16 & 18	Waters of the State	Permanent	0.006	276	42
Drainage Between TSP-16 & 18	Waters of the US	Permanent	0.004	174	43
Drainage Between TSP-16 & 18	Waters of the State	Temporary	0.012	540	80
Drainage Between TSP-16 & 18	Waters of the US	Temporary	0.008	338	93
Drainage Between TSP-19 & 21	Waters of the State	Permanent	0.001	31	0
Drainage Between TSP-19 & 22	Waters of the US	Permanent	0.000	0	0
Drainage Between TSP-19 & 21	Waters of the State	Temporary	0.019	848	25
Drainage Between TSP-19 & 21	Waters of the US	Temporary	0.004	176	25
Drainage Between TSP-24 & 25	Waters of the State	Permanent	0.391	17050	337
Drainage Between TSP-24 & 25	Waters of the US	Permanent	0.039	1687	337
Drainage Between TSP-24 & 25	Waters of the State	Temporary	0.329	14315	397
Drainage Between TSP-24 & 25	Waters of the US	Temporary	0.040	1752	397
Drainage Near TSP-11	Waters of the State	Temporary	0.000	0	0
Drainage Near TSP-11	Waters of the US	Temporary	0.000	0	0
North Drainage Near TSP-30	Waters of the State	Permanent	0.013	578	29
North Drainage Near TSP-30	Waters of the US	Permanent	0.002	84	29
North Drainage Near TSP-30	Waters of the State	Temporary	0.022	972	16
North Drainage Near TSP-30	Waters of the US	Temporary	0.001	45	16
Northeast Drainage Near TSP-30	Waters of the State	Permanent	0.019	839	46
Northeast Drainage Near TSP-30	Waters of the US	Permanent	0.004	190	46
Northeast Drainage Near TSP-30	Waters of the State	Temporary	0.067	2927	33
Northeast Drainage Near TSP-30	Waters of the US	Temporary	0.004	196	33
South Drainage Between TSP-19 & 21	Waters of the State	Permanent	0.010	426	4
South Drainage Between TSP-19 & 21	Waters of the US	Permanent	0.000	18	4
South Drainage Between TSP-19 & 21	Waters of the State	Temporary	0.007	317	23
South Drainage Between TSP-19 & 21	Waters of the US	Temporary	0.002	102	23

Jurisdictional Water Totals

Jurisdictional Waters	Disturbance	Acres	Square Feet	Linear Feet
Waters of the State	Permanent	0.441	19199	458
Waters of the State	Temporary	0.457	19921	574
Waters of the US	Permanent	0.049	2153	459
Waters of the US	Temporary	0.060	2610	587

ARCADIS

Figures



SCE Natural Substation
Los Angeles County, CA

SITE VICINITY

ARCADIS

FIGURE
1

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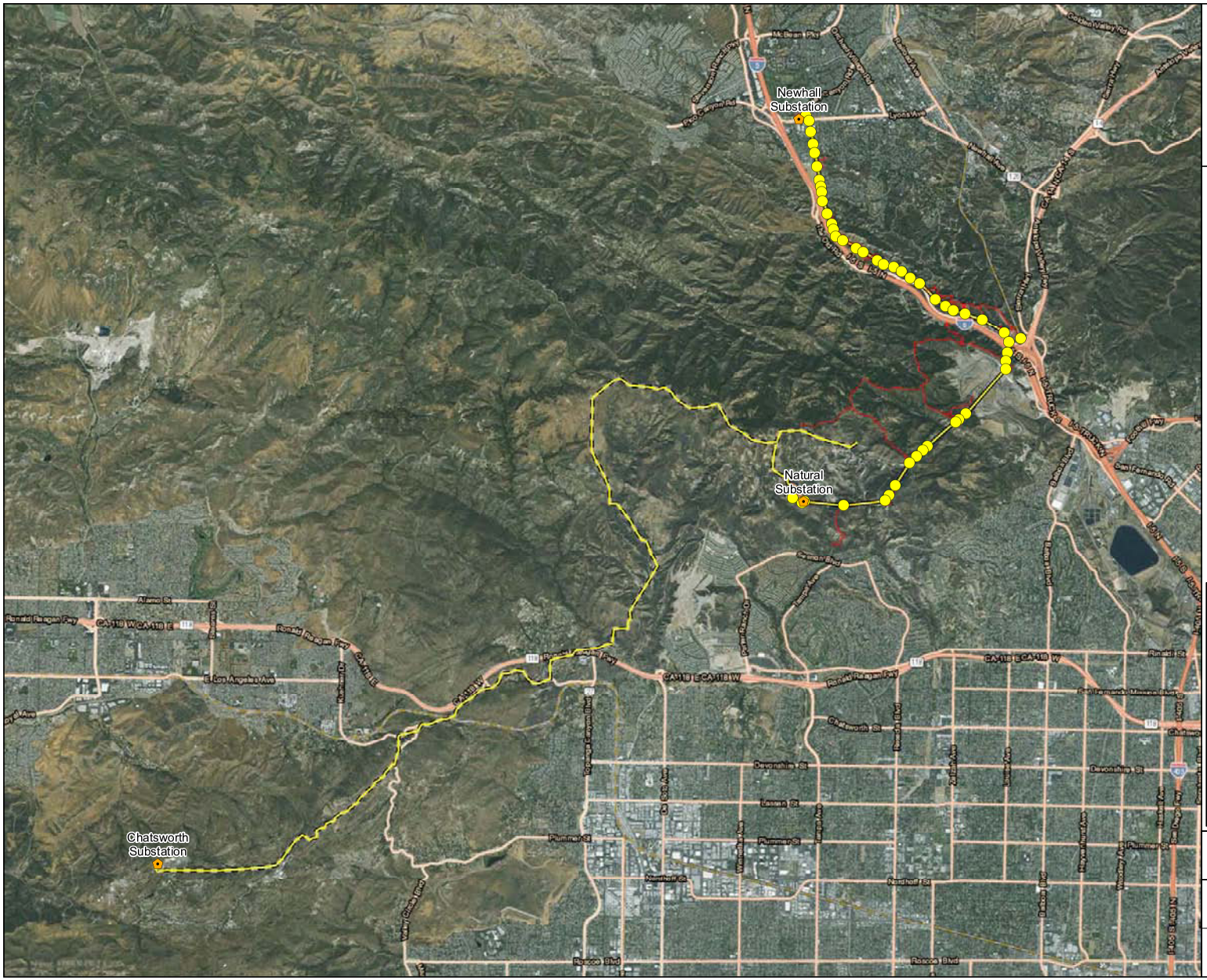


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Proposed Structures
- Natural-Chatsworth Line
- Newhall-Natural Line
- Existing Access Roads

N

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010

0 0.5 1 2 3 Miles

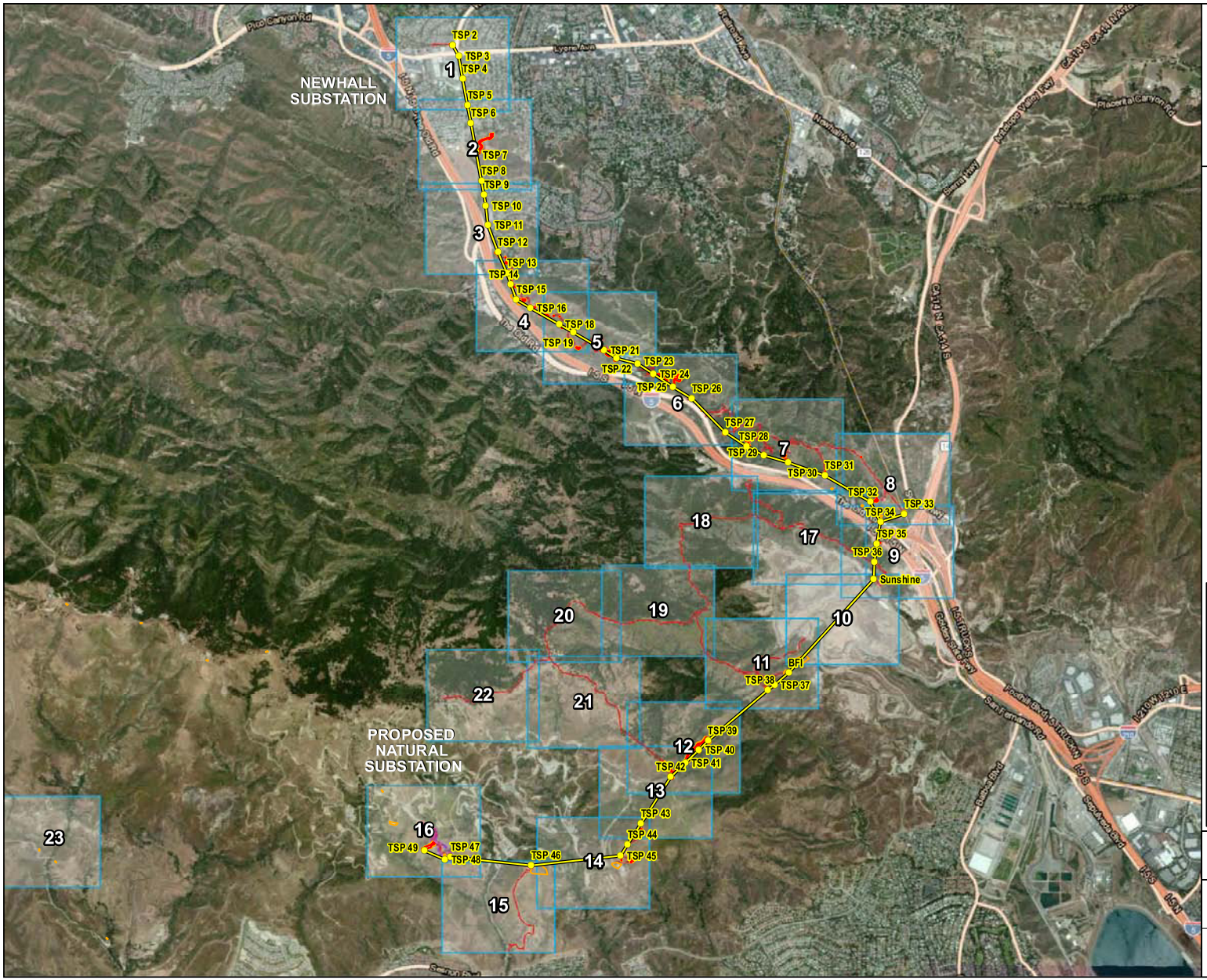
SCE Natural Substation
Los Angeles County, CA

SITE LOCATION

ARCADIS

FIGURE 2

\\corpargis\Data\ArcGisData\GISPROJECTS_ENV Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\Habitat Assessment\SCE_Fig2_SiteLocation.mxd 7/21/2014 DFischer/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

FEATURE LEGEND

- Map Index and Sheet Number
- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

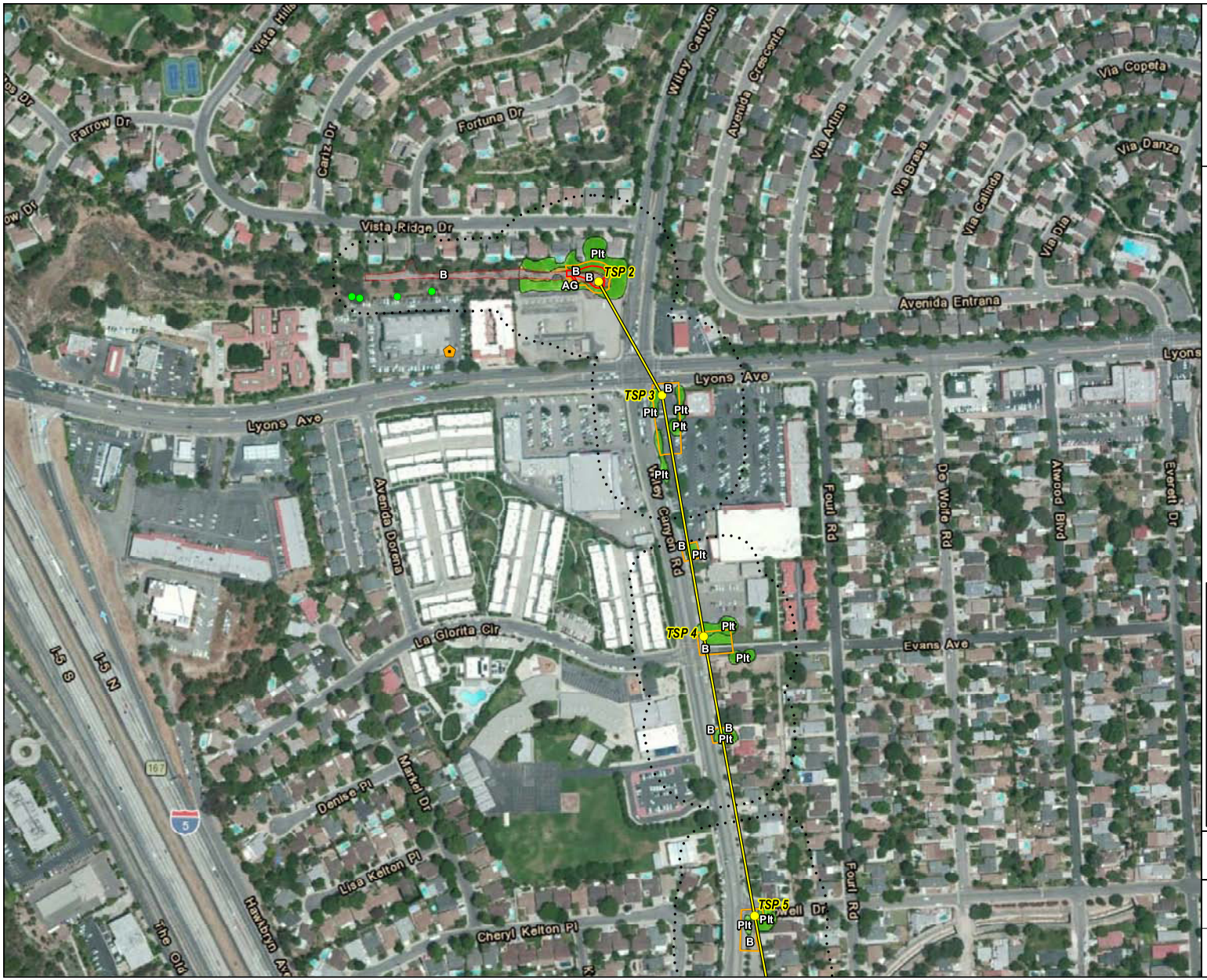
SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE
3

\\corpargis\Data\ArcGisData\GISPROJECTS_ENV Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPSETS\SCE_Fig3_Vegetation_Mapset_Indexsheet.mxd 8/19/2014 DFischer/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads

Vegetation Legend

- Oak Trees
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
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- AG - Annual Grassland
- Plt - Planted Trees/Other Landscaping
- Rud - Ruderal
- B - Bare

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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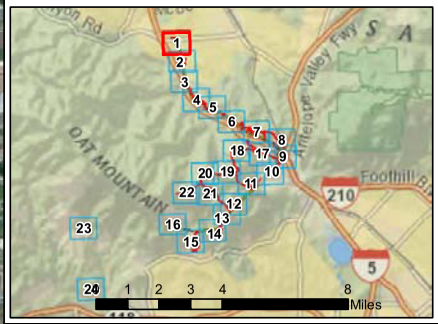

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.1

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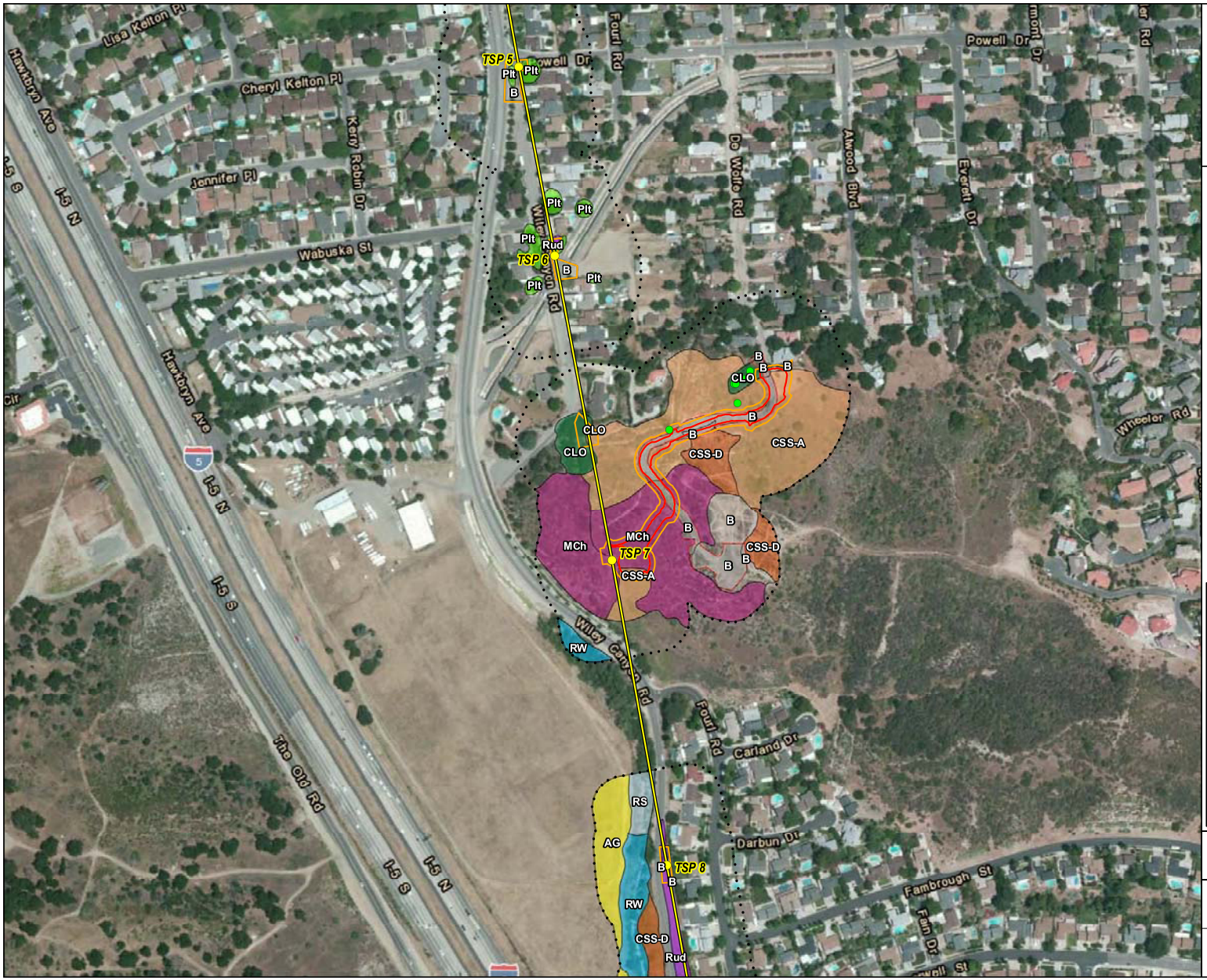
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads

Vegetation Legend

- Oak Trees
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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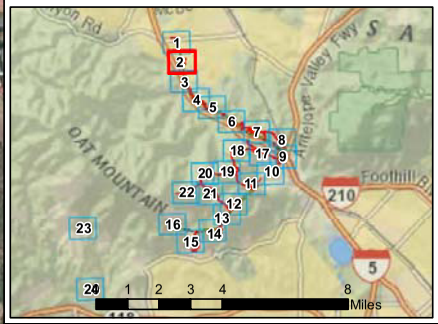

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.2

SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend
- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads

Vegetation Legend
- Oak Trees
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

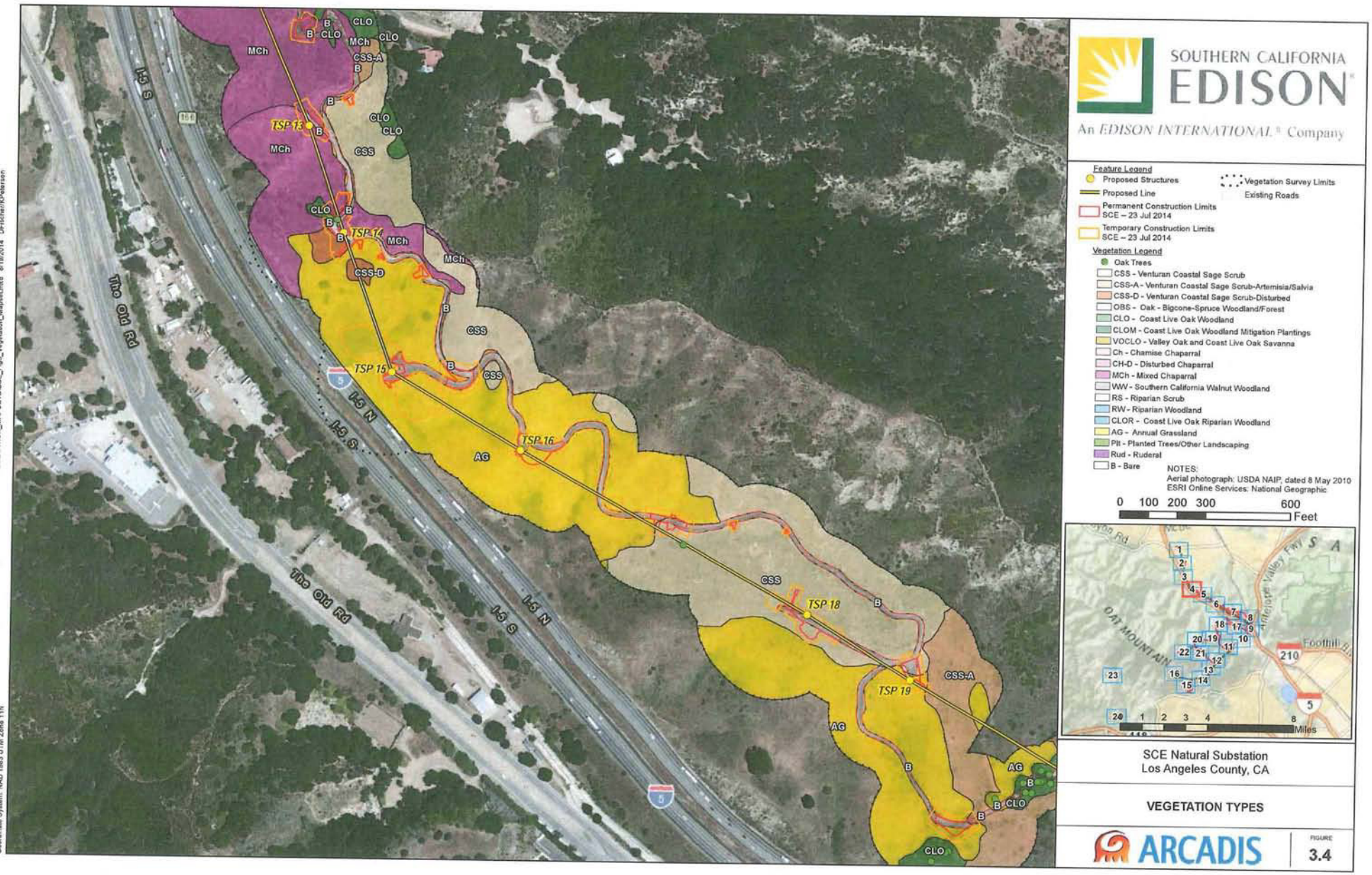
0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.3



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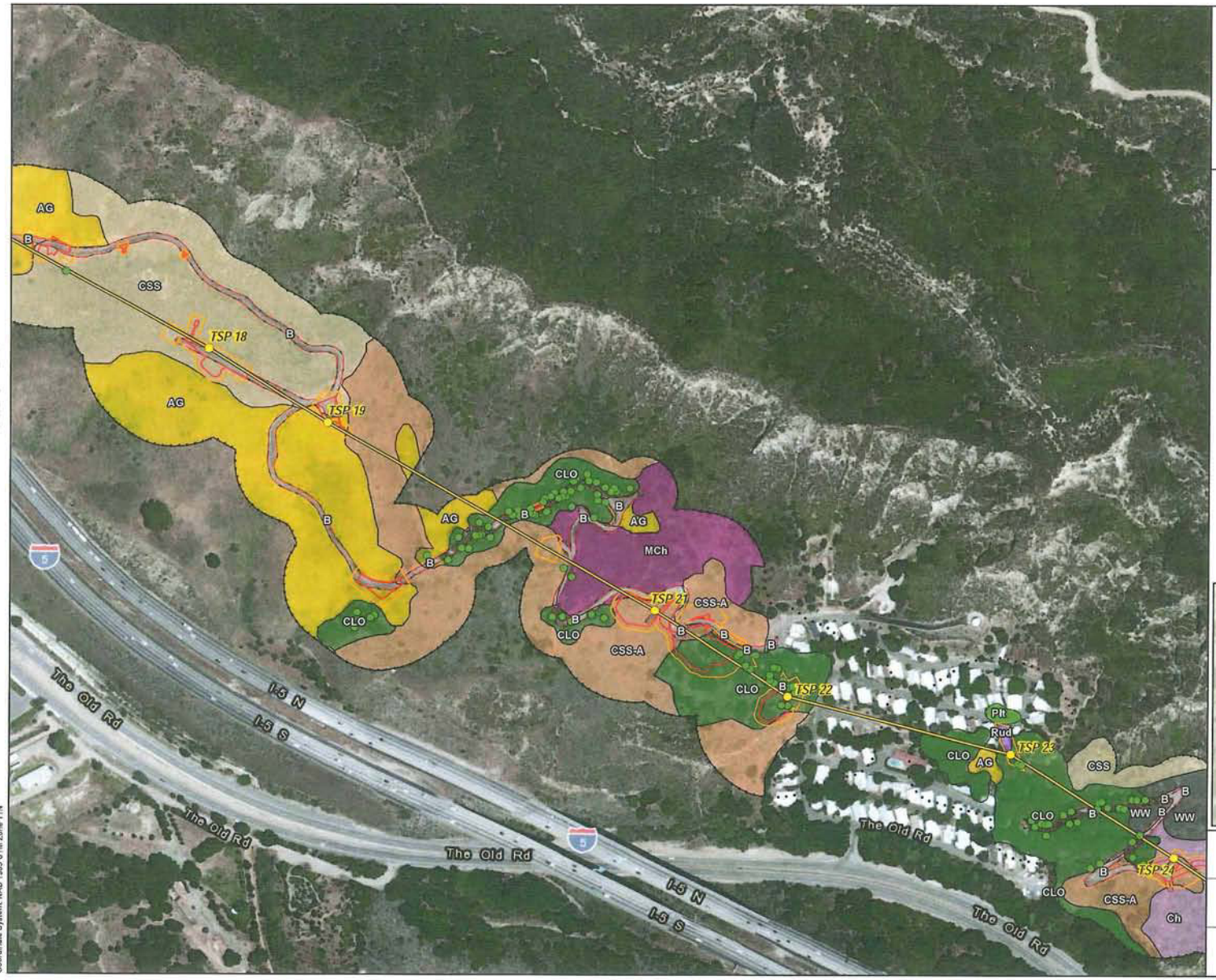
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Vegetation Survey Limits
- Proposed Line
- Existing Roads
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend

- Oak Trees
- CSS - Venturan Coastal Sage Scrub
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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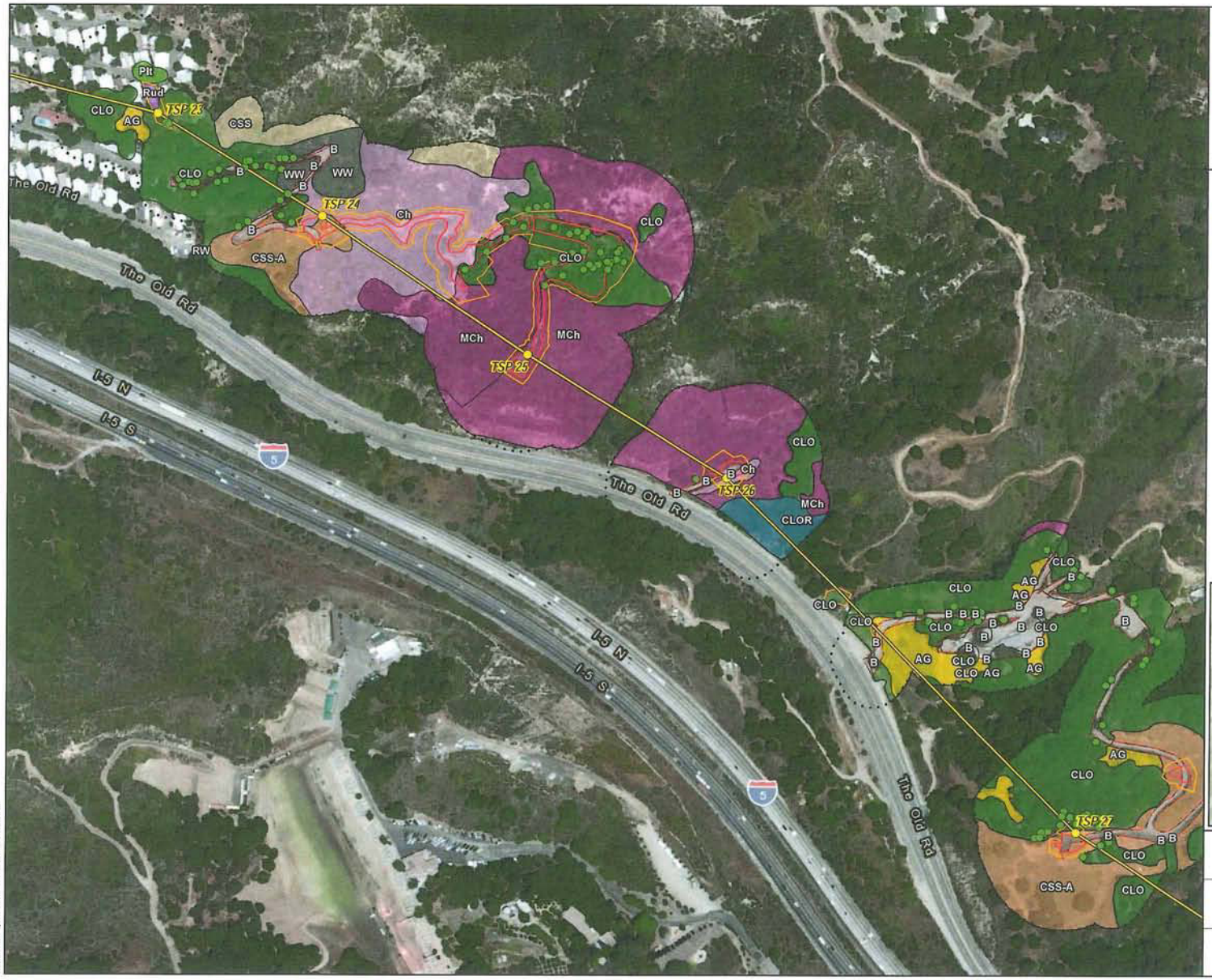
SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.5



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- Proposed Structures
- Vegetation Survey Limits
- Proposed Line
- Existing Roads
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- Oak Trees
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.6

\\corpargis\Data\ArcGIS\Data\GISPROJECTS_ENV 2:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPSETS\SCE_Fig3_Vegetation_MapSet.mxd 8/19/2014 DFischer/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend
- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads

Vegetation Legend
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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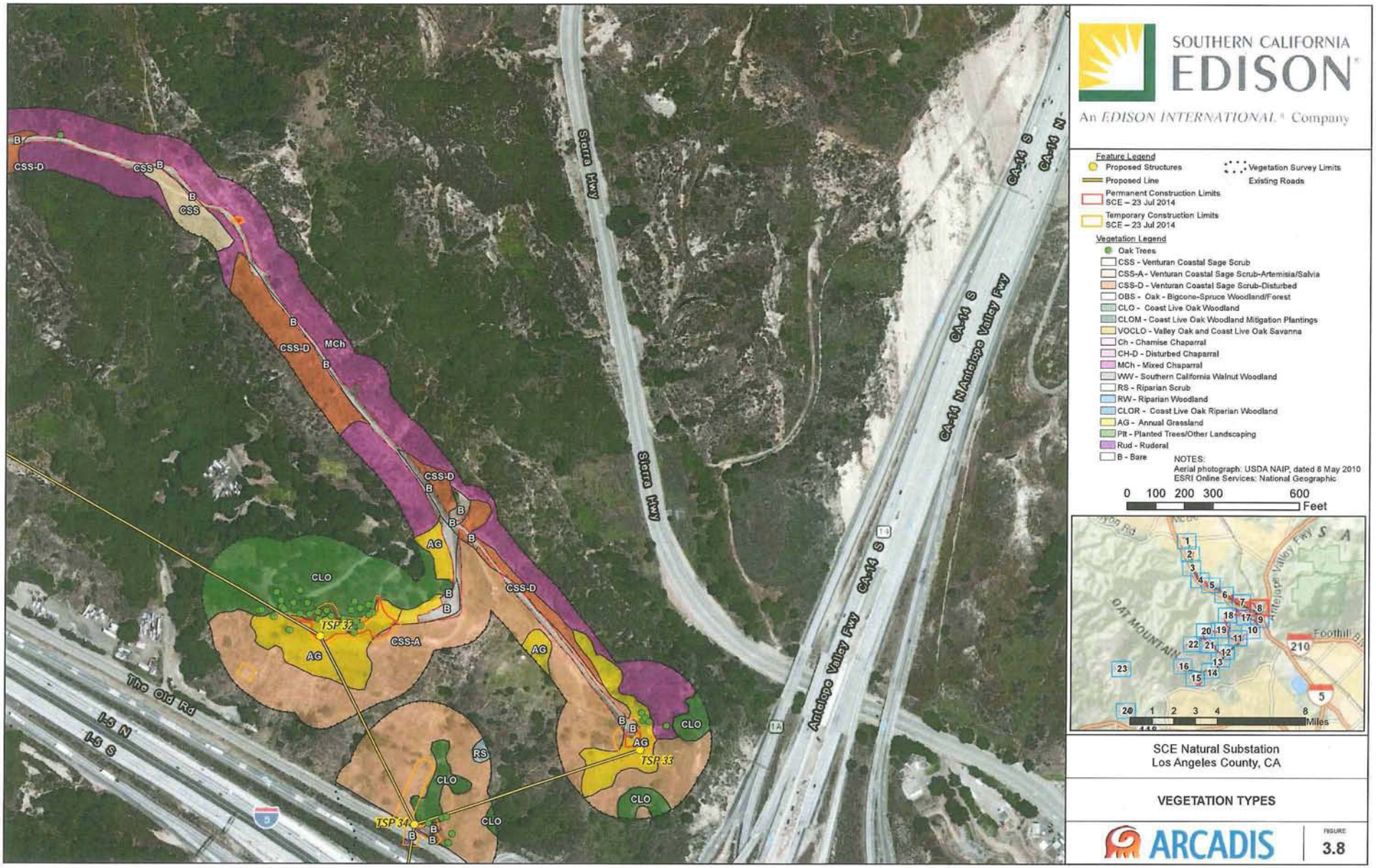
SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.7



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.8

\\corpargis\Data\ArcGis Data\GISPROJECTS_ENV Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPSETS\SCE_Fig3_Vegetation_Mapset.mxd 8/19/2014 DFitcherik/Peterson
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- Proposed Structures
- Vegetation Survey Limits
- Proposed Line
- Existing Roads
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- Oak Trees
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.9

SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend
- Proposed Structures
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- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
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Vegetation Legend
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.10

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads

Vegetation Legend

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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

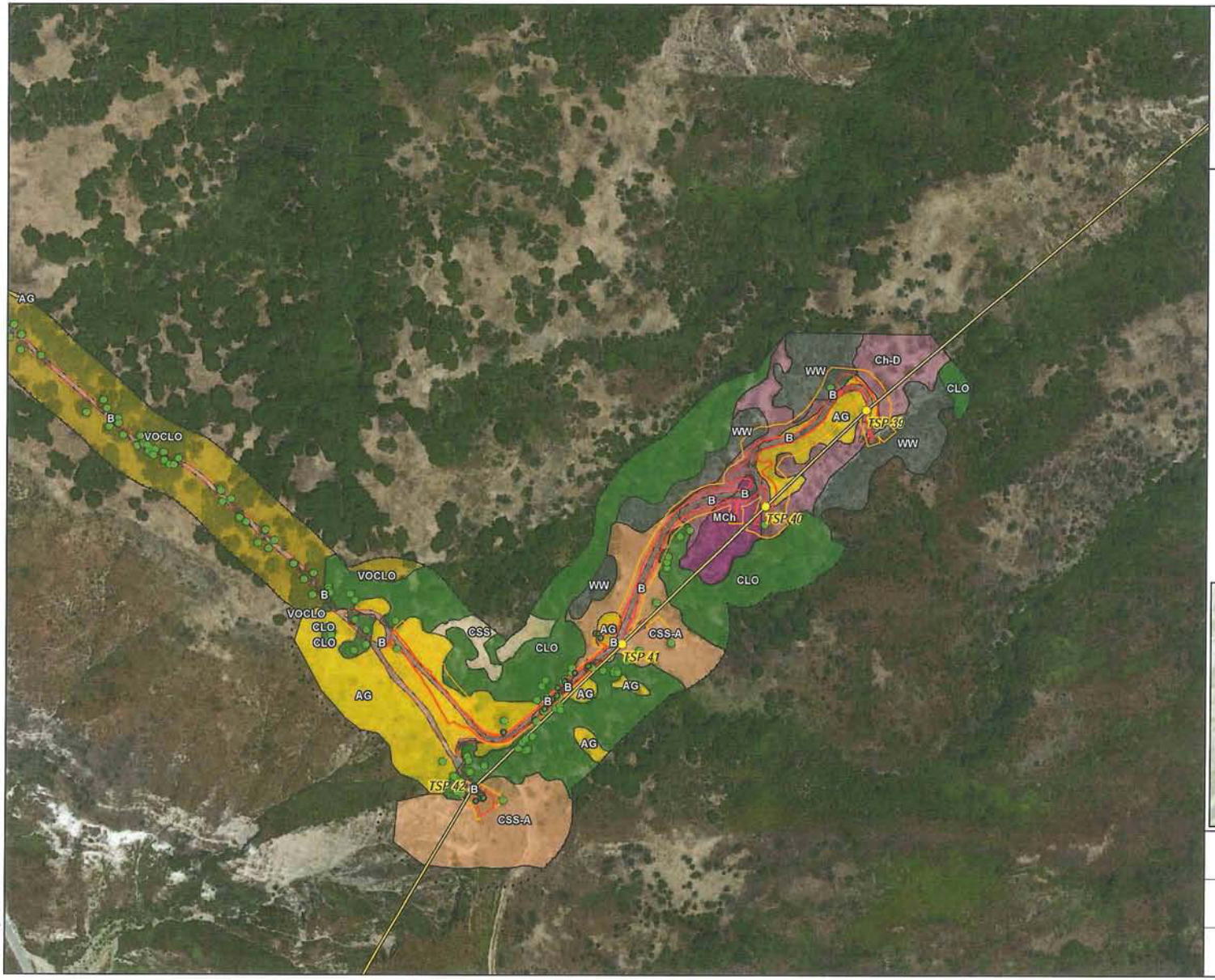
0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.11



SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

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- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
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Vegetation Legend

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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

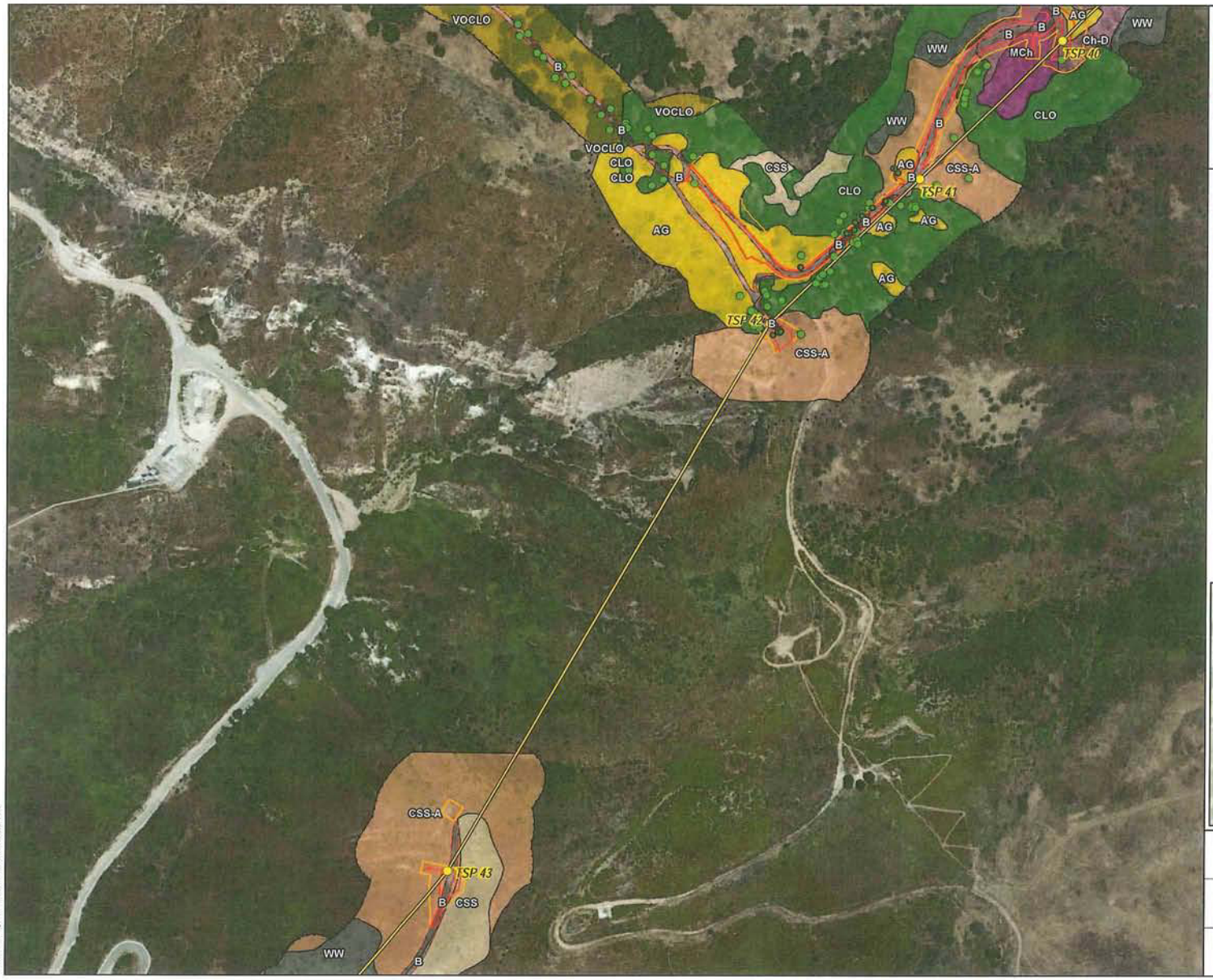
0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.12



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend
- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
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- Existing Roads

Vegetation Legend
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NOTES:
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ESRI Online Services: National Geographic

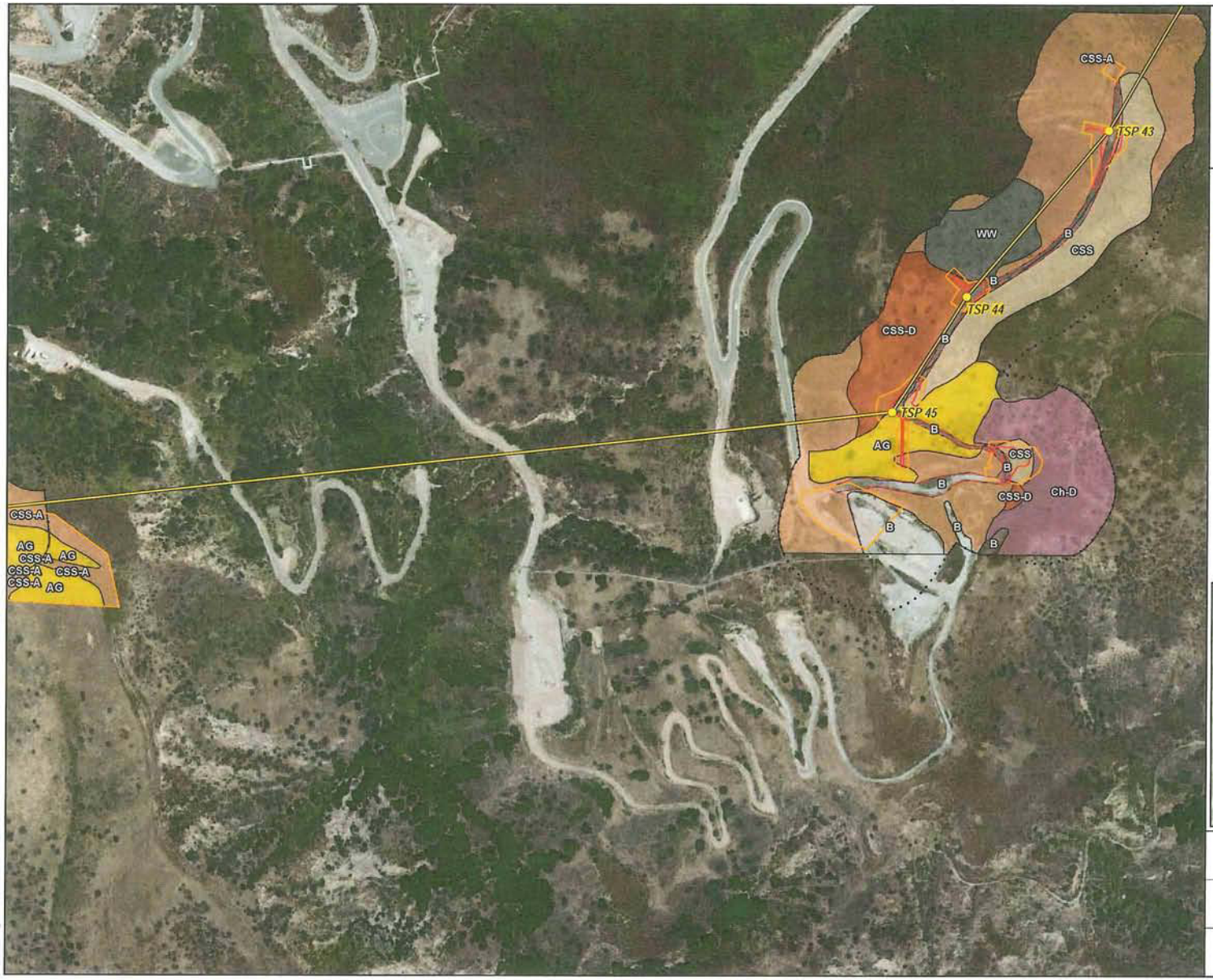
0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.13



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend
- Proposed Structures
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.14

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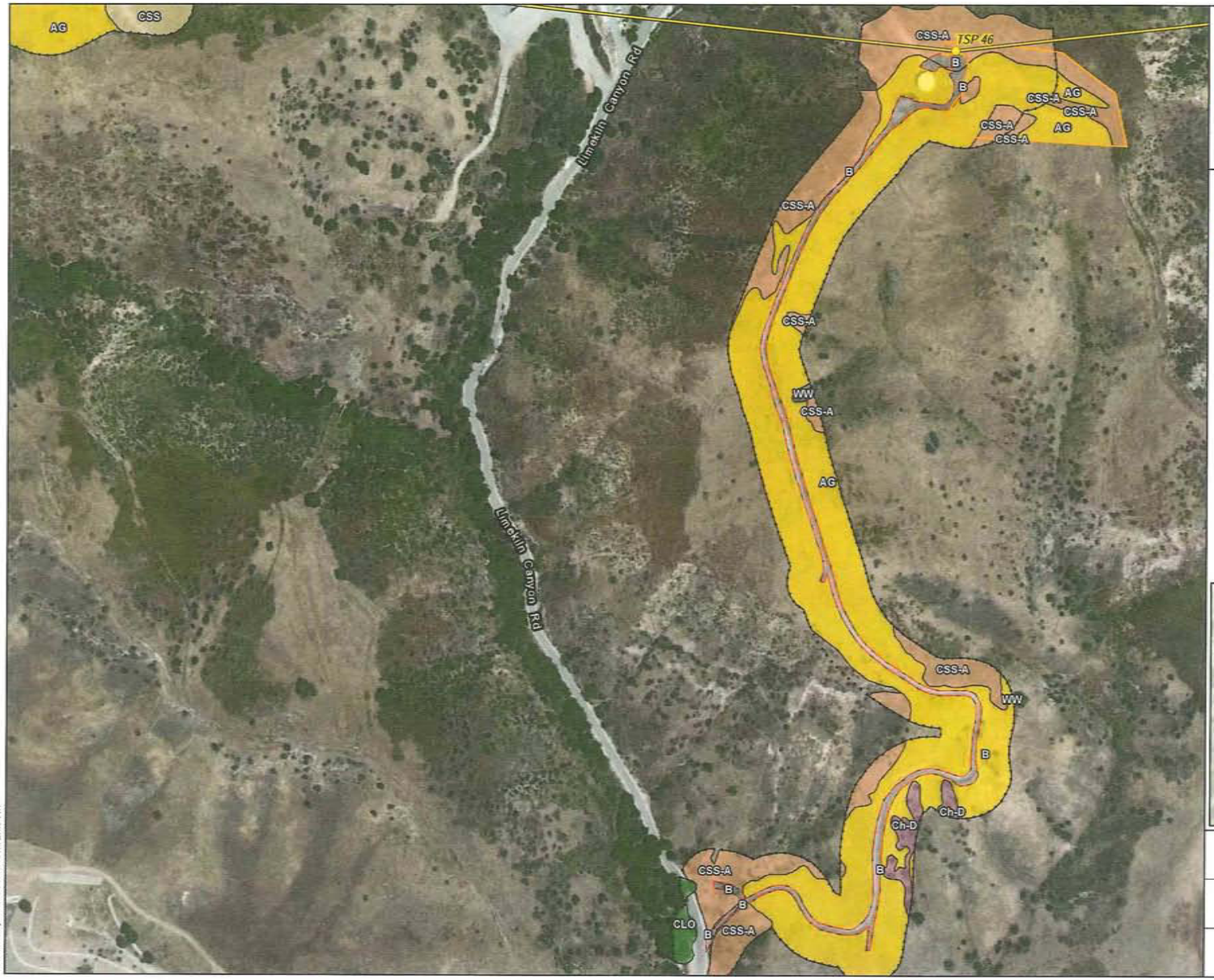
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- Proposed Structures
- Vegetation Survey Limits
- Proposed Line
- Existing Roads
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.15

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads

Vegetation Legend
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.16

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- Proposed Structures
- Vegetation Survey Limits
- Proposed Line
- Existing Roads
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- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
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- CH-D - Disturbed Chaparral
- MCh - Mixed Chaparral
- WW - Southern California Walnut Woodland
- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland
- AG - Annual Grassland
- Plt - Planted Trees/Other Landscaping
- Rud - Ruderal
- B - Bare

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.17

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads

Vegetation Legend

- Oak Trees
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
- OBS - Oak - Bigcone-Spruce Woodland/Forest
- CLO - Coast Live Oak Woodland
- CLOM - Coast Live Oak Woodland Mitigation Plantings
- VOCLO - Valley Oak and Coast Live Oak Savanna
- Ch - Chamise Chaparral
- CH-D - Disturbed Chaparral
- MCh - Mixed Chaparral
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- RS - Riparian Scrub
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- Rud - Ruderal
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NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.18

SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend
- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads

Vegetation Legend
- Oak Trees
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
- OBS - Oak - Bigcone-Spruce Woodland/Forest
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- CH-D - Disturbed Chaparral
- MCh - Mixed Chaparral
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- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland
- AG - Annual Grassland
- Plt - Planted Trees/Other Landscaping
- Rud - Ruderal
- B - Bare

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.19

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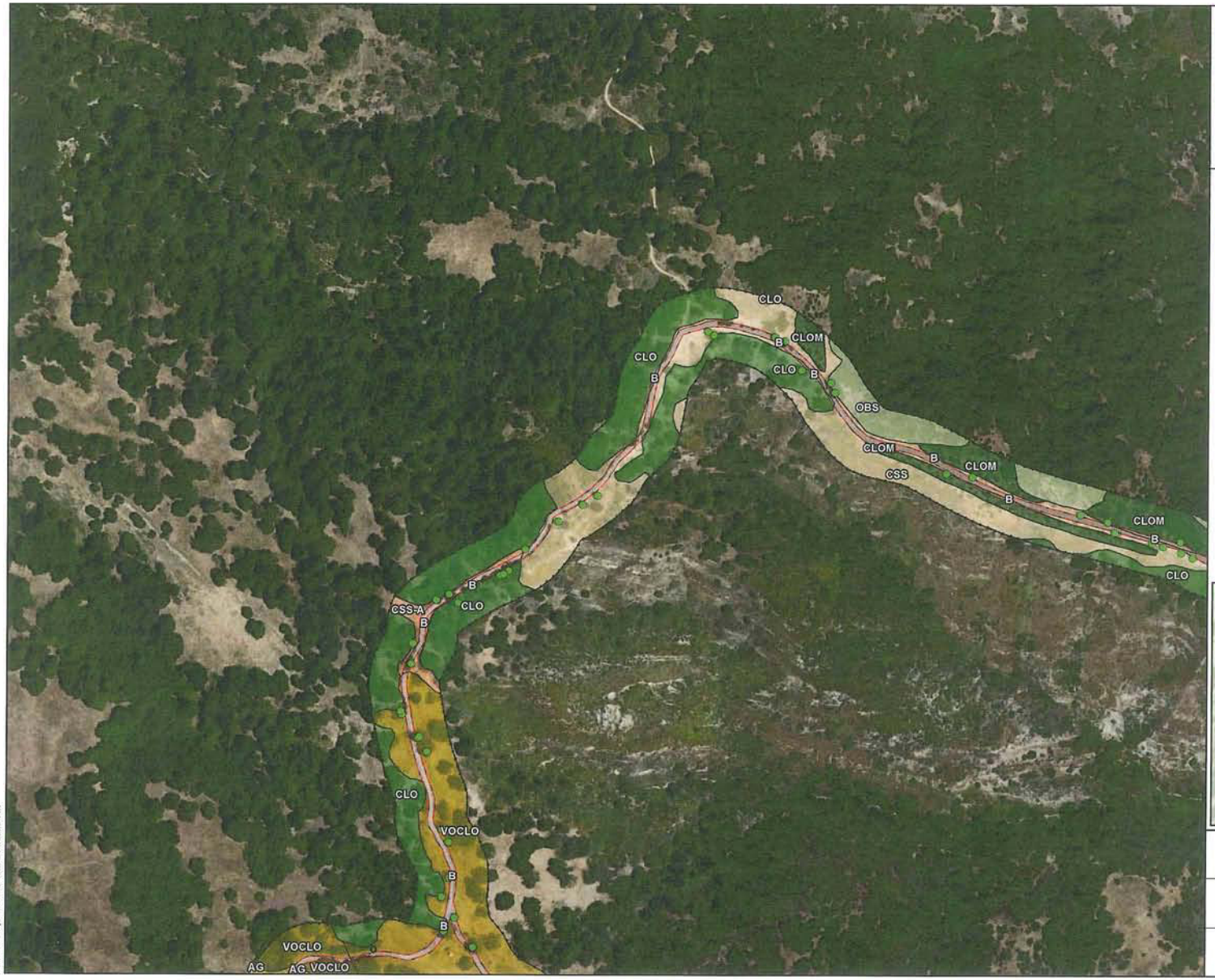
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend
- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads

Vegetation Legend
- Oak Trees
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
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- RW - Riparian Woodland
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- AG - Annual Grassland
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- Rud - Ruderal
- B - Bare

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.20

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- Proposed Structures
- Vegetation Survey Limits
- Proposed Line
- Existing Roads
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- Oak Trees
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
- OBS - Oak - Bigcone-Spruce Woodland/Forest
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- MCh - Mixed Chaparral
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- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland
- AG - Annual Grassland
- Plt - Planted Trees/Other Landscaping
- Rud - Ruderal
- B - Bare

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

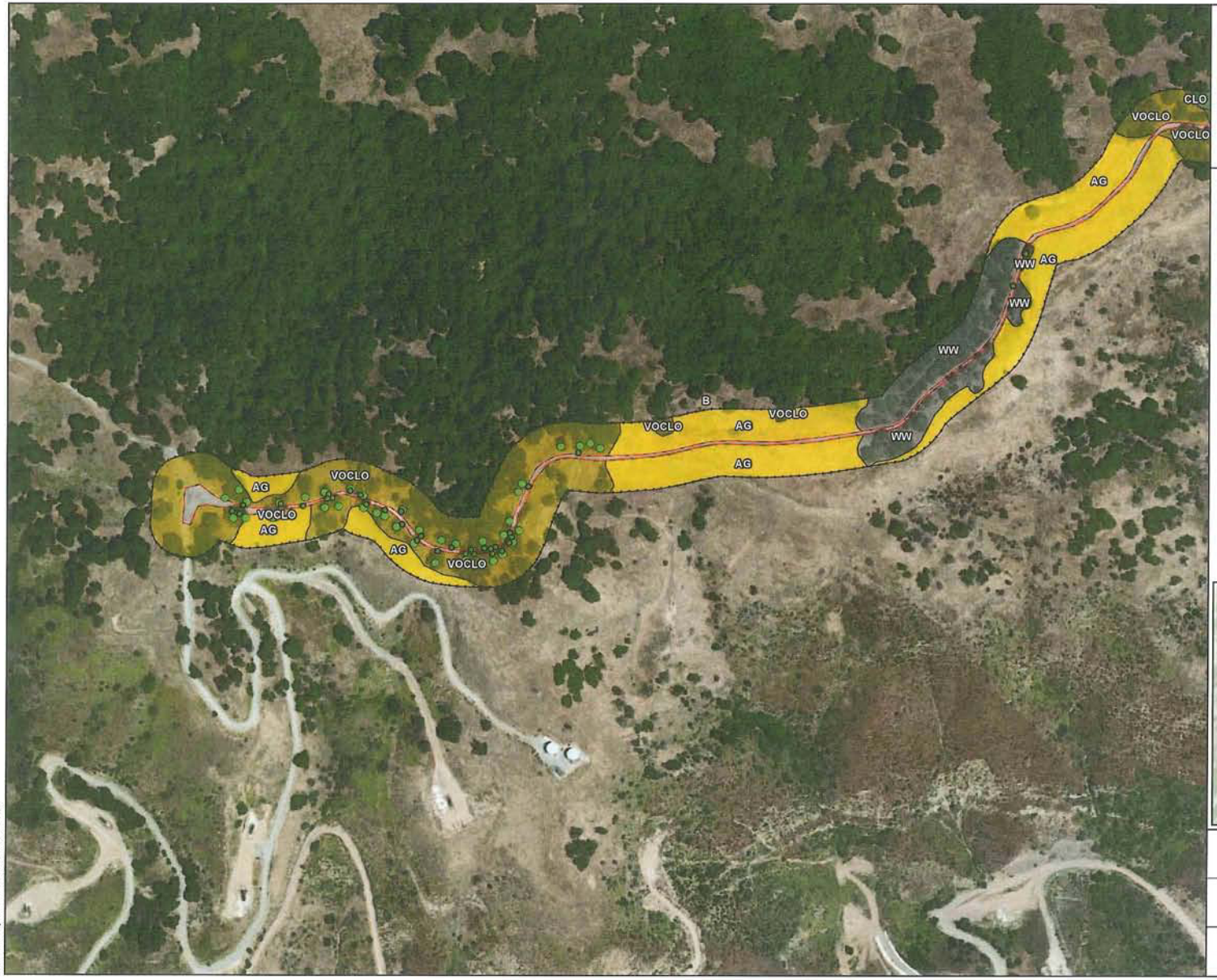
0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.21



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend
- Proposed Structures
- Vegetation Survey Limits
- Proposed Line
- Existing Roads
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- Oak Trees
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
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- Plt - Planted Trees/Other Landscaping
- Rud - Ruderal
- B - Bare

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.22

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- Proposed Structures
- Vegetation Survey Limits
- Proposed Line
- Existing Roads
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- Oak Trees
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
- OBS - Oak - Bigcone-Spruce Woodland/Forest
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- CLOM - Coast Live Oak Woodland Mitigation Plantings
- VOCLO - Valley Oak and Coast Live Oak Savanna
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- CH-D - Disturbed Chaparral
- MCh - Mixed Chaparral
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- RW - Riparian Woodland
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- AG - Annual Grassland
- Plt - Planted Trees/Other Landscaping
- Rud - Ruderal
- B - Bare

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.23

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Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Feature Legend
- Proposed Structures
- Proposed Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads

Vegetation Legend
- Oak Trees
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
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- AG - Annual Grassland
- Plt - Planted Trees/Other Landscaping
- Rud - Ruderal
- B - Bare

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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SCE Natural Substation
Los Angeles County, CA

VEGETATION TYPES

ARCADIS

FIGURE 3.24

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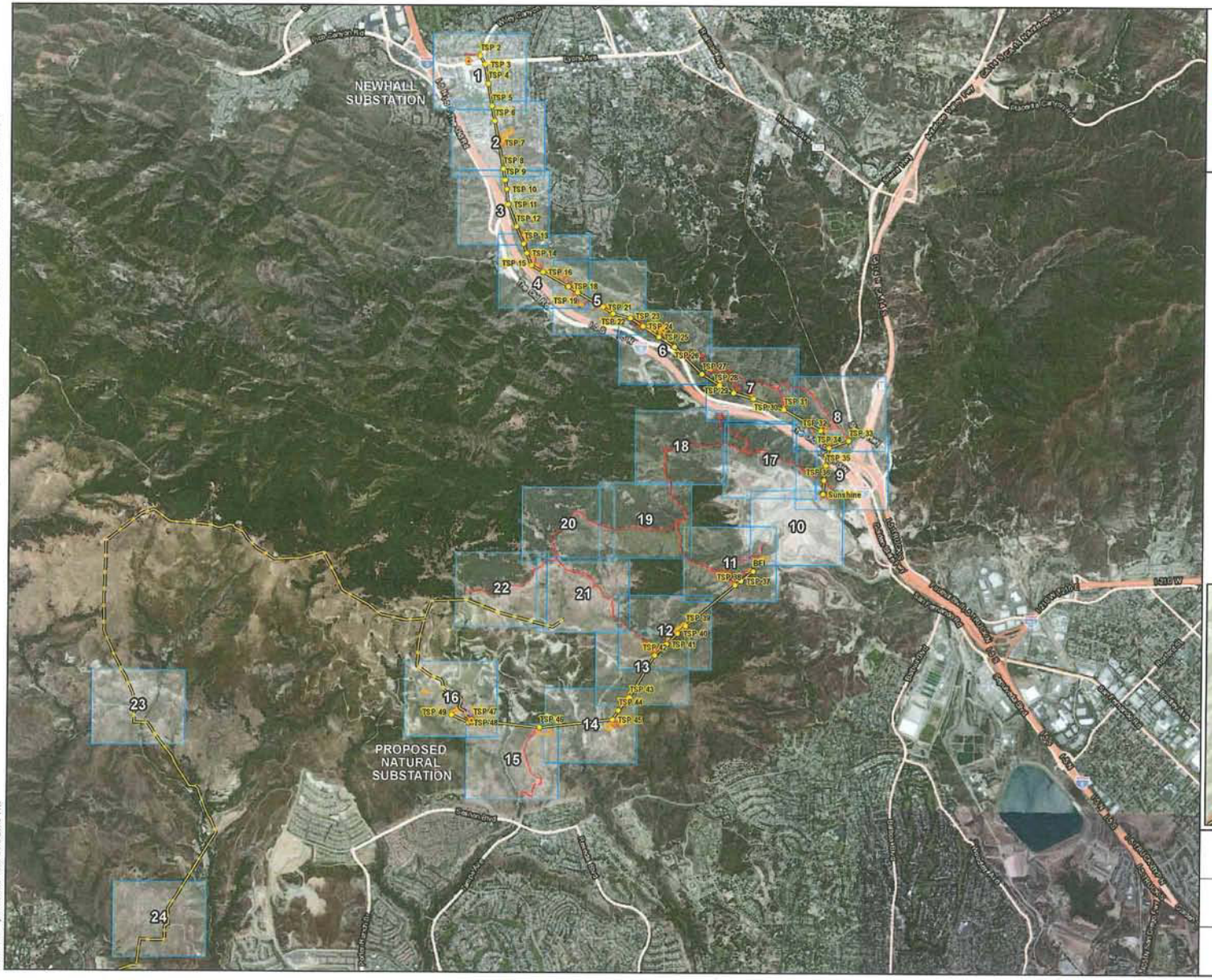
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FEATURE LEGEND

- Map Index and Sheet Number
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

NOTES:
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4

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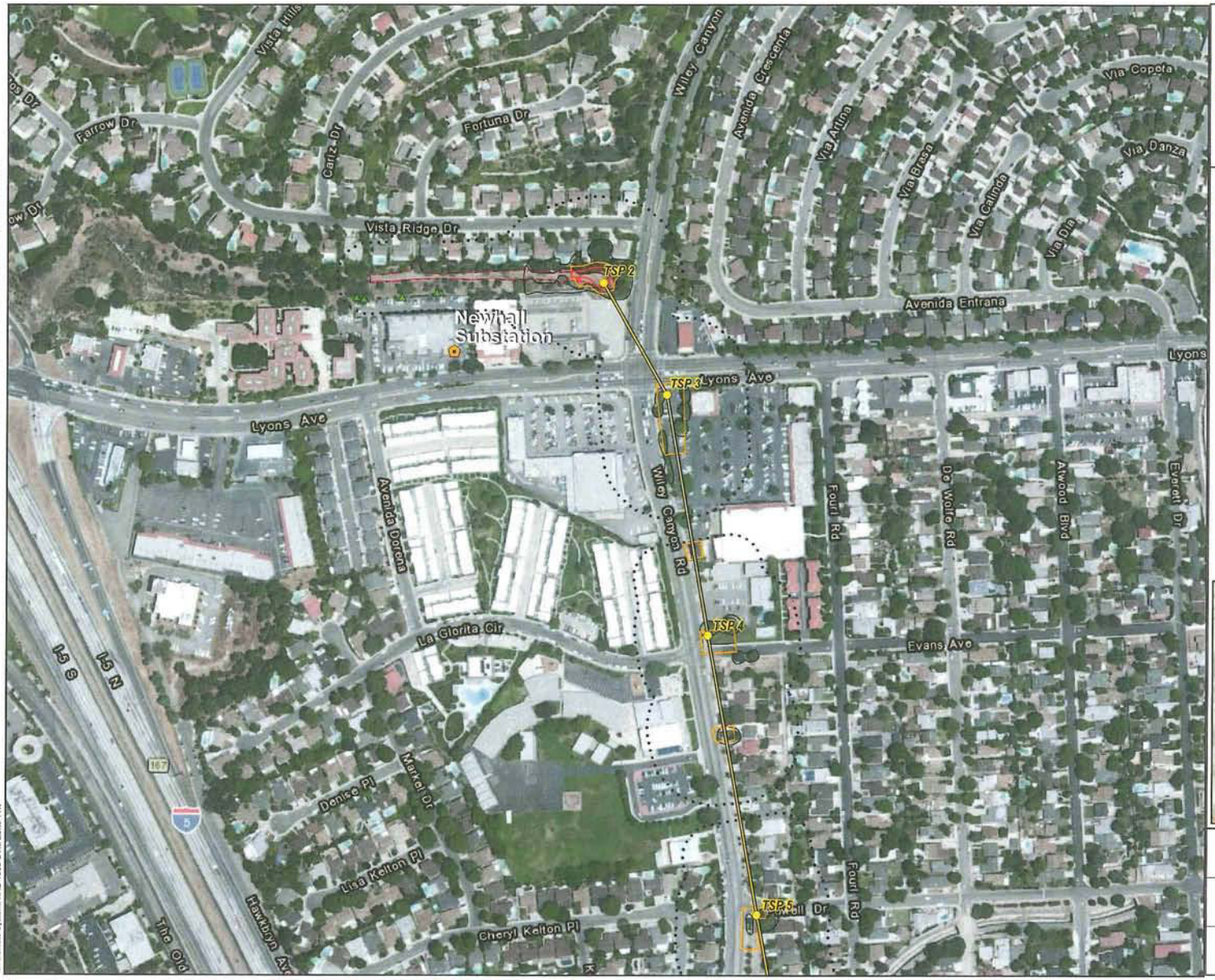
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

- Oak - no planned pruning
- Oak - planned pruning <25%
- Oak - planned pruning >25%
- Oak - planned removal
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
- OBS - Oak - Bigcone-Spruce Woodland/Forest
- VOCLO - Valley Oak and Coast Live Oak Savanna
- WW - Southern California Walnut Woodland
- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

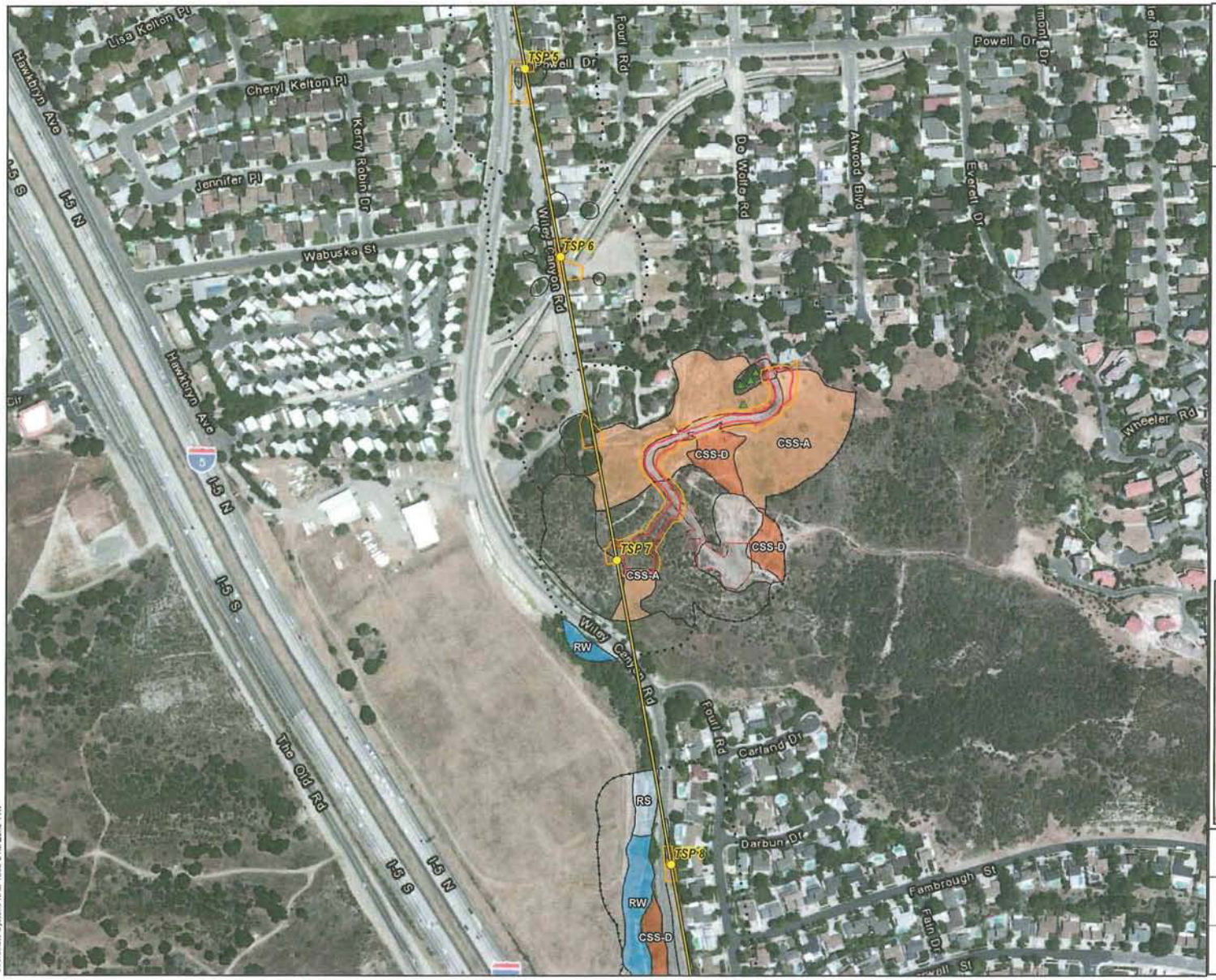
0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.1



SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

- Oak - no planned pruning
- Oak - planned pruning <25%
- Oak - planned pruning >25%
- Oak - planned removal
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
- OBS - Oak - Bigcone-Spruce Woodland/Forest
- VOCLO - Valley Oak and Coast Live Oak Savanna
- WW - Southern California Walnut Woodland
- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.2

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

- Oak - no planned pruning
- Oak - planned pruning <25%
- Oak - planned pruning >25%
- Oak - planned removal
- CSS - Venturan Coastal Sage Scrub
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- WW - Southern California Walnut Woodland
- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.3

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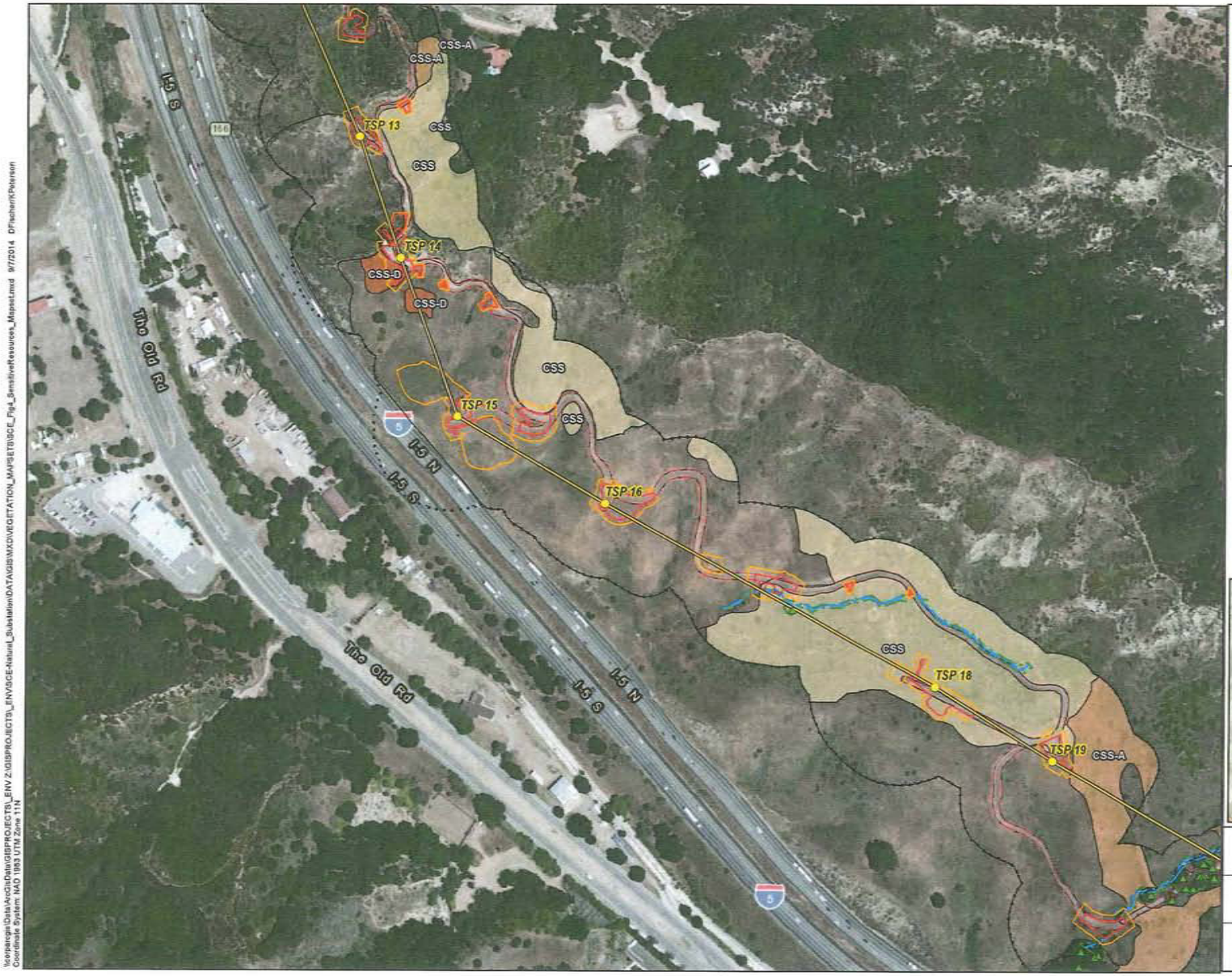
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

- Oak - no planned pruning
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- RW - Riparian Woodland
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NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.4

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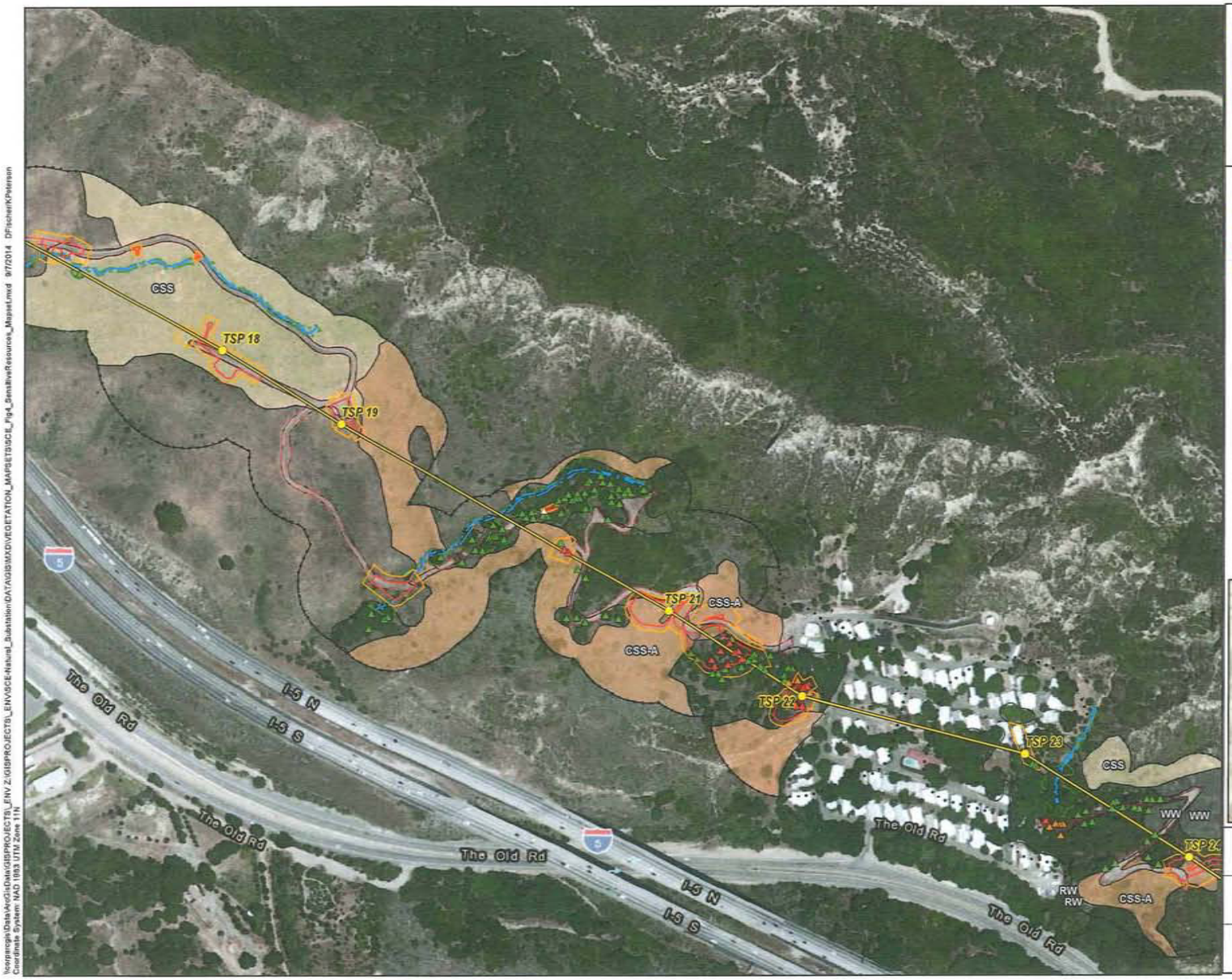
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- Oak - planned pruning >25%
- Oak - planned removal
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NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

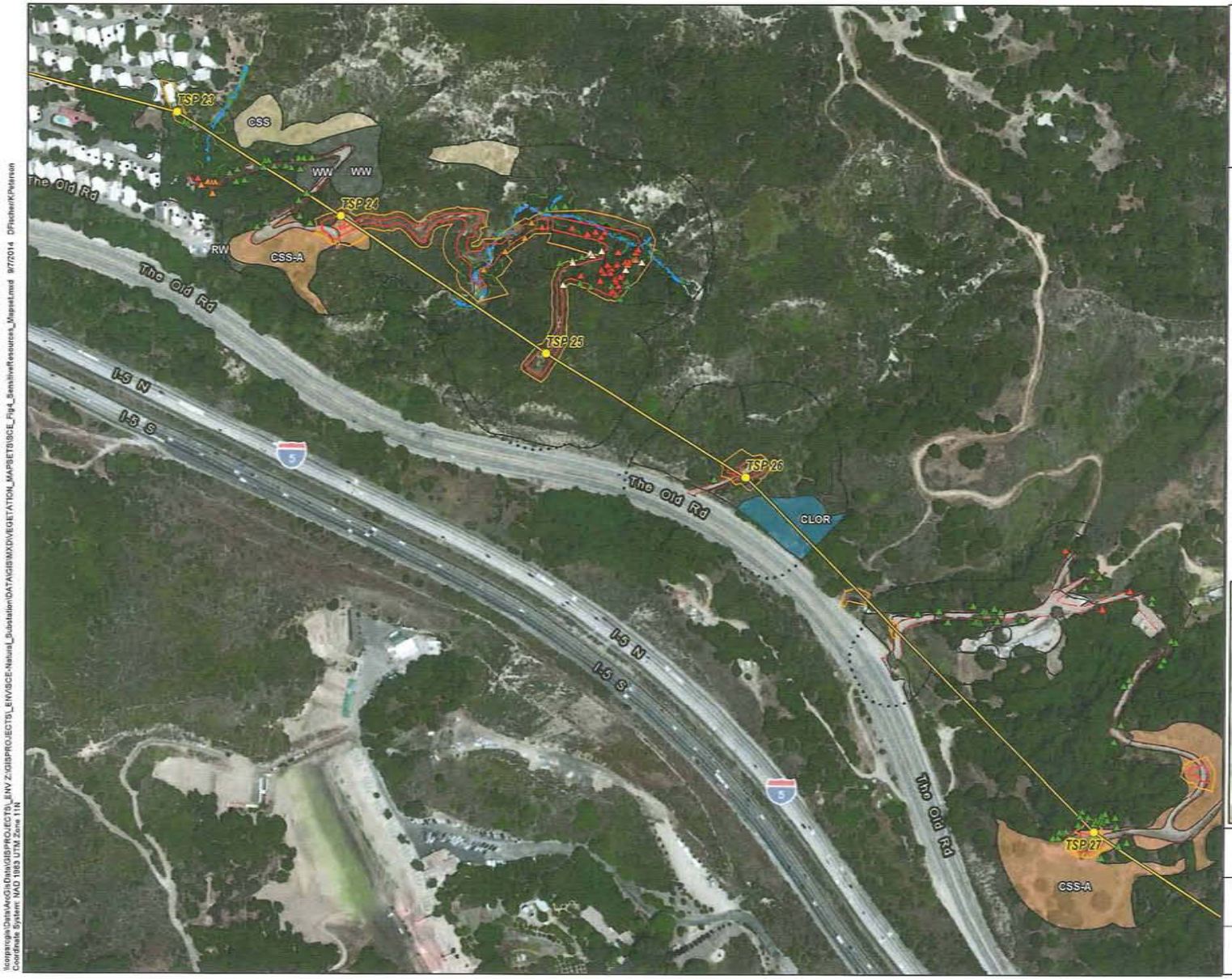
SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.5

\\corpnrcgis\Data\Ver01\nData\GISPROJECTS_ENV Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPSETS\SCE_Fig4_SensitiveResources_Mapset.mxd 9/7/2014 DFischer/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.6

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- VW - Southern California Walnut Woodland
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- RW - Riparian Woodland
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NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

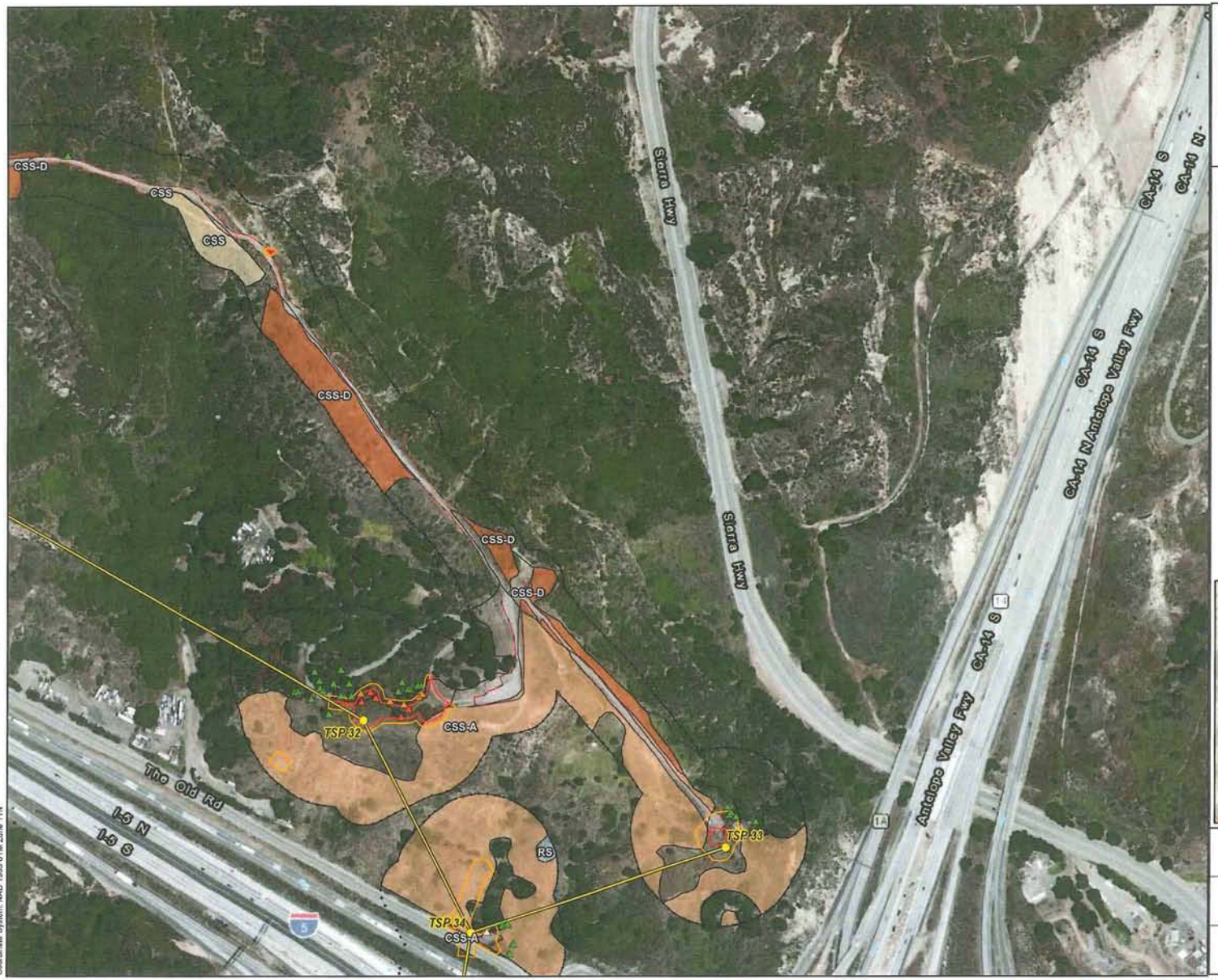
0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.7



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- Oak - planned pruning >25%
- Oak - planned removal
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- WW - Southern California Walnut Woodland
- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.8

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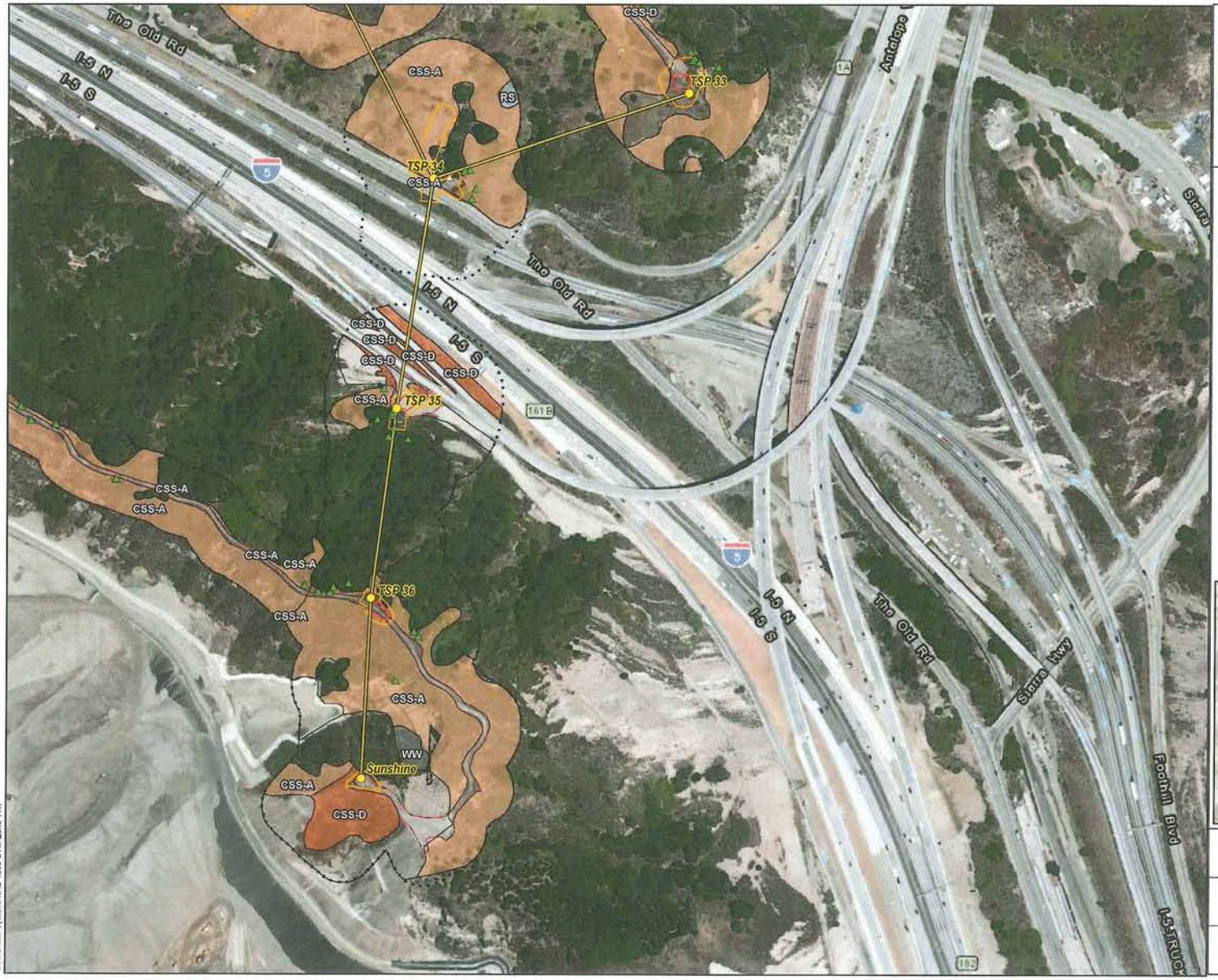
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

- Oak - no planned pruning
- Oak - planned pruning <25%
- Oak - planned pruning >25%
- Oak - planned removal
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
- OBS - Oak - Bigcone-Spruce Woodland/Forest
- VOCLO - Valley Oak and Coast Live Oak Savanna
- WW - Southern California Walnut Woodland
- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.9

\\corpsangis\Data\ArcGis\Data\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPSETS\SCE_Fig4_SensitiveResources_Mapset.mxd 9/7/2014 DFischer/KPetersen
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.10

\\corpsrcgis\Data\ArcGis Data\GISPROJECTS_ENV Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPSETS\SCE_Fig4_SensitiveResources_Mapset.mxd 9/7/2014 DFischer/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

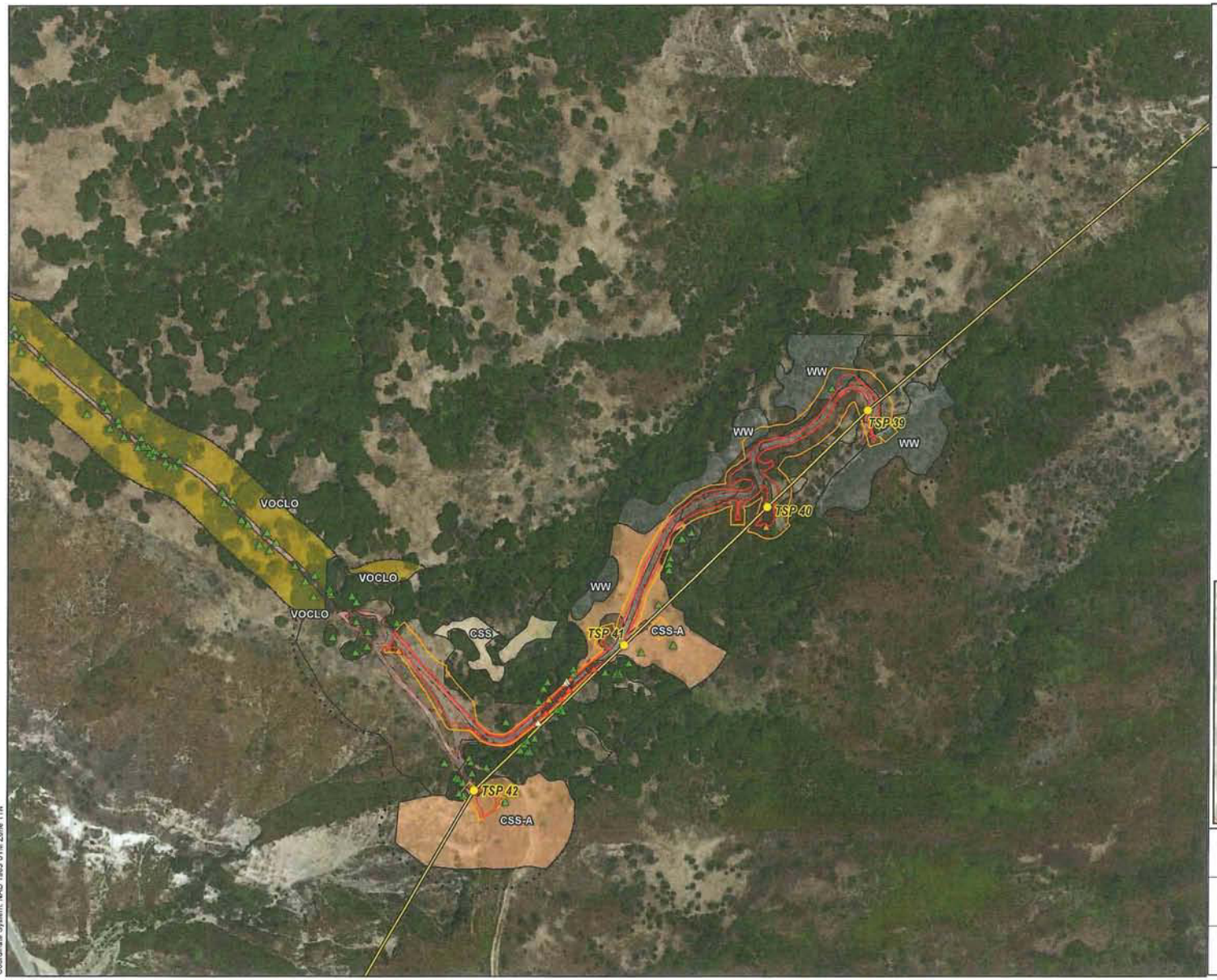
SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.11

I:\corporate\Data\ArcGisData\GISPROJECTS_ENV Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPSET\SCE_Fig4_SensitiveResources_Mapset.mxd 9/7/2014 DFischer/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.12

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Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- CSS-D - Venturan Coastal Sage Scrub-Disturbed
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- VOCLO - Valley Oak and Coast Live Oak Savanna
- WW - Southern California Walnut Woodland
- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.13

\\orpargis\Data\ArcGIsData\GIS\PROJECTS_ENV Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPSET\S19\CE_Fig4_SensitiveResources_Mapset.mxd 9/7/2014 DFischer/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

- Oak - no planned pruning
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- Oak - planned removal
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- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
- OBS - Oak - Bigcone-Spruce Woodland/Forest
- VOCLO - Valley Oak and Coast Live Oak Savanna
- WW - Southern California Walnut Woodland
- RS - Riparian Scrub
- RV - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.14

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- Oak - planned pruning <25%
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- CSS-D - Venturan Coastal Sage Scrub-Disturbed
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- WW - Southern California Walnut Woodland
- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.15

\\corpargis\Data\ArcGisData\GIS\PROJECTS_ENV Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPS\ET\TS15CE_Fig4_SensitiveResources_Mapset.mxd 9/7/2014 DFletcher/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- Oak - planned removal
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- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.16

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.17

\\corpargis\Data\ArcGisData\GISPROJECTS_ENV Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPSHEETS\SCE_Fig4_SensitiveResources_Mapset.mxd 9/7/2014 DFischer/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.18

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

Vegetation Legend

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- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

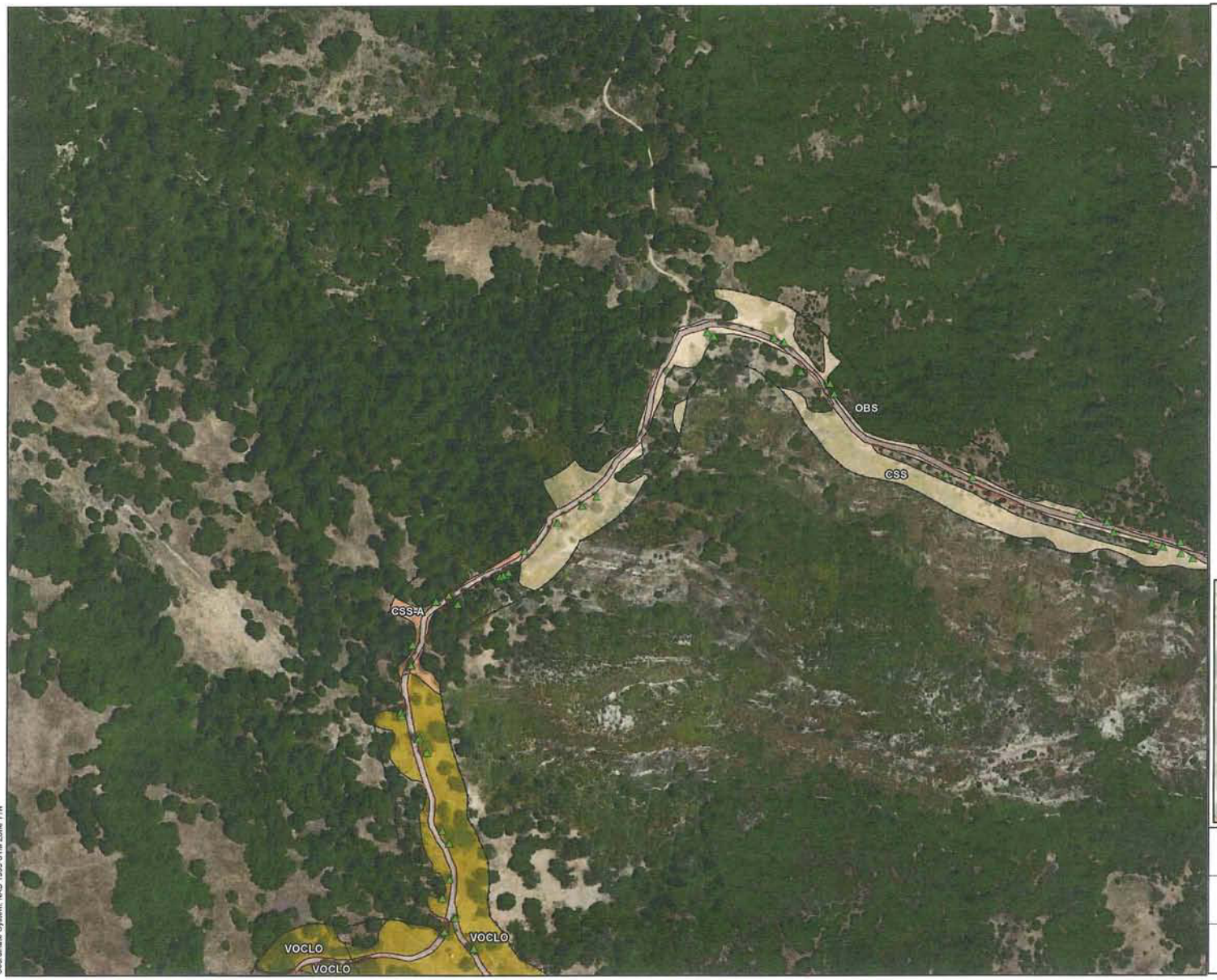
0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.19



SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Vegetation Survey Limits
- Existing Roads
- CDFW Jurisdictional Areas
- USACE Jurisdictional Drainages

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NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.20

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
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NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.21

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Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
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- Vegetation Survey Limits
- Existing Roads
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NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.22

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
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- USACE Jurisdictional Drainages

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- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.23

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
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- RS - Riparian Scrub
- RW - Riparian Woodland
- CLOR - Coast Live Oak Riparian Woodland

NOTES:
Calochortus observations mapped seperately
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

0 100 200 300 600 Feet

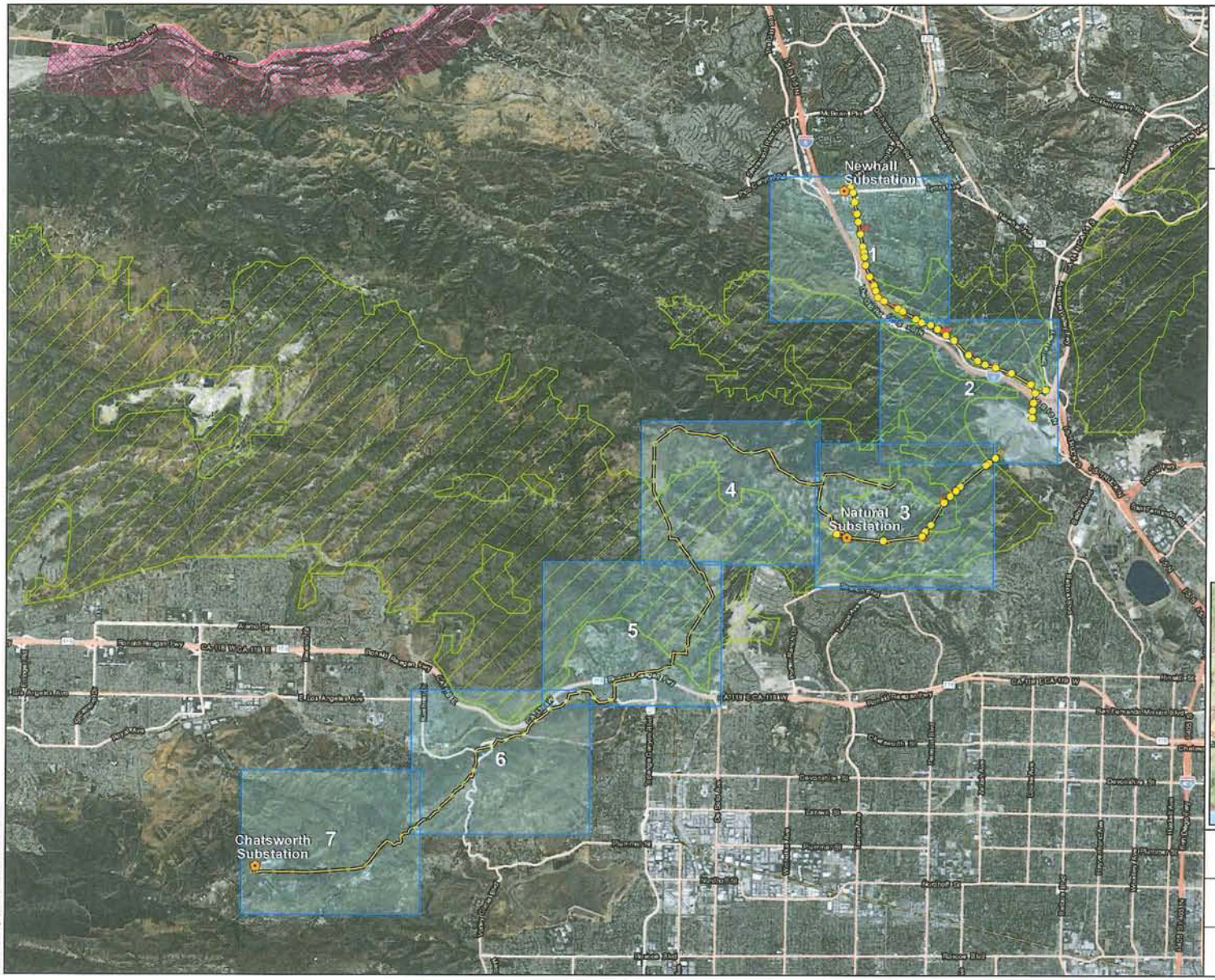
SCE Natural Substation
Los Angeles County, CA

SENSITIVE BIOLOGICAL RESOURCES

ARCADIS

FIGURE 4.24

\\corpgis\Data\ArcGISData\GISPROJECTS_ENV 7\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\VEGETATION_MAPS\ETR\SCE_Fig4_SensitiveResources_Mapset.mxd 9/7/2014 DFischer/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N



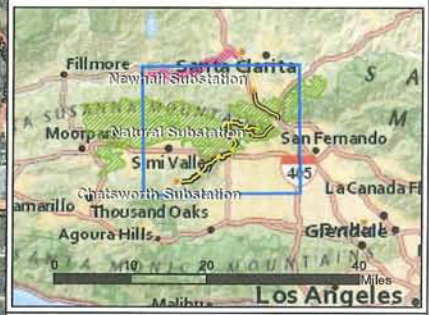
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- Map Index
- Coastal California Gnatcatcher Designated Critical Habitat
- Least Bell's Vireo Designated Critical Habitat
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line

NOTES:
Critical Habitat from U.S Fish and Wildlife Critical Habitat Portal
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic and World Imagery

0 1 2 Miles

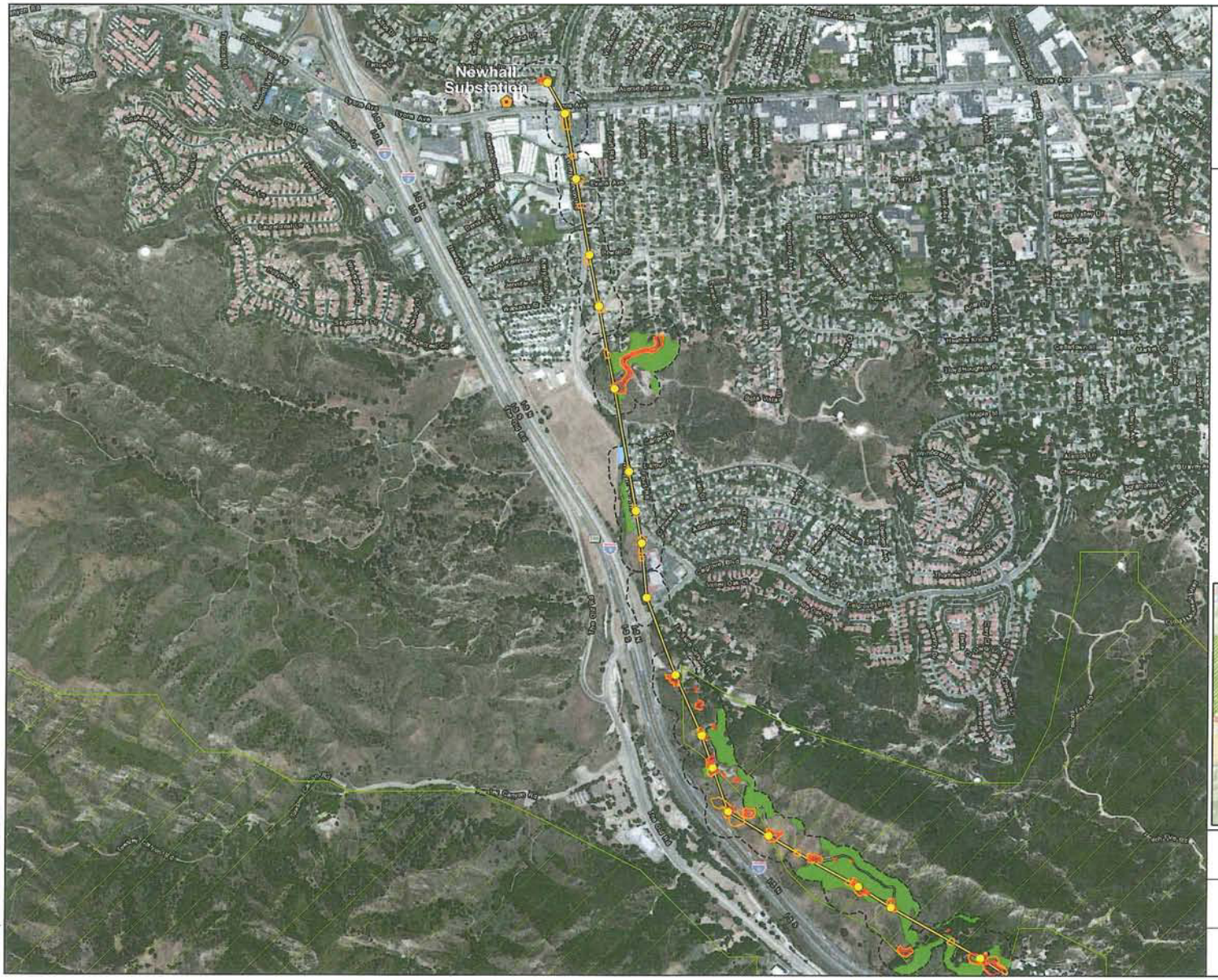


SCE Natural Substation
Los Angeles County, CA

CA GNATCATCHER AND LEAST BELL'S VIREO HABITAT

ARCADIS

FIGURE 5



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

- Coastal California Gnatcatcher Designated Critical Habitat
- Least Bell's Vireo Designated Critical Habitat
- Coastal California Gnatcatcher Suitable Habitat
- Least Bell's Vireo Suitable Habitat
- Vegetation Survey Limits
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Proposed Structures

NOTES:
Critical Habitat from U.S Fish and Wildlife Critical Habitat Portal
Suitable Habitat Mapping on Chatsworth Line from AECOM Surveys 2012
Suitable Habitat Mapping on Newhall-Natural Line from ARCADIS Surveys 2014
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic and World Imagery

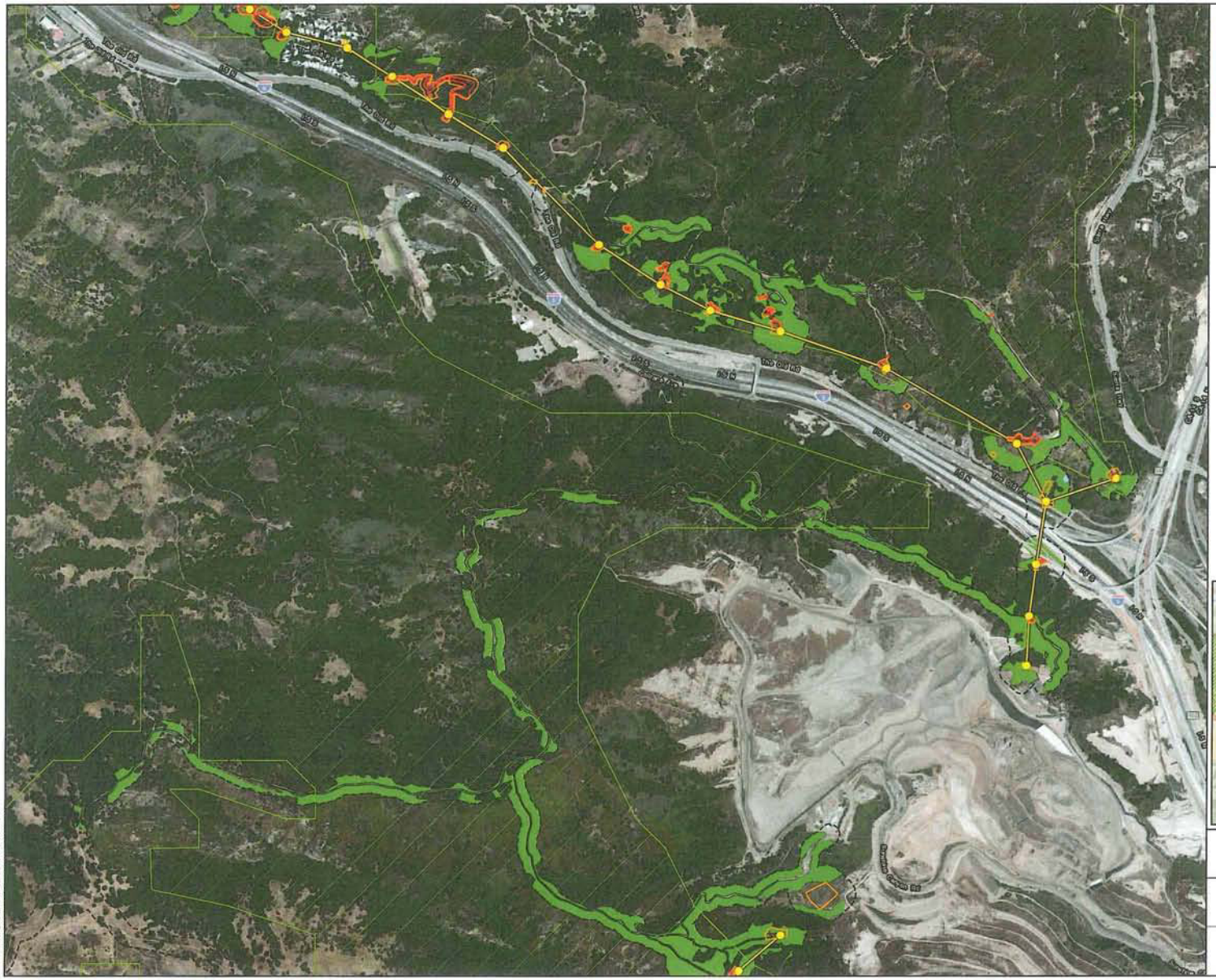
0 1,000 2,000 Feet

SCE Natural Substation
Los Angeles County, CA

CA GNATCATCHER AND LEAST BELL'S VIREO HABITAT

ARCADIS

FIGURE 5.1



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

- Coastal California Gnatcatcher Designated Critical Habitat
- Least Bell's Vireo Designated Critical Habitat
- Coastal California Gnatcatcher Suitable Habitat
- Least Bell's Vireo Suitable Habitat
- Vegetation Survey Limits
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Proposed Structures

NOTES:
Critical Habitat from U.S Fish and Wildlife Critical Habitat Portal
Suitable Habitat Mapping on Chatsworth Line from AECOM Surveys 2012
Suitable Habitat Mapping on Newhall-Natural Line from ARCADIS Surveys 2014
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic and World Imagery

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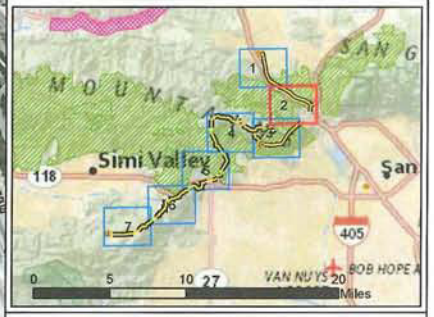
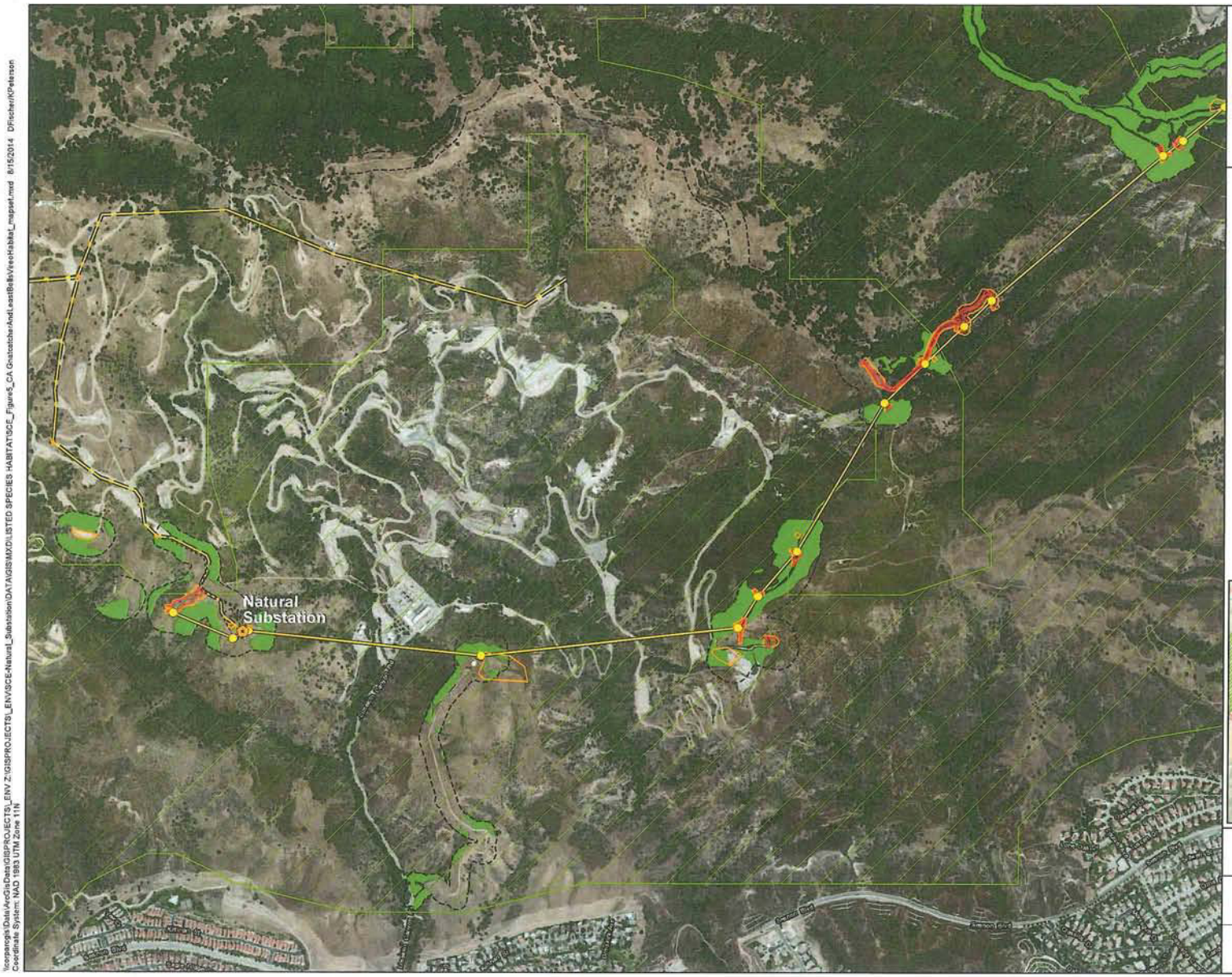


SCE Natural Substation
Los Angeles County, CA

CA GNATCATCHER AND LEAST BELL'S VIREO HABITAT

ARCADIS

FIGURE 5.2



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

- Coastal California Gnatcatcher Designated Critical Habitat
- Least Bell's Vireo Designated Critical Habitat
- Coastal California Gnatcatcher Suitable Habitat
- Least Bell's Vireo Suitable Habitat
- Vegetation Survey Limits
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Proposed Structures

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Critical Habitat from U.S Fish and Wildlife Critical Habitat Portal
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Suitable Habitat Mapping on Newhall-Natural Line from ARCADIS Surveys 2014
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic and World Imagery

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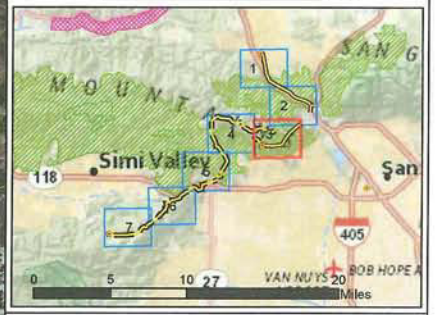
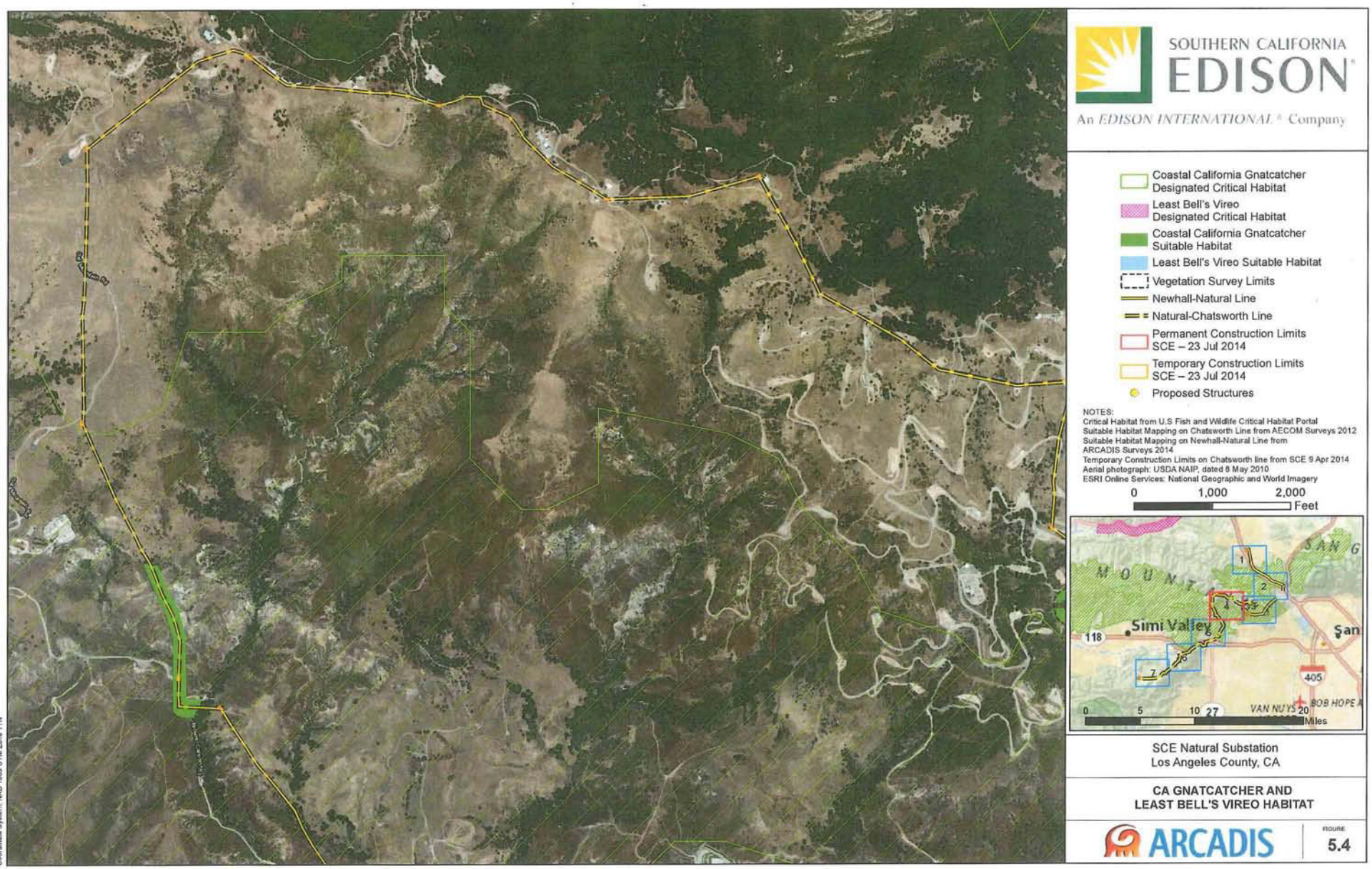


SCE Natural Substation
Los Angeles County, CA

CA GNATCATCHER AND LEAST BELL'S VIREO HABITAT

ARCADIS

FIGURE 5.3


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company
Coastal California Gnatcatcher Designated Critical Habitat
Least Bell's Vireo Designated Critical Habitat
Coastal California Gnatcatcher Suitable Habitat
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Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic and World Imagery
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SCE Natural Substation
Los Angeles County, CA
CA GNATCATCHER AND LEAST BELL'S VIREO HABITAT
ARCADIS
FIGURE 5.4
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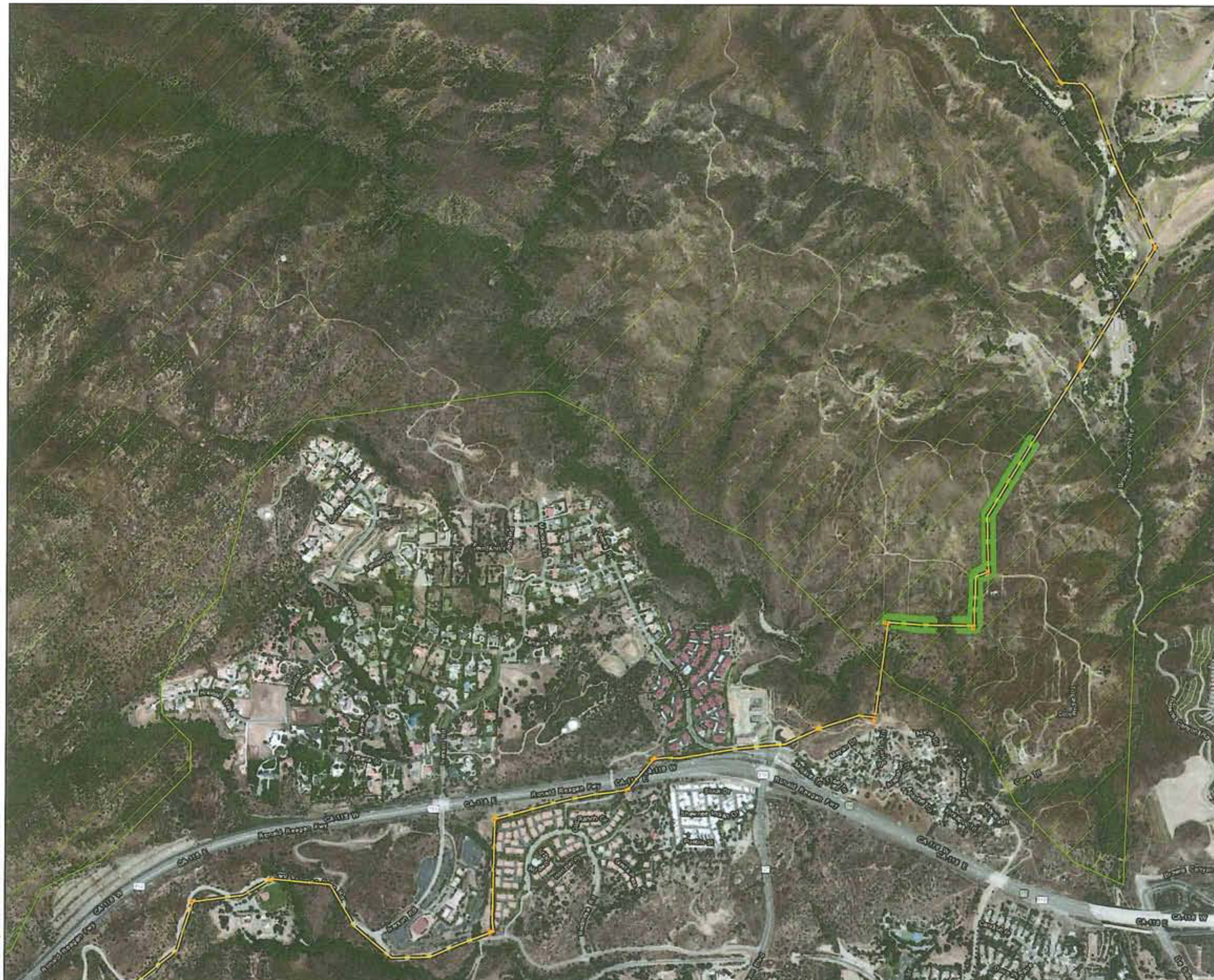
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA
EDISON
An EDISON INTERNATIONAL Company

Coastal California Gnatcatcher Designated Critical Habitat
Least Bell's Vireo Designated Critical Habitat
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Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic and World Imagery

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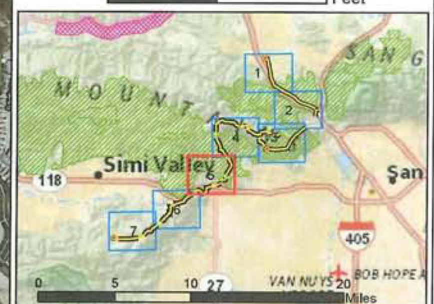

SCE Natural Substation
Los Angeles County, CA

CA GNATCATCHER AND LEAST BELL'S VIREO HABITAT

ARCADIS

FIGURE 5.5

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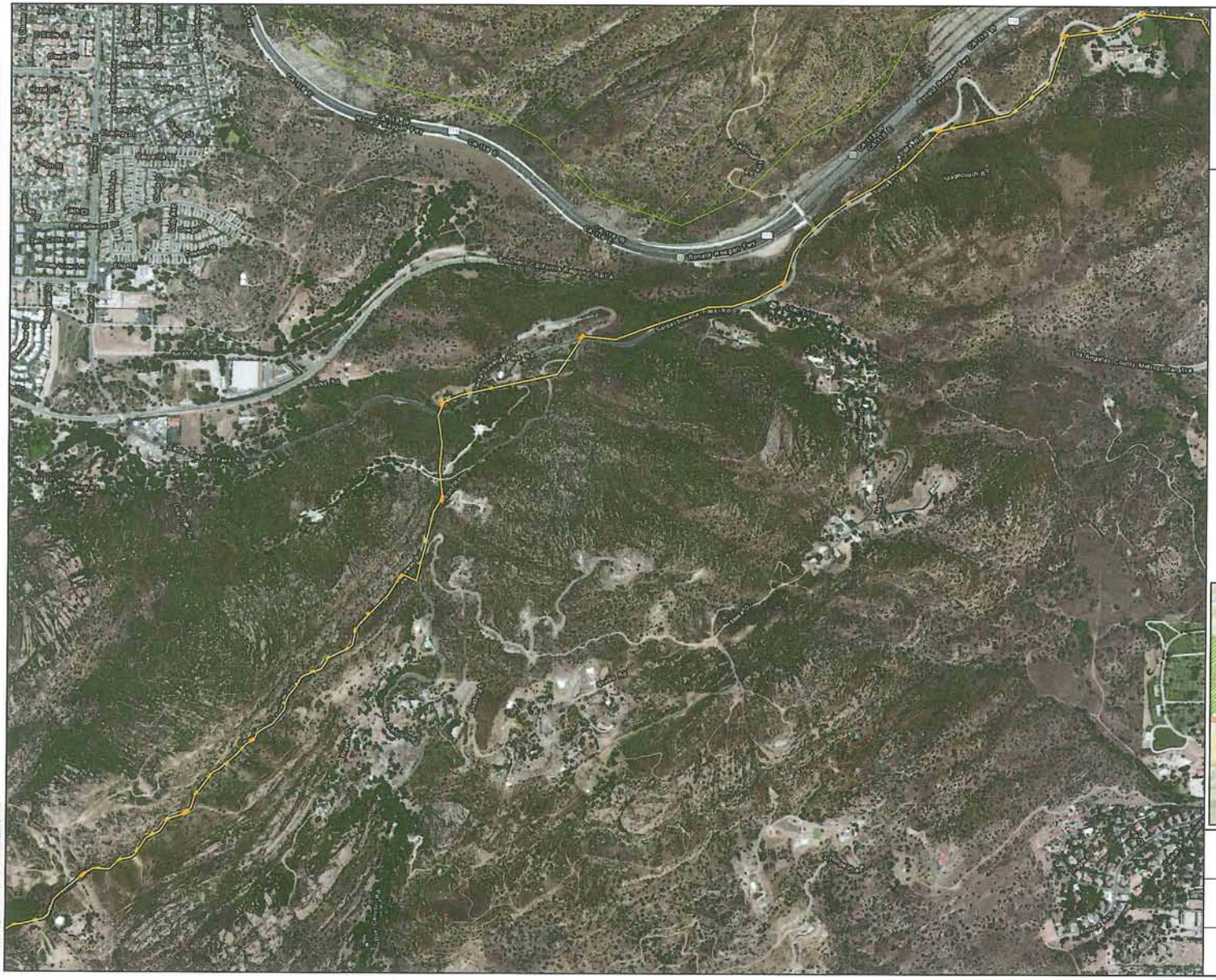
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

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Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic and World Imagery

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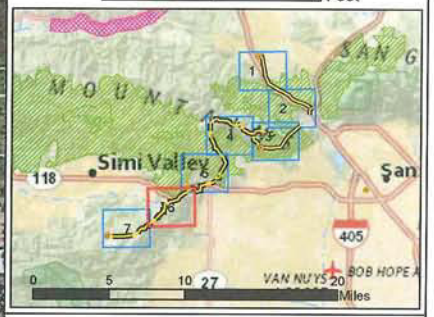

SCE Natural Substation
Los Angeles County, CA

CA GNATCATCHER AND LEAST BELL'S VIREO HABITAT

ARCADIS

FIGURE 5.6

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

- Coastal California Gnatcatcher Designated Critical Habitat
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Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic and World Imagery

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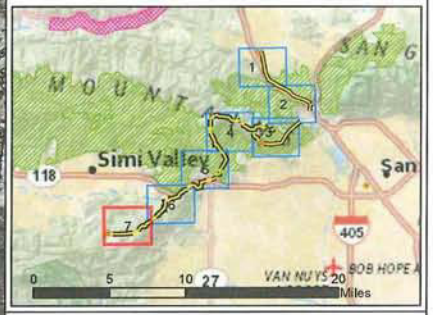

SCE Natural Substation
Los Angeles County, CA

CA GNATCATCHER AND LEAST BELL'S VIREO HABITAT

ARCADIS

FIGURE 5.7

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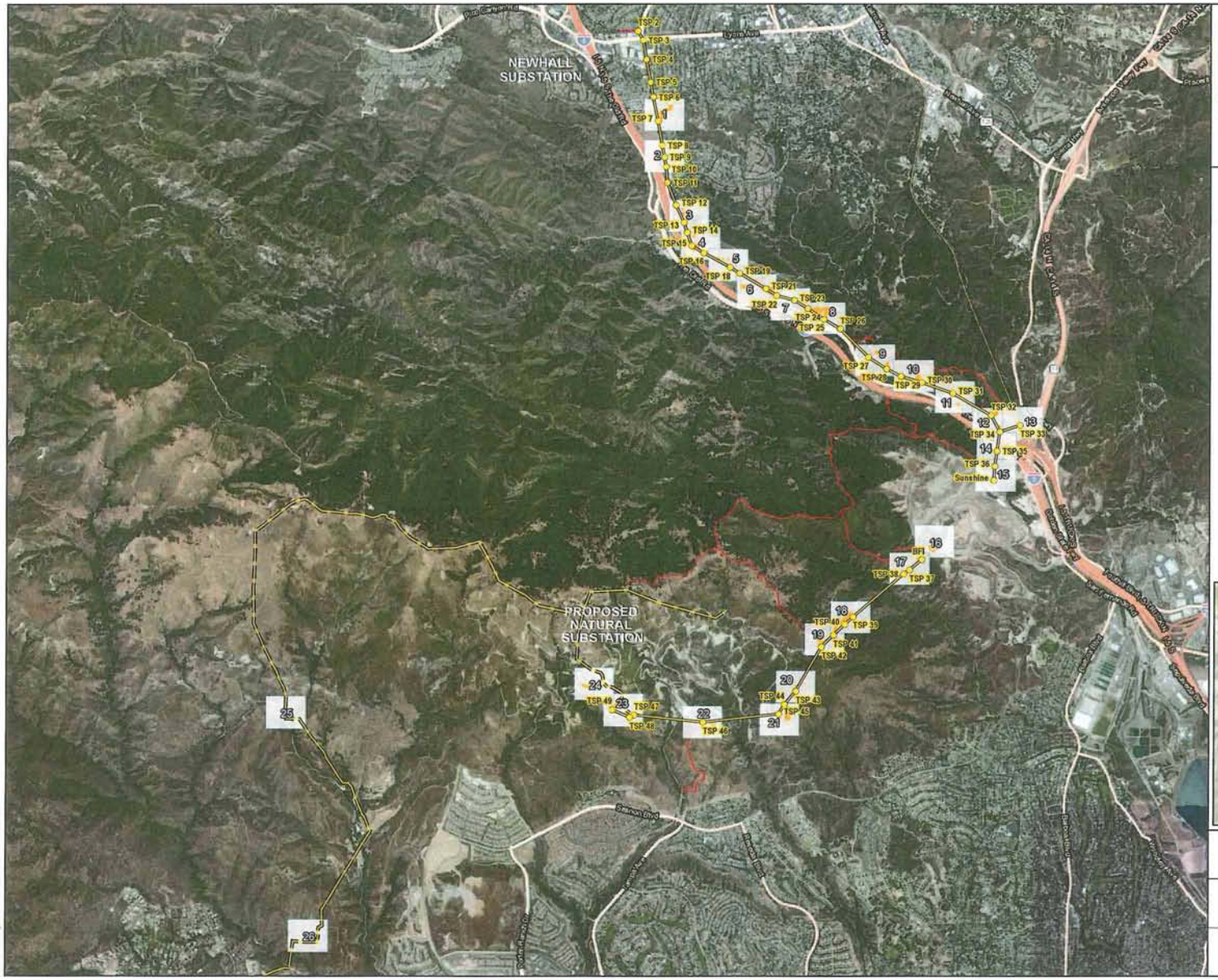
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

FEATURE LEGEND

- Map Index and Sheet Number
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Existing Roads

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010
ESRI Online Services: National Geographic

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SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS

FIGURE 6

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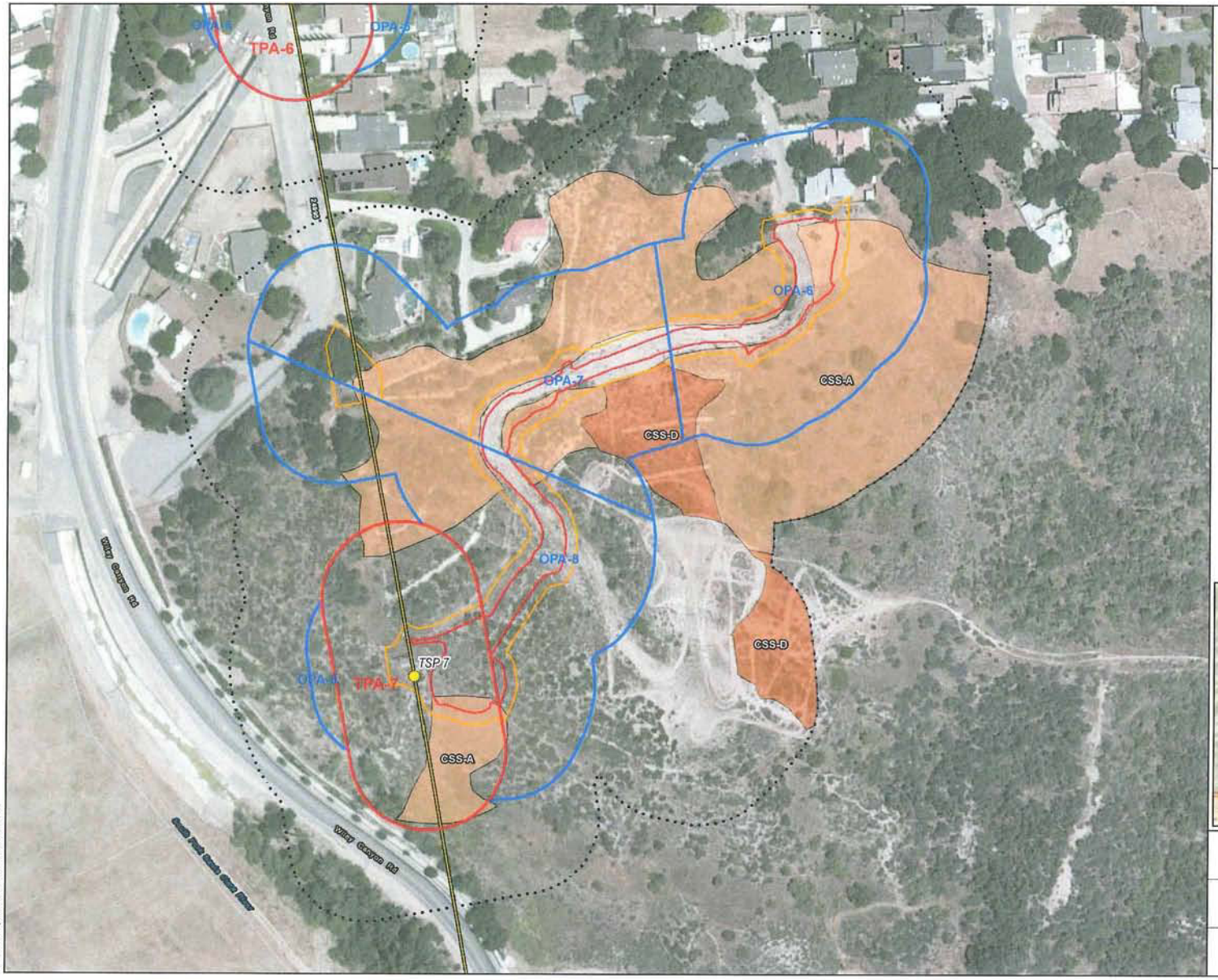
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend

- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

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SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.1

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

- TSP project areas (TPA)
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NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

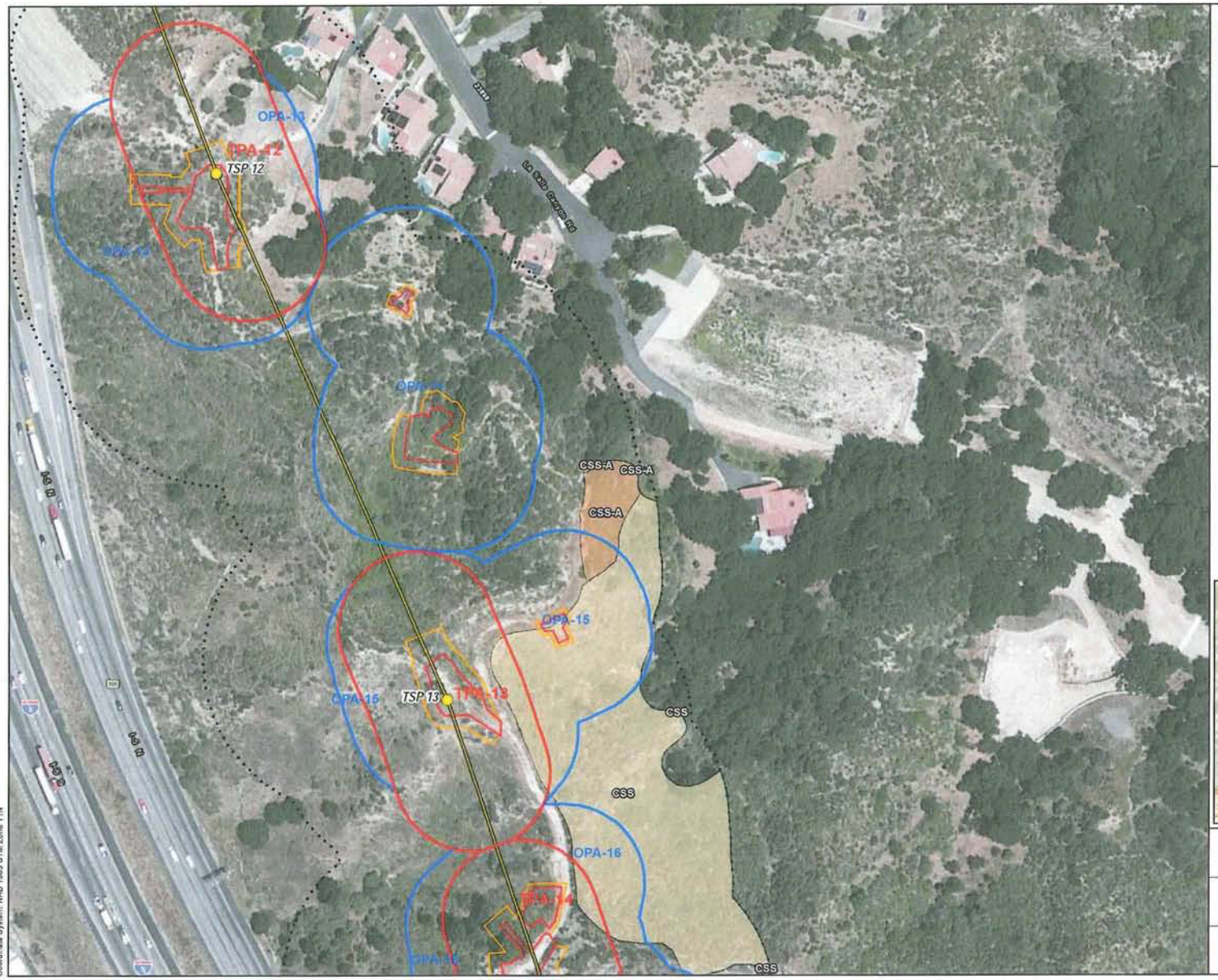
N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.2

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- TSP project areas (TPA)
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- Proposed Structures
- Newhall-Natural Line
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- Permanent Construction Limits SCE – 23 Jul 2014
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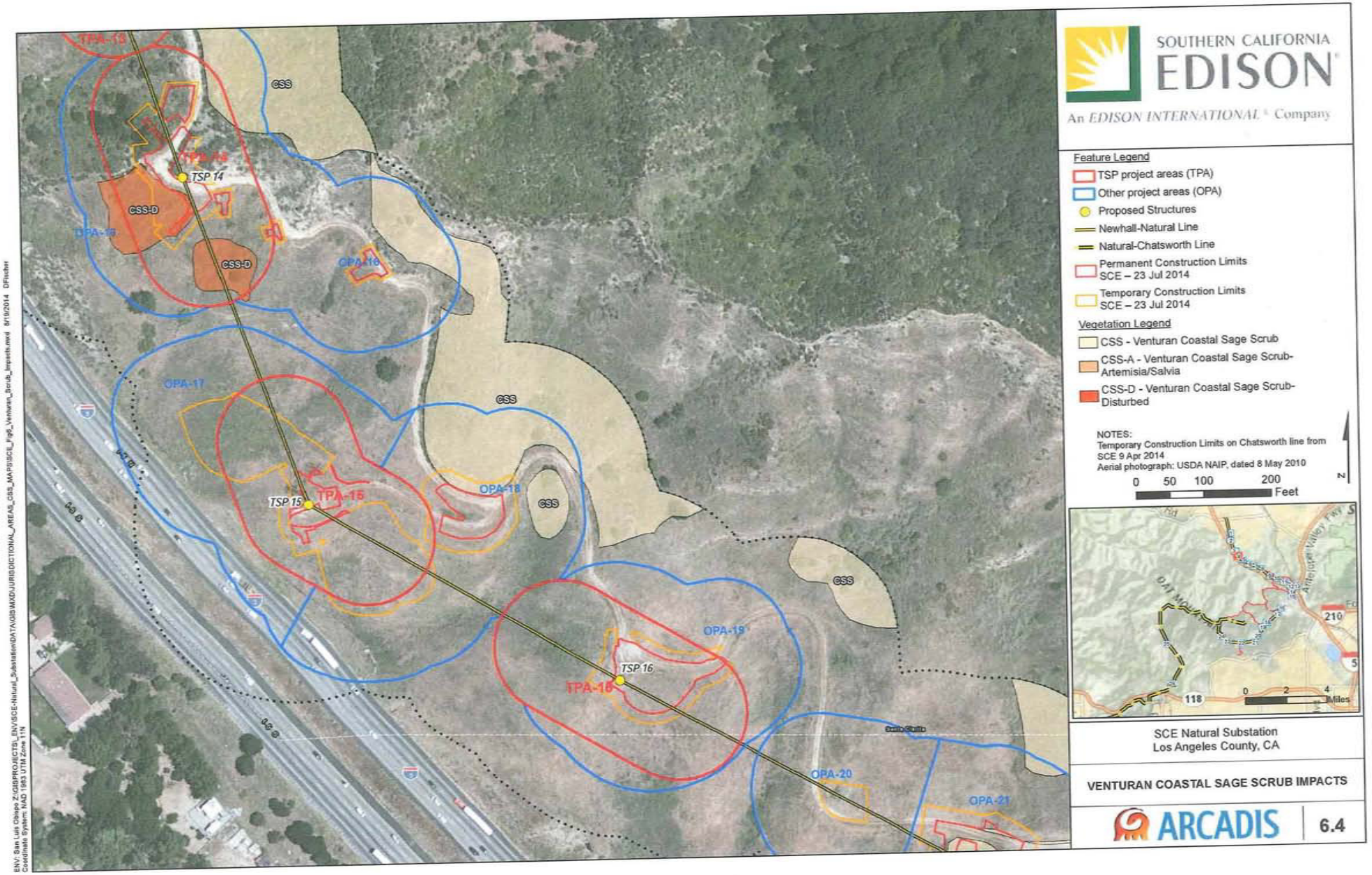
Aerial photograph: USDA NAIP, dated 8 May 2010

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.3

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\URIS\DICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend

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NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

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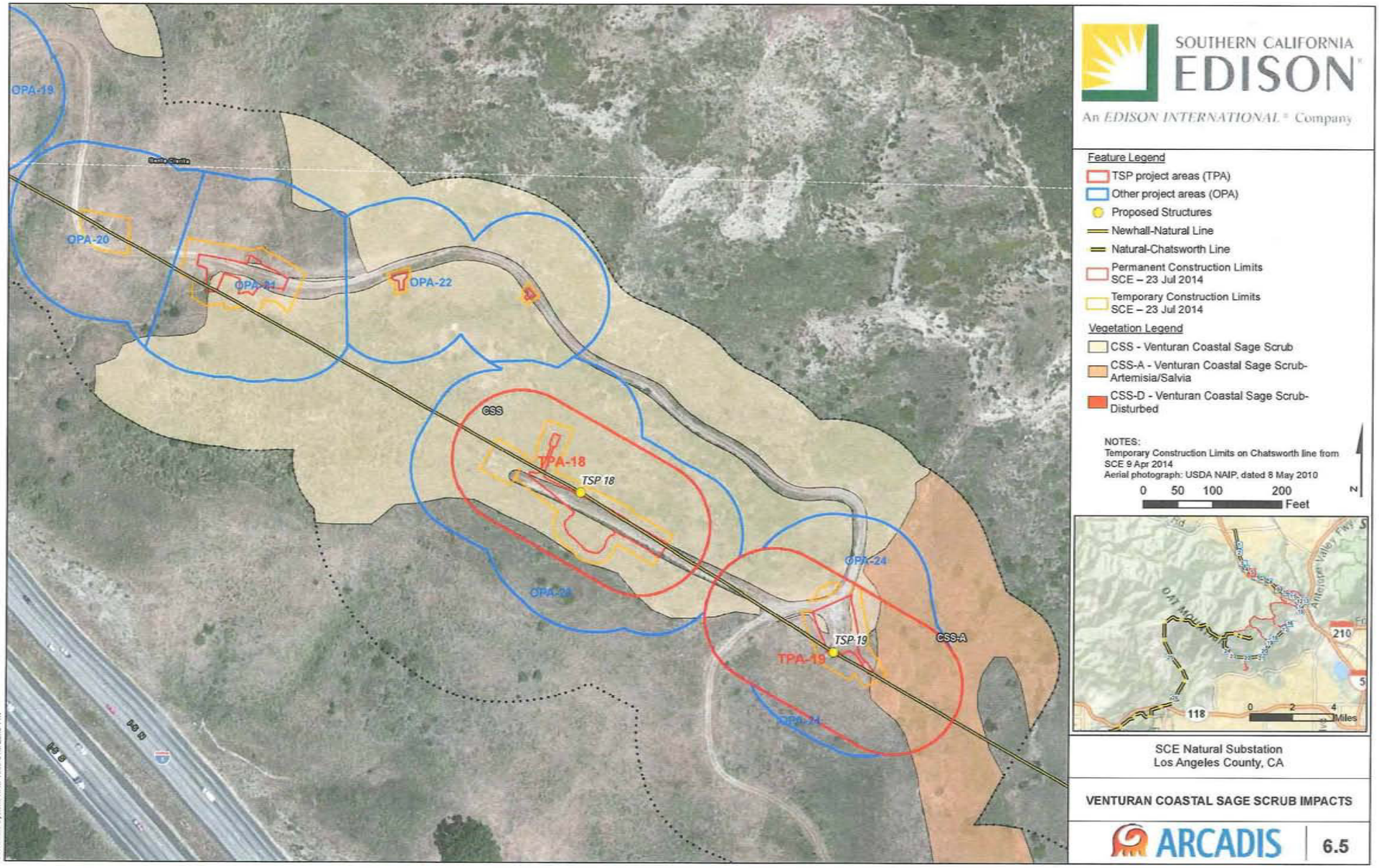
SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.4

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N


OPA-19
OPA-20
OPA-21
OPA-22
OPA-23
OPA-24
TPA-18
TPA-19
TSP 18
TSP 19
CSS
CSS-A
Santa Clarita
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company
Feature Legend
TSP project areas (TPA)
Other project areas (OPA)
Proposed Structures
Newhall-Natural Line
Natural-Chatsworth Line
Permanent Construction Limits SCE – 23 Jul 2014
Temporary Construction Limits SCE – 23 Jul 2014
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CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
CSS-D - Venturan Coastal Sage Scrub-Disturbed
NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010
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SCE Natural Substation
Los Angeles County, CA
VENTURAN COASTAL SAGE SCRUB IMPACTS
ARCADIS
6.5
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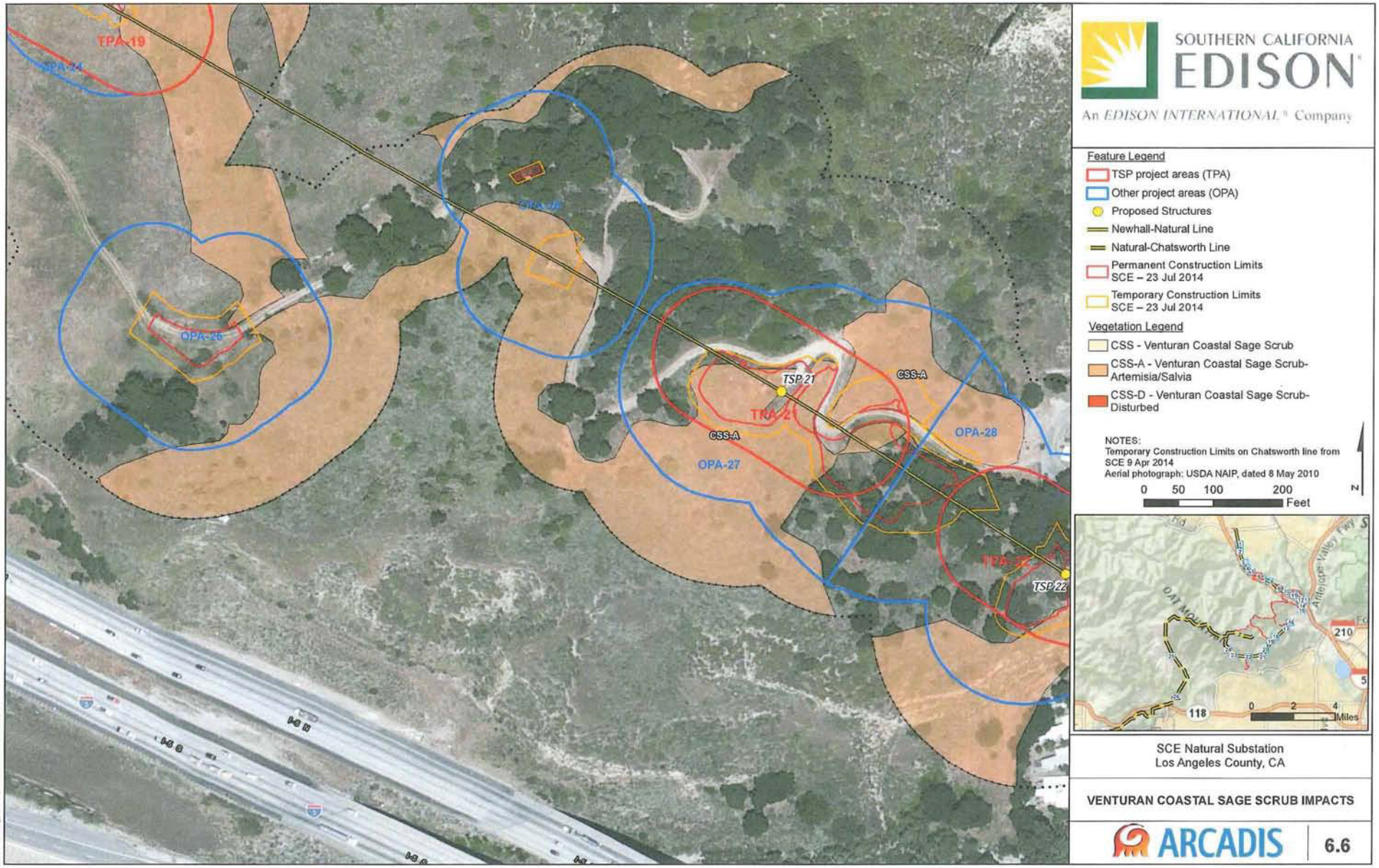
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

ENV: San Luis Obispo Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend

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NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

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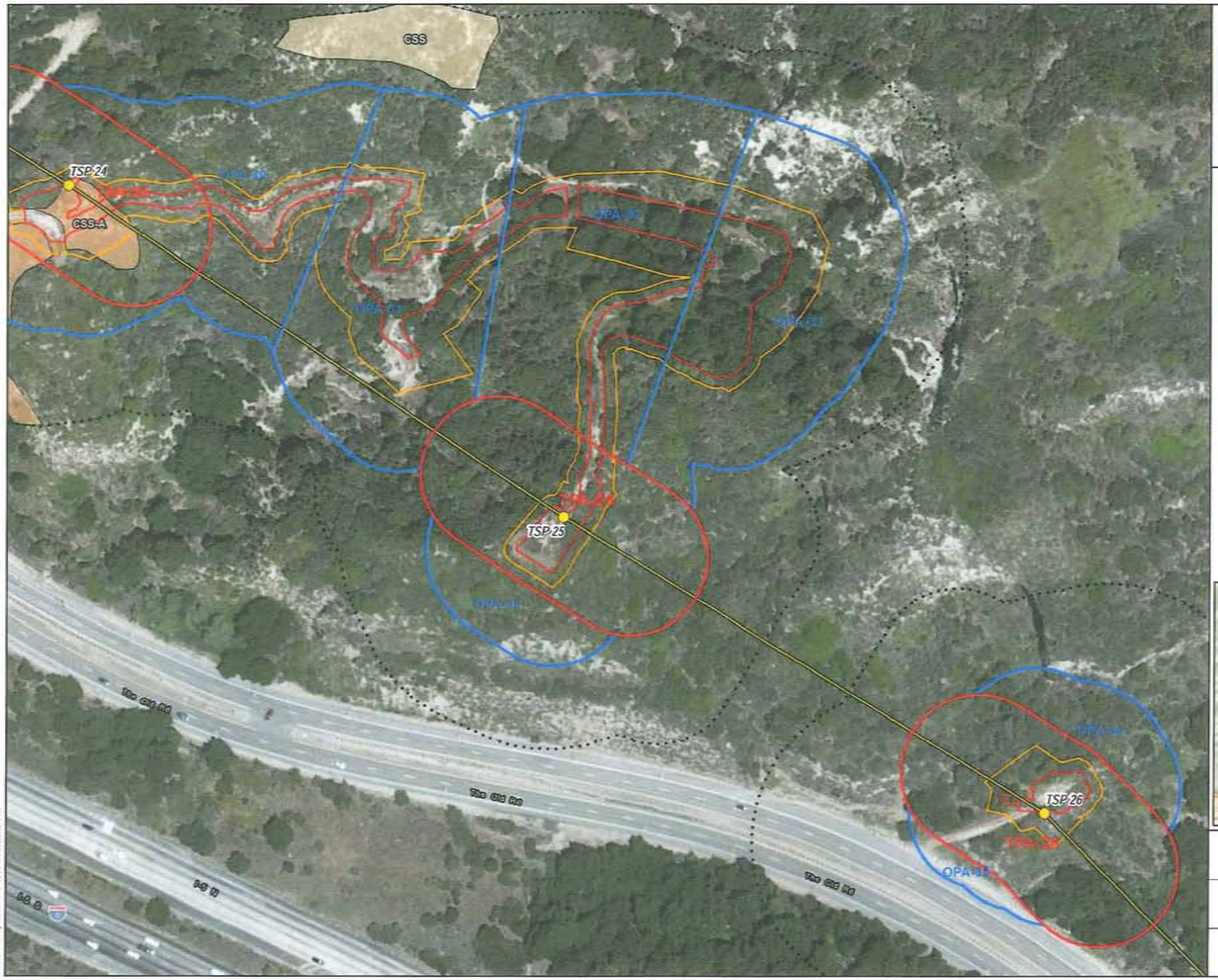
SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS

6.7

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
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0 50 100 200 Feet

N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.8

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

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0 50 100 200 Feet

N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.9

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\UVRIS\DICTIONAL_AREAS_CSS_MAPS\SCE_Fig9_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

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- Natural-Chatsworth Line
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- Temporary Construction Limits SCE – 23 Jul 2014

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Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS 6.10

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/18/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

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- Temporary Construction Limits SCE – 23 Jul 2014

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NOTES:
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Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

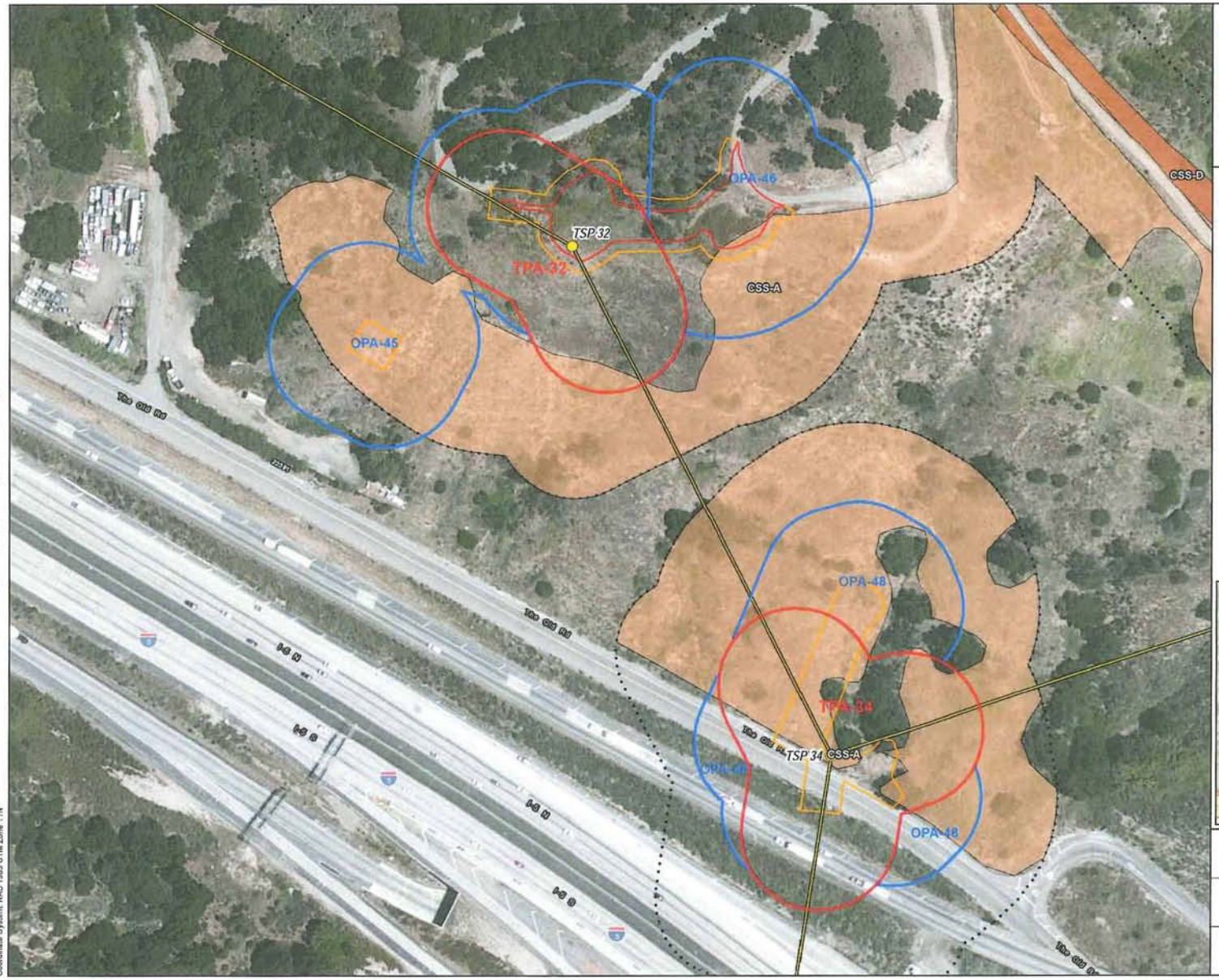
N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.11

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JJR\SDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

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- Natural-Chatsworth Line
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NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.12

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.13

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend

- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.14

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.15

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

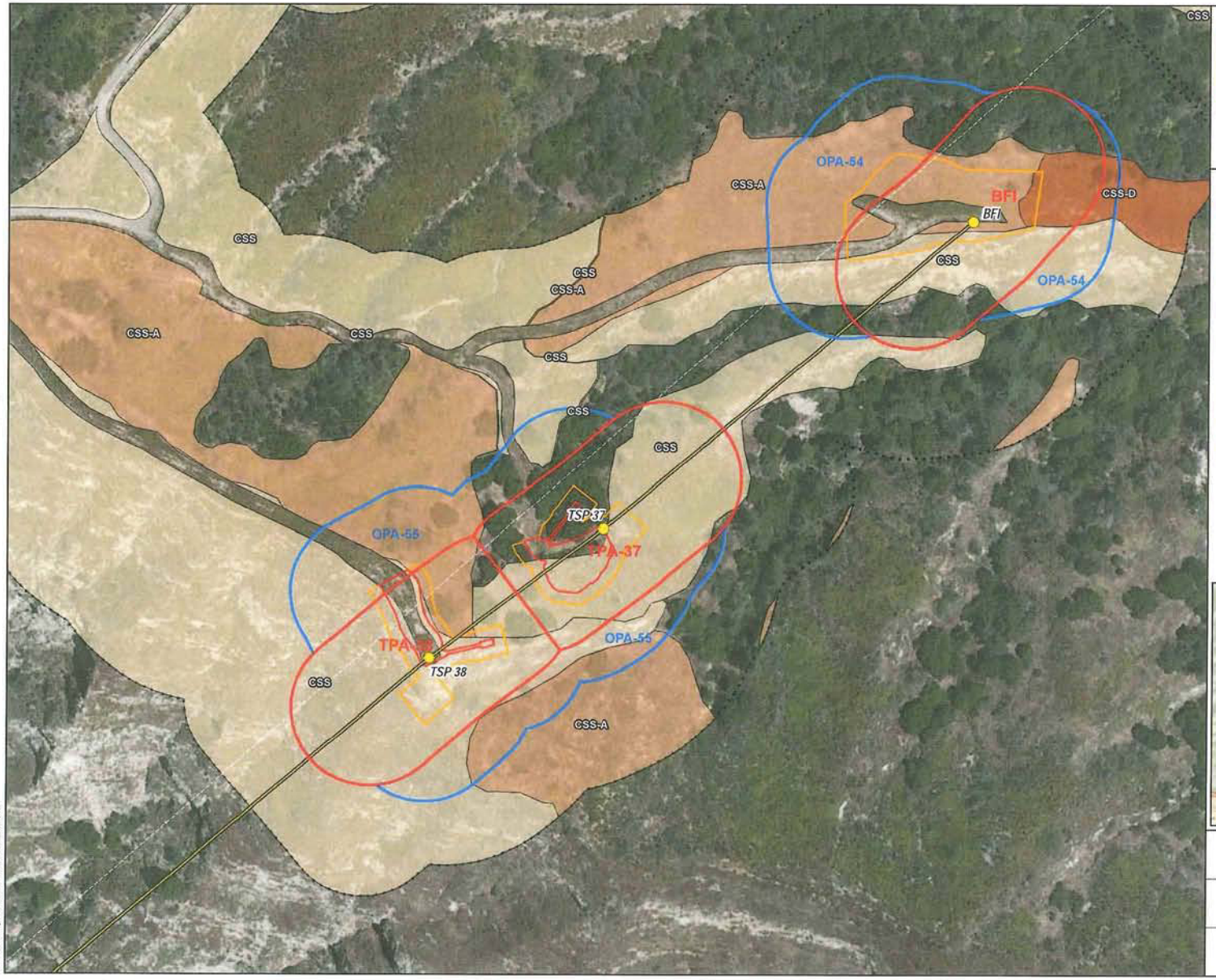
N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.16

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

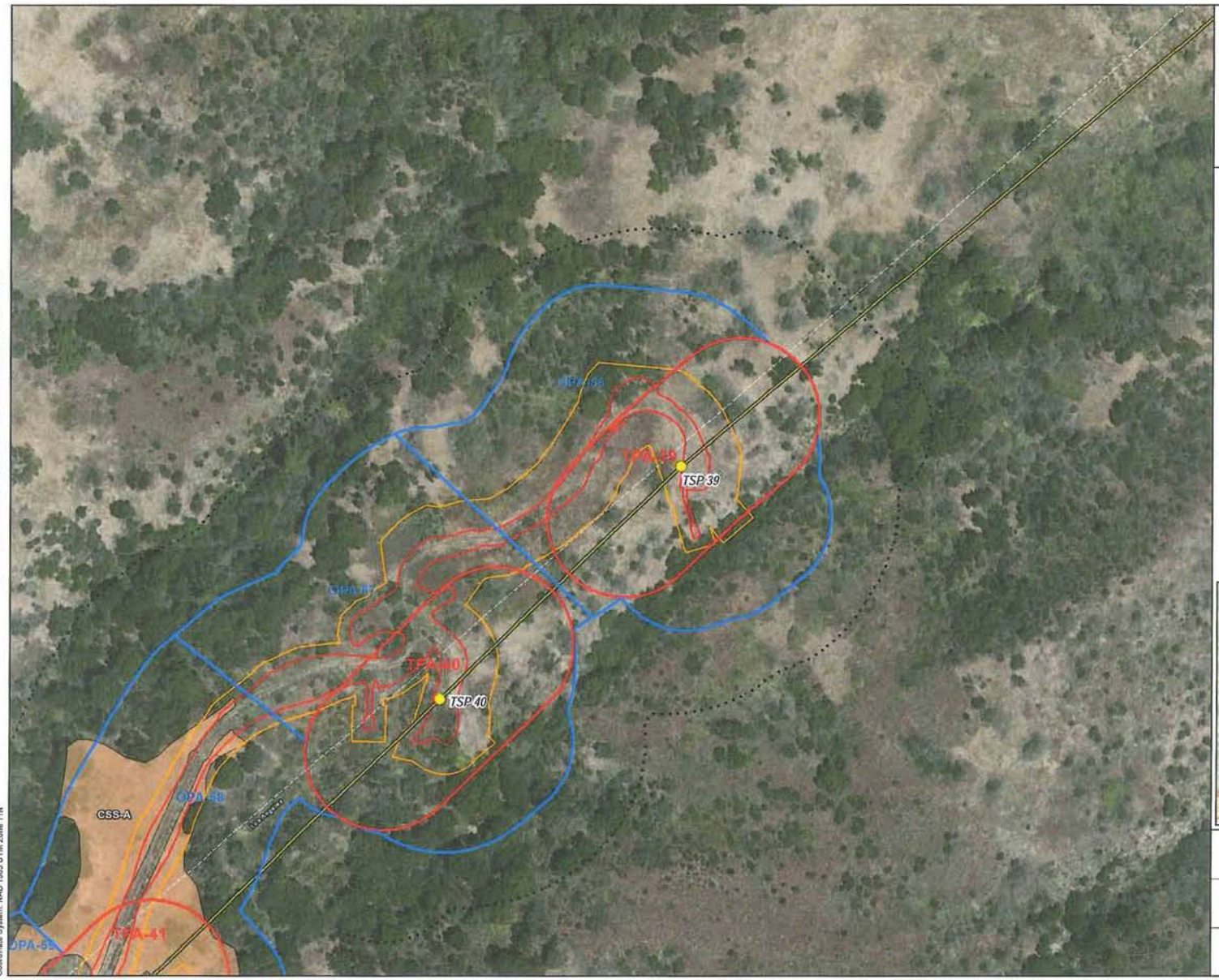
N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.17

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

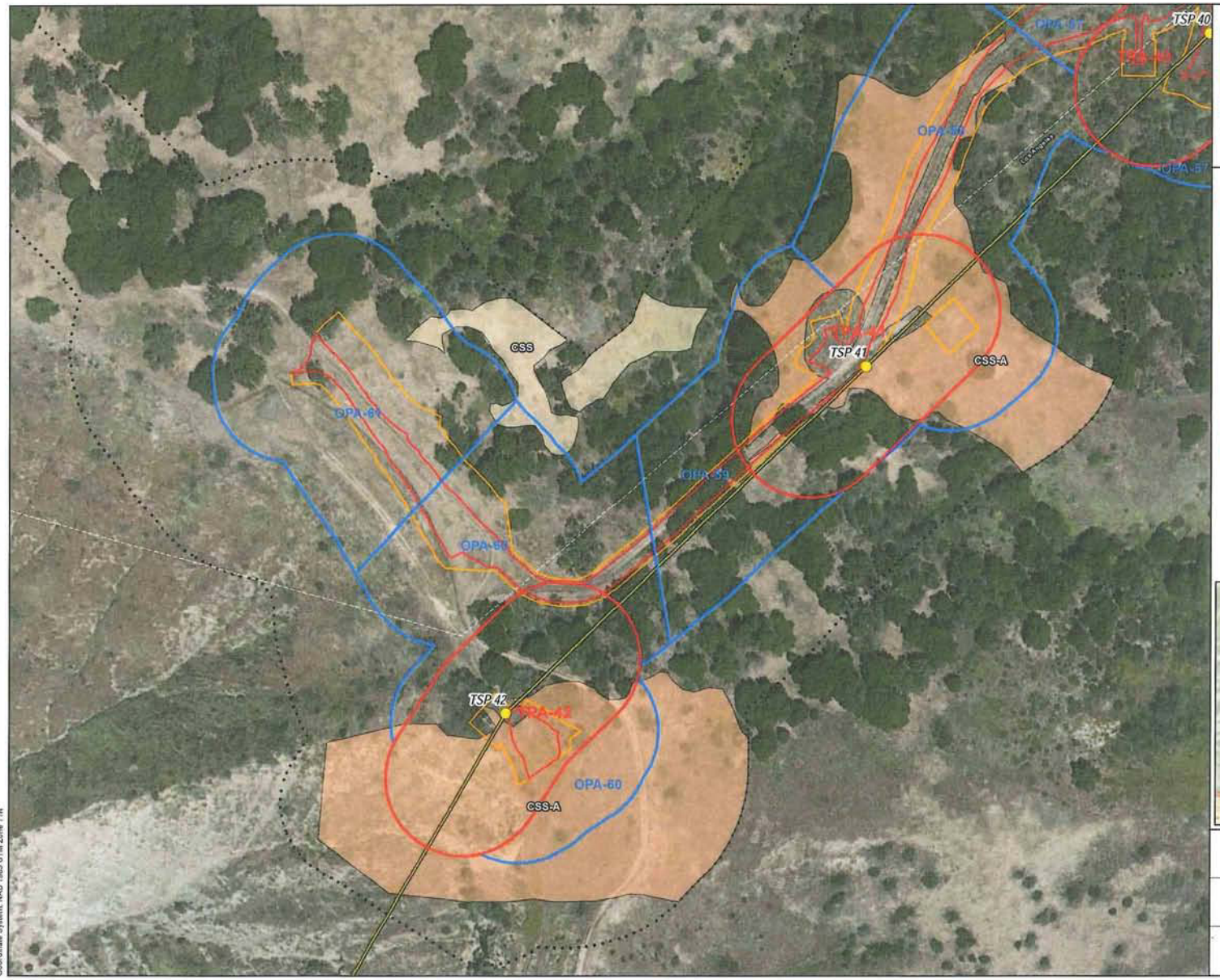
N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS 6.18

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

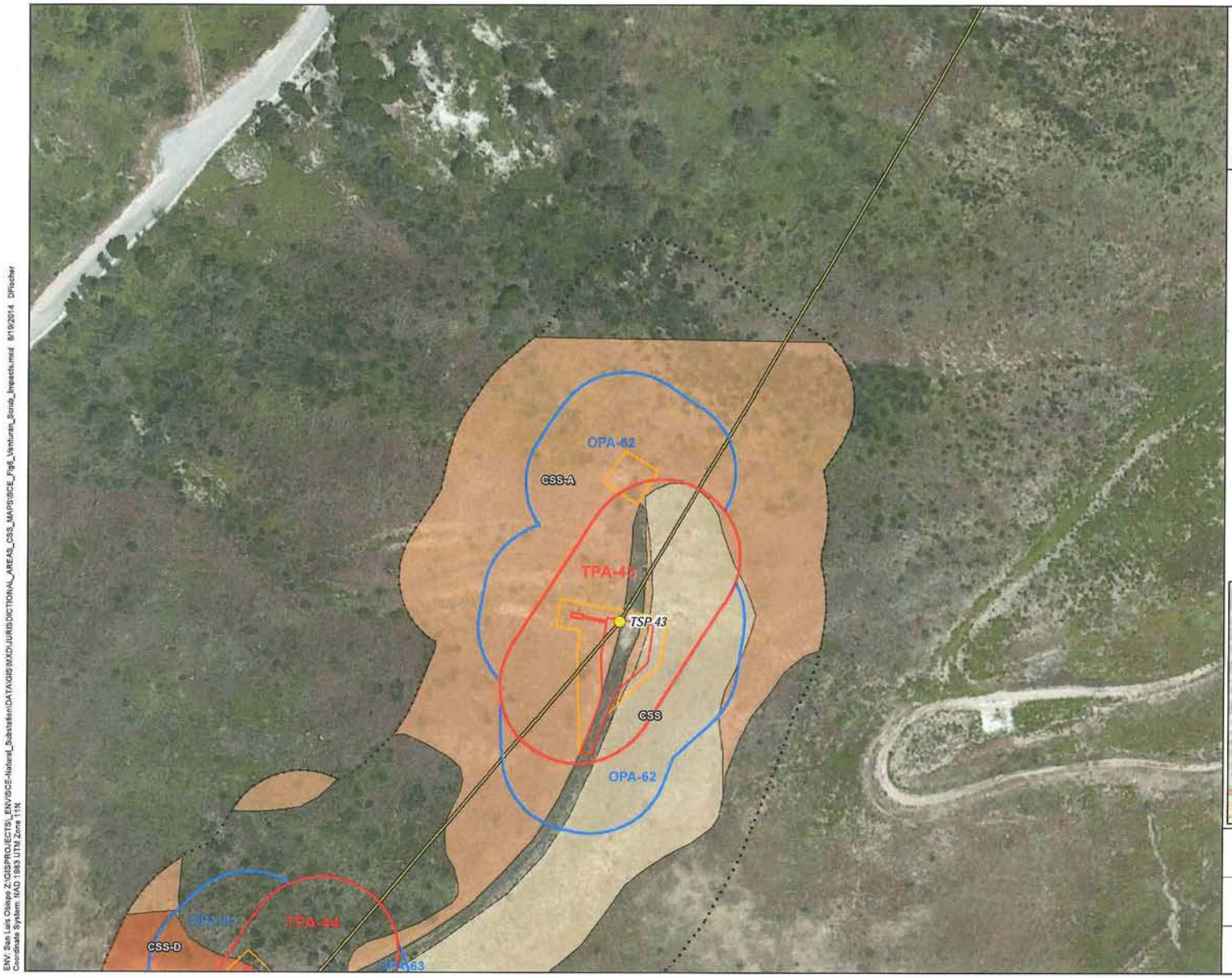
N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.19

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

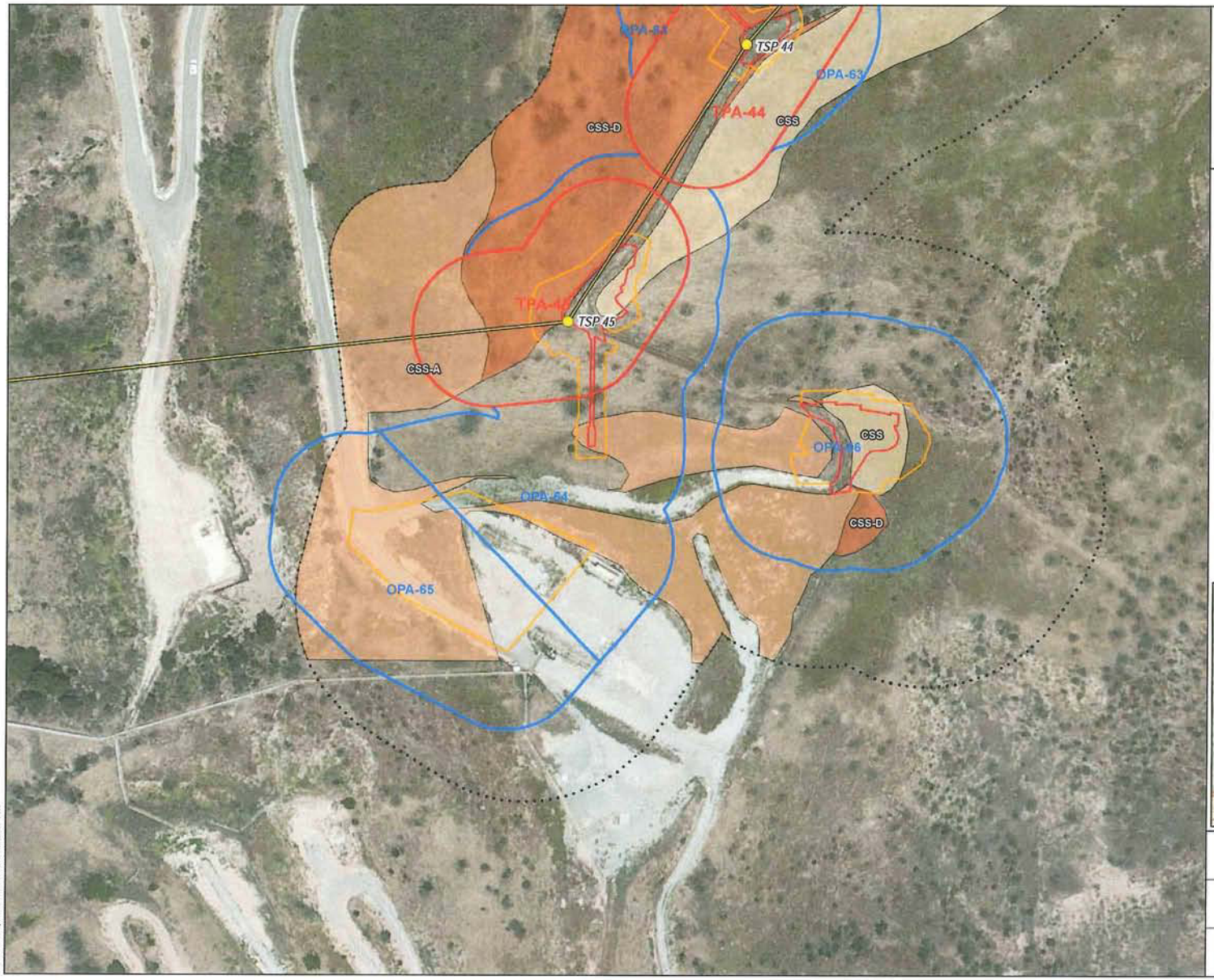
N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.20

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend

- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

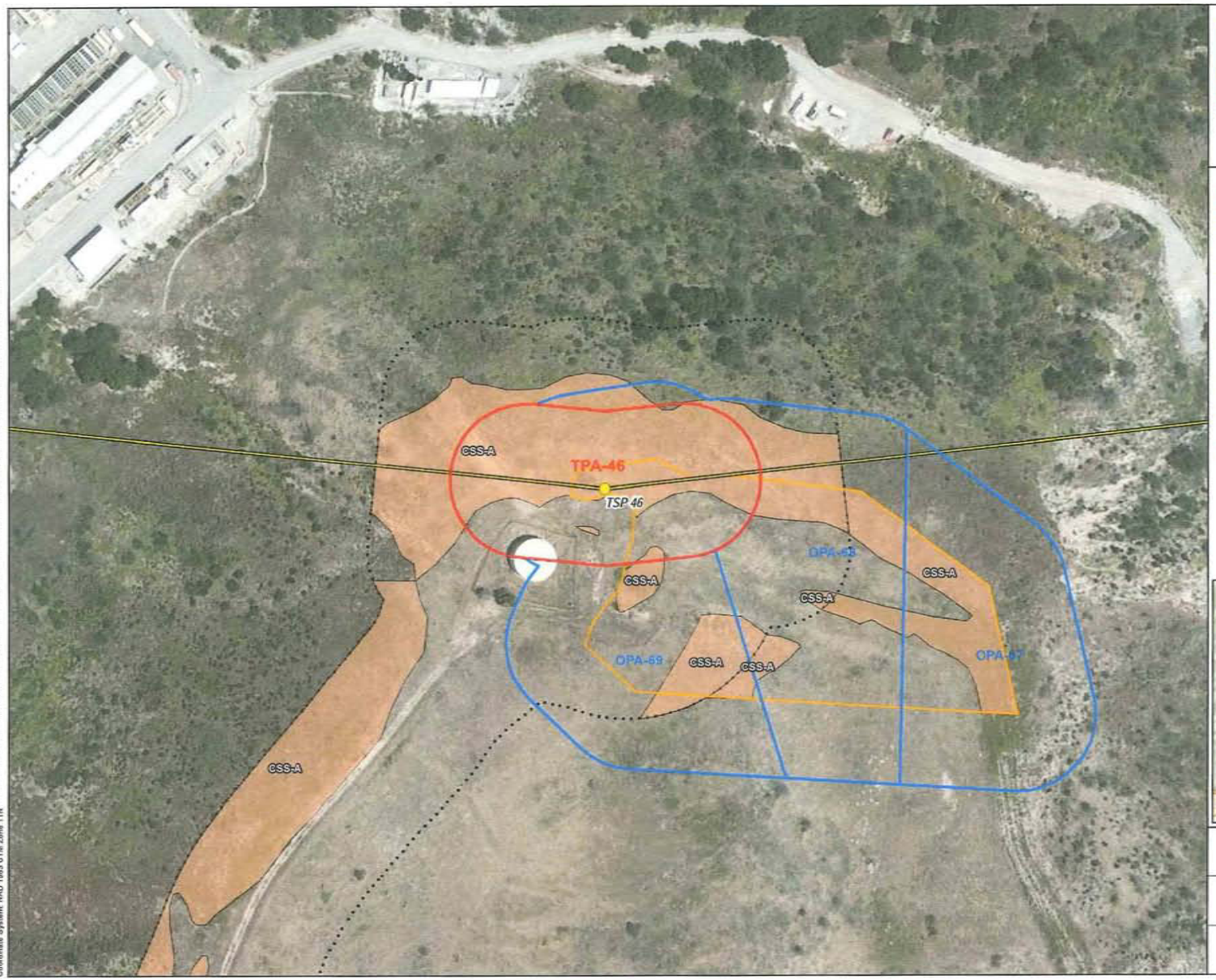
N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.21

E:\NV\ San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

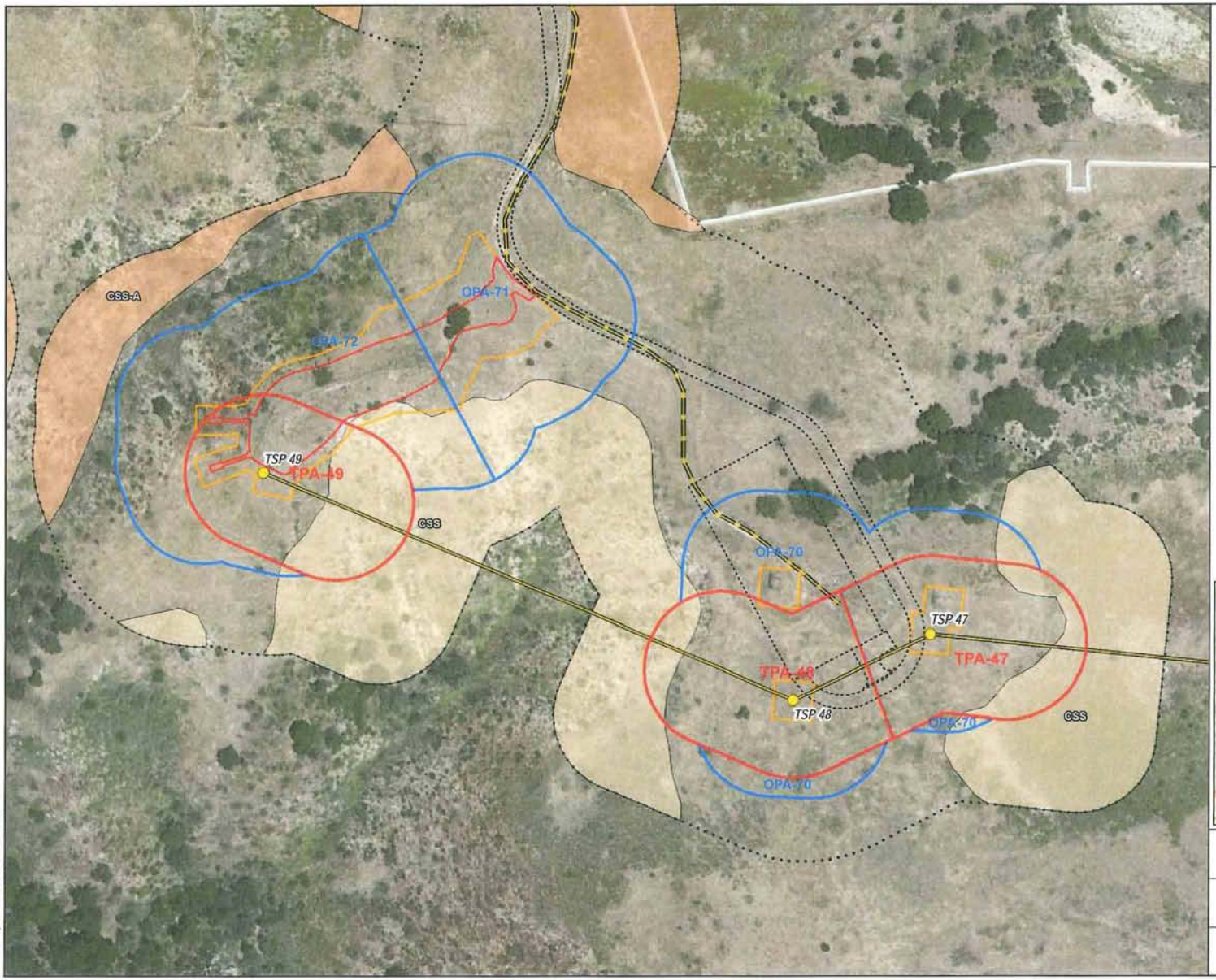
N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.22

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.23

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend

- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.24

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend
- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend
- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS 6.25

ENV: San Luis Obispo Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Venturan_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- TSP project areas (TPA)
- Other project areas (OPA)
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014

Vegetation Legend

- CSS - Venturan Coastal Sage Scrub
- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS-D - Venturan Coastal Sage Scrub-Disturbed

NOTES:
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
Aerial photograph: USDA NAIP, dated 8 May 2010

0 50 100 200 Feet

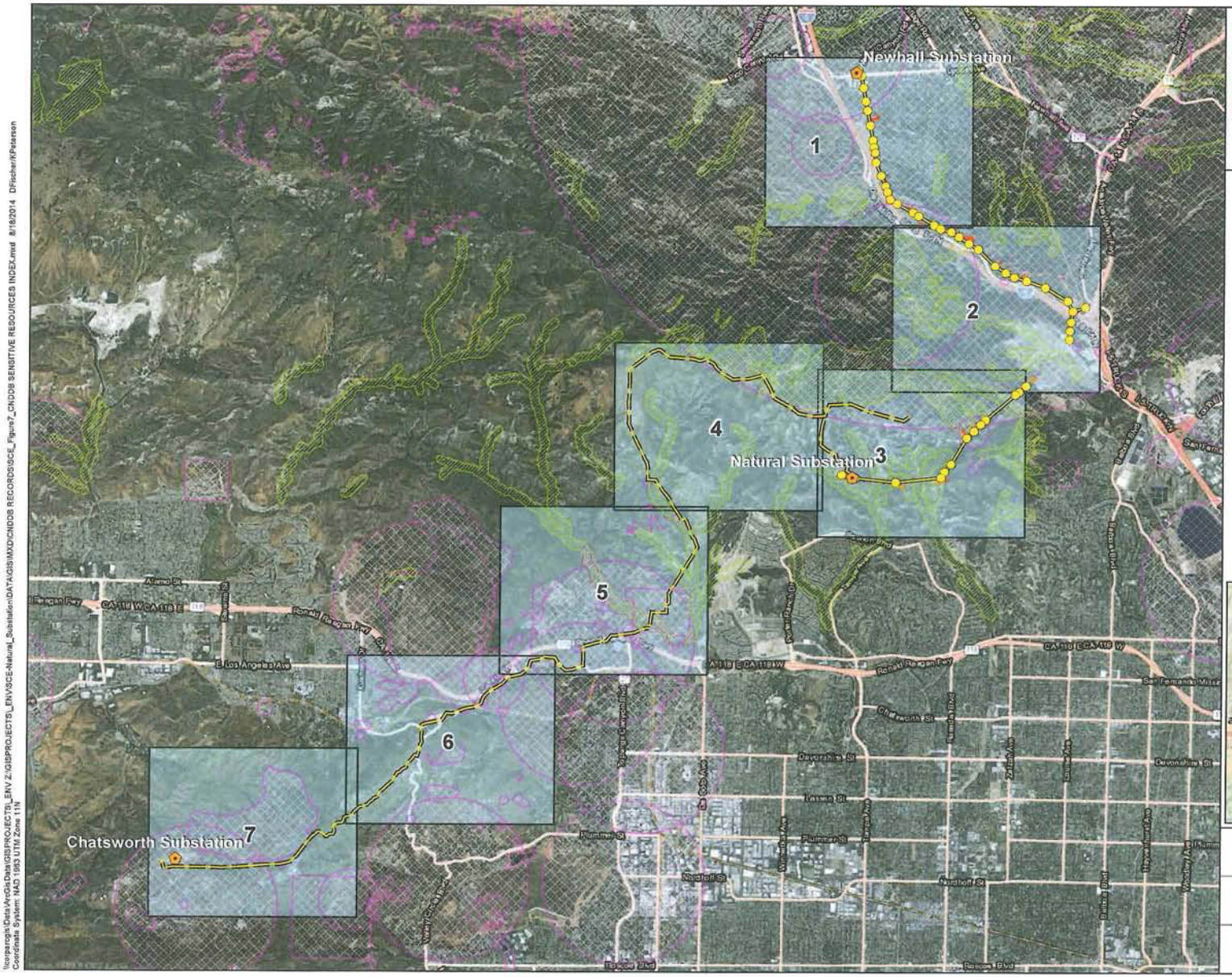
N

SCE Natural Substation
Los Angeles County, CA

VENTURAN COASTAL SAGE SCRUB IMPACTS

ARCADIS | 6.26

ENV: San Luis Obispo Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig6_Ventura_Scrub_Impacts.mxd 8/19/2014 DFischer
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

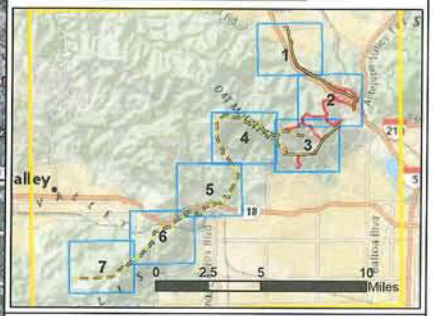
Feature Legend

- Map Index
- Sensitive Communities
- Sensitive Species
- Substation
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- SCE Stringing Sites 17 Mar 2014
- Existing Roads

Sources:
California Natural Diversity Database Version 4 Mar 2014
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
ESRI Online Services Transportation
ESRI Online Services World Imagery

0 0.5 1 2 Miles

N



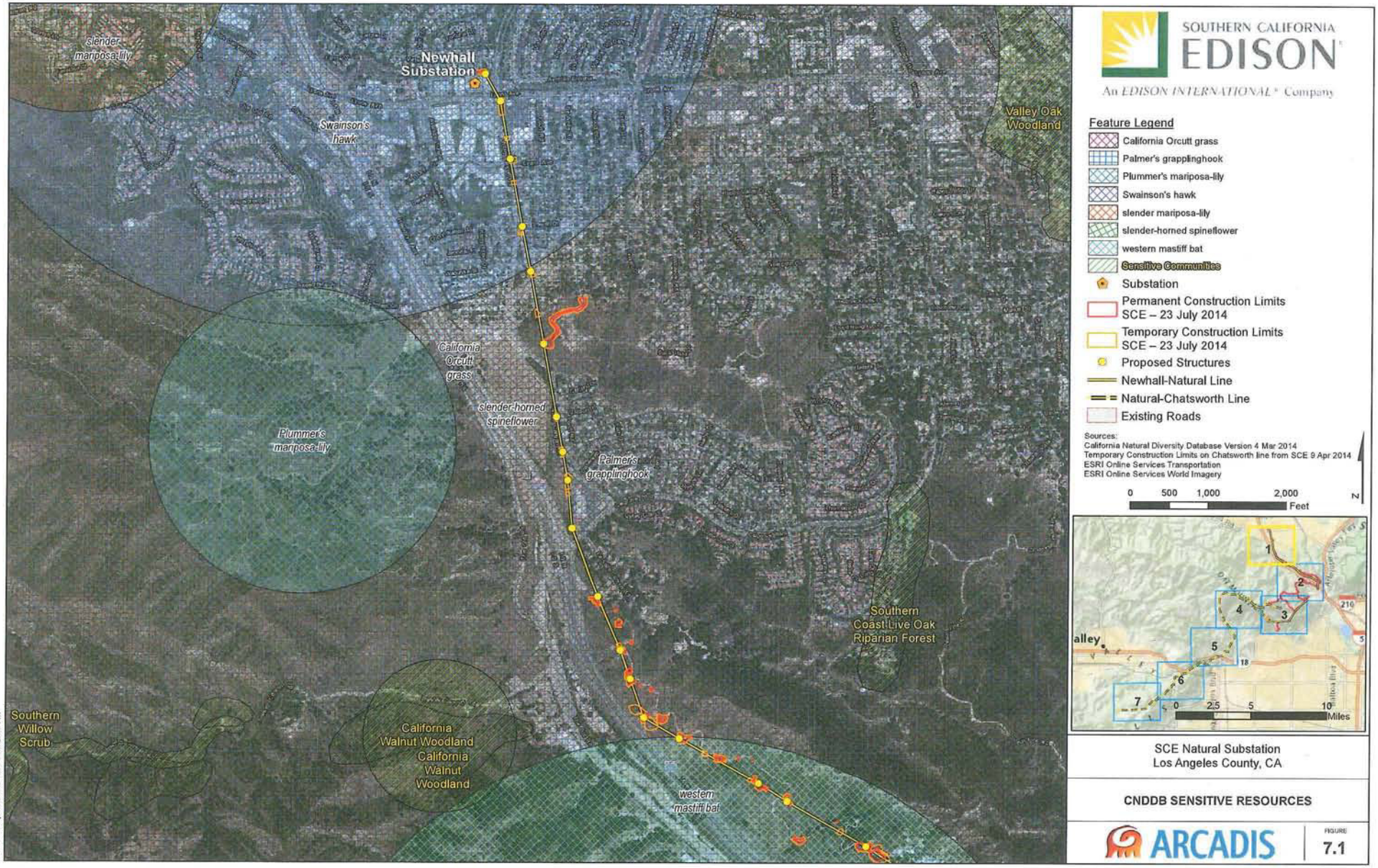
SCE Natural Substation
Los Angeles County, CA

CNDDB SENSITIVE RESOURCES

ARCADIS

FIGURE 7

\\corpgis\Data\ArcGIsData\GIS\PROJECTS_ENV Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\CNDDB RECORDS\SCE_Figure7_CNDDB SENSITIVE RESOURCES INDEX.mxd 8/18/2014 DFischer/KPetersen
Coordinate System: NAD 1983 UTM Zone 11N



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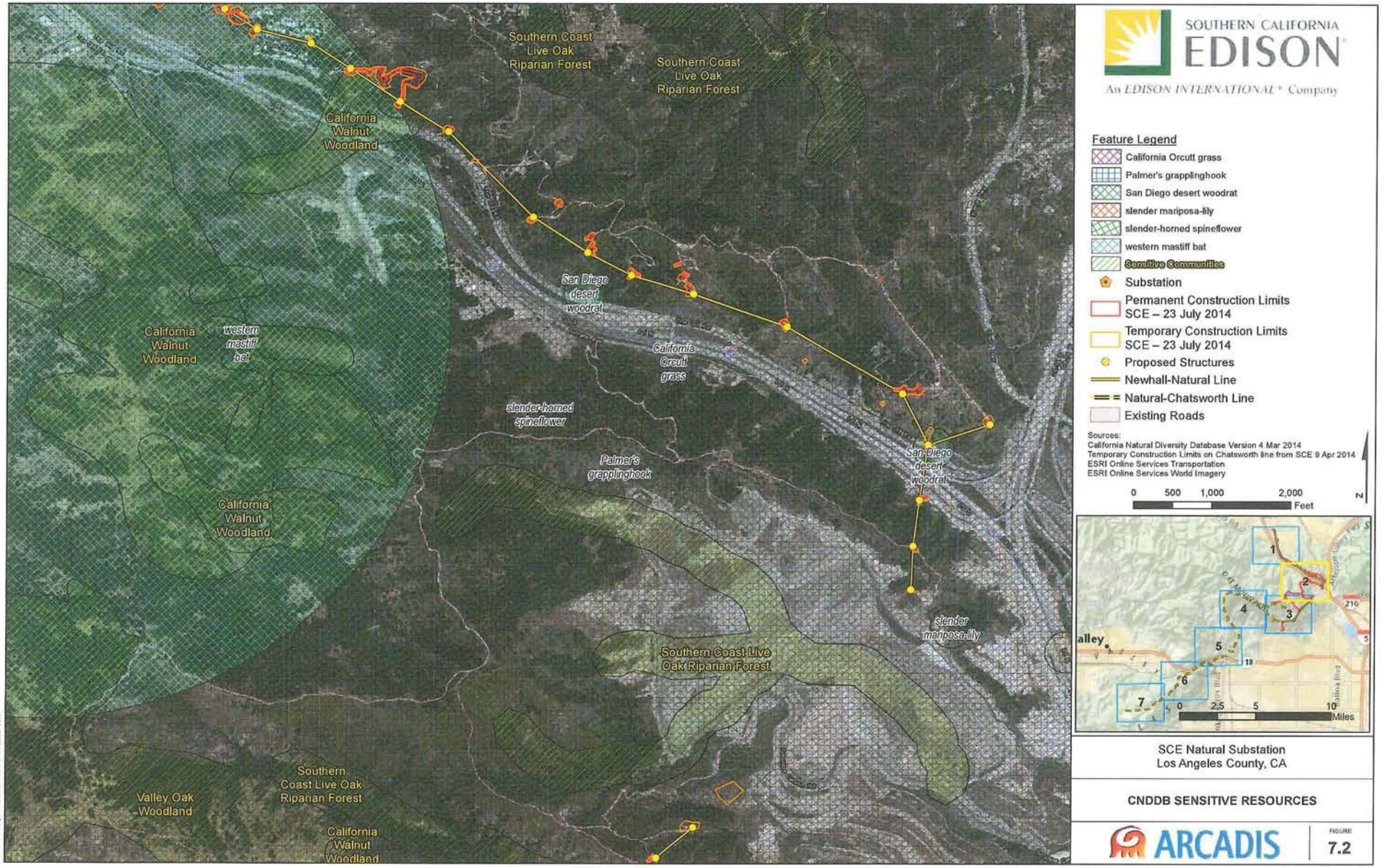
Coordinate System: NAD 1983 UTM Zone 11N



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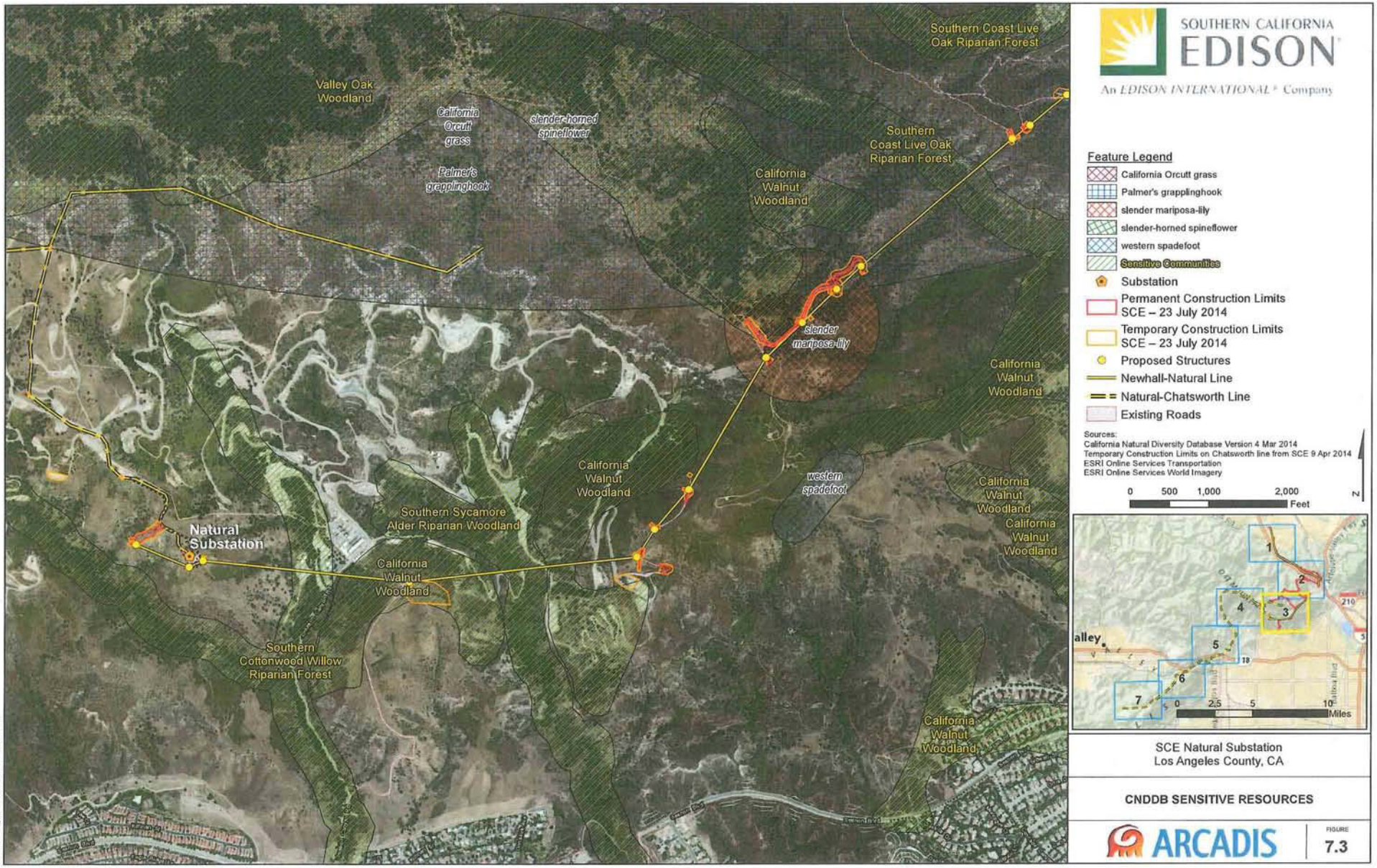
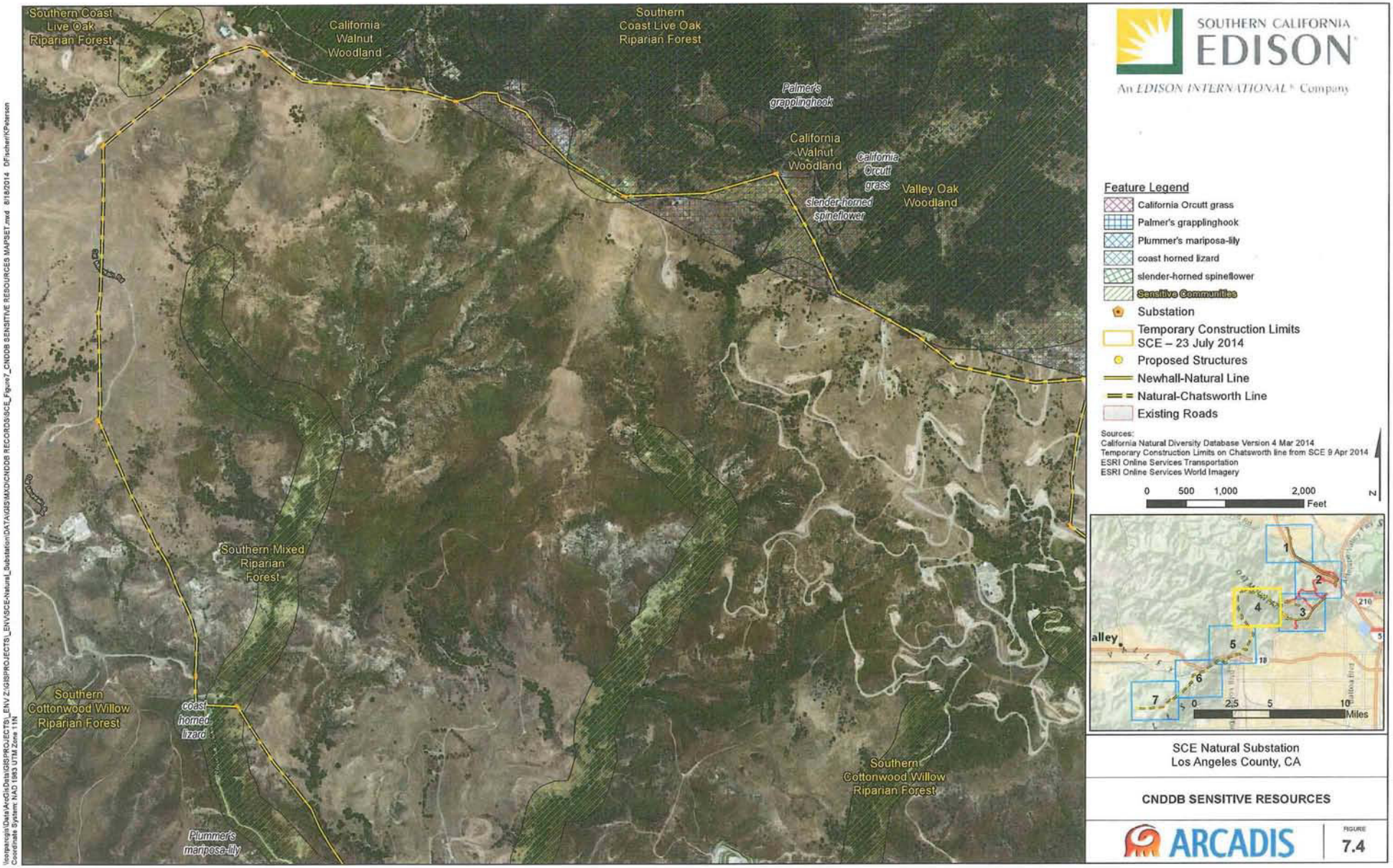
Coordinate System: NAD 1983 UTM Zone 11N


Valley Oak Woodland
California Orcutt grass
slender-horned spineflower
Palmer's grapplinghook
Southern Coast Live Oak Riparian Forest
California Walnut Woodland
slender mariposa-lily
western spadefoot
Natural Substation
Southern Sycamore Alder Riparian Woodland
Southern Cottonwood Willow Riparian Forest
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company
Feature Legend
California Orcutt grass
Palmer's grapplinghook
slender mariposa-lily
slender-horned spineflower
western spadefoot
Sensitive Communities
Substation
Permanent Construction Limits SCE – 23 July 2014
Temporary Construction Limits SCE – 23 July 2014
Proposed Structures
Newhall-Natural Line
Natural-Chatsworth Line
Existing Roads
Sources:
California Natural Diversity Database Version 4 Mar 2014
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
ESRI Online Services Transportation
ESRI Online Services World Imagery
0 500 1,000 2,000 Feet
N
0 2.5 5 10 Miles
SCE Natural Substation
Los Angeles County, CA
CNDDB SENSITIVE RESOURCES
ARCADIS
FIGURE 7.3



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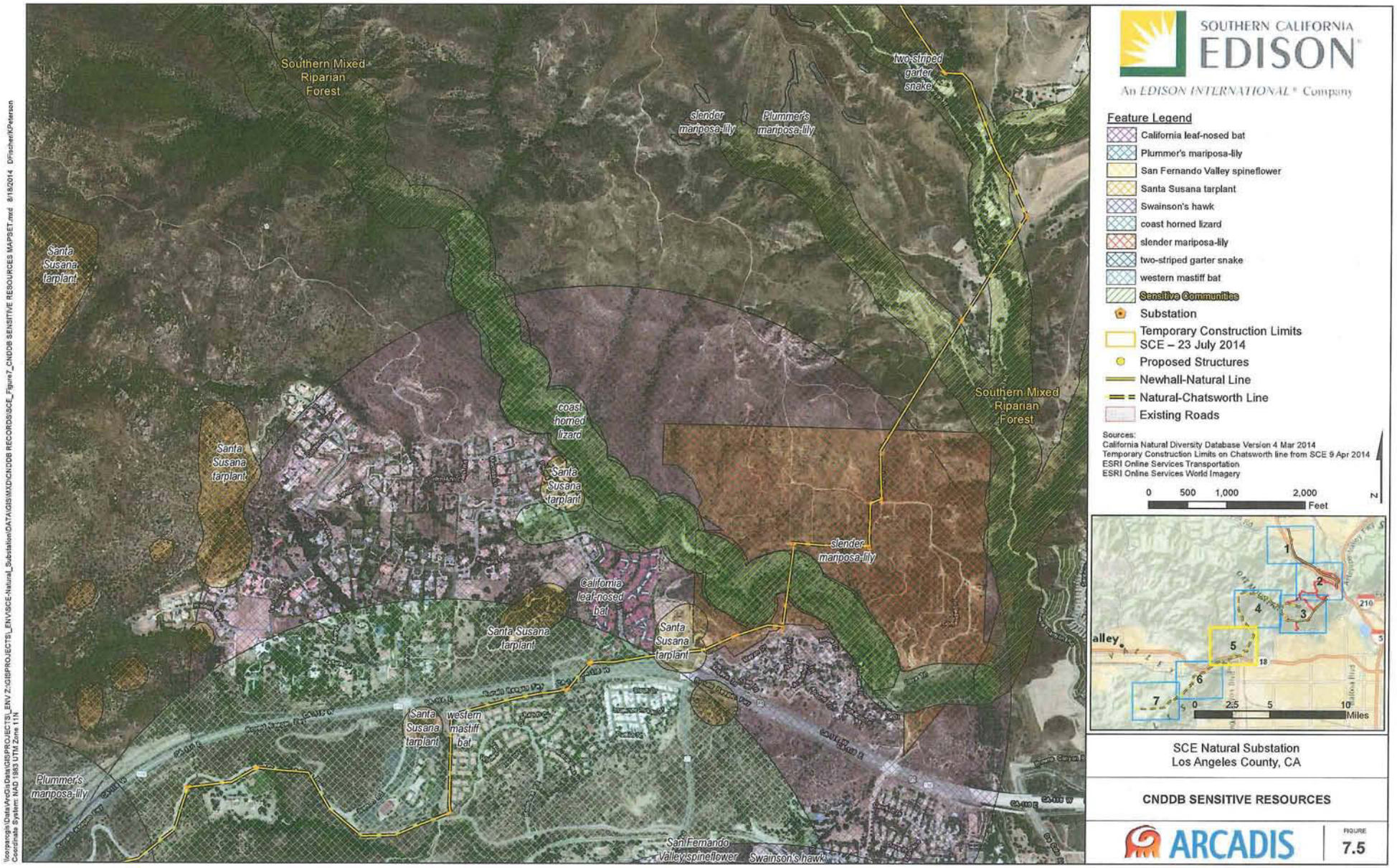
Coordinate System: NAD 1983 UTM Zone 11N



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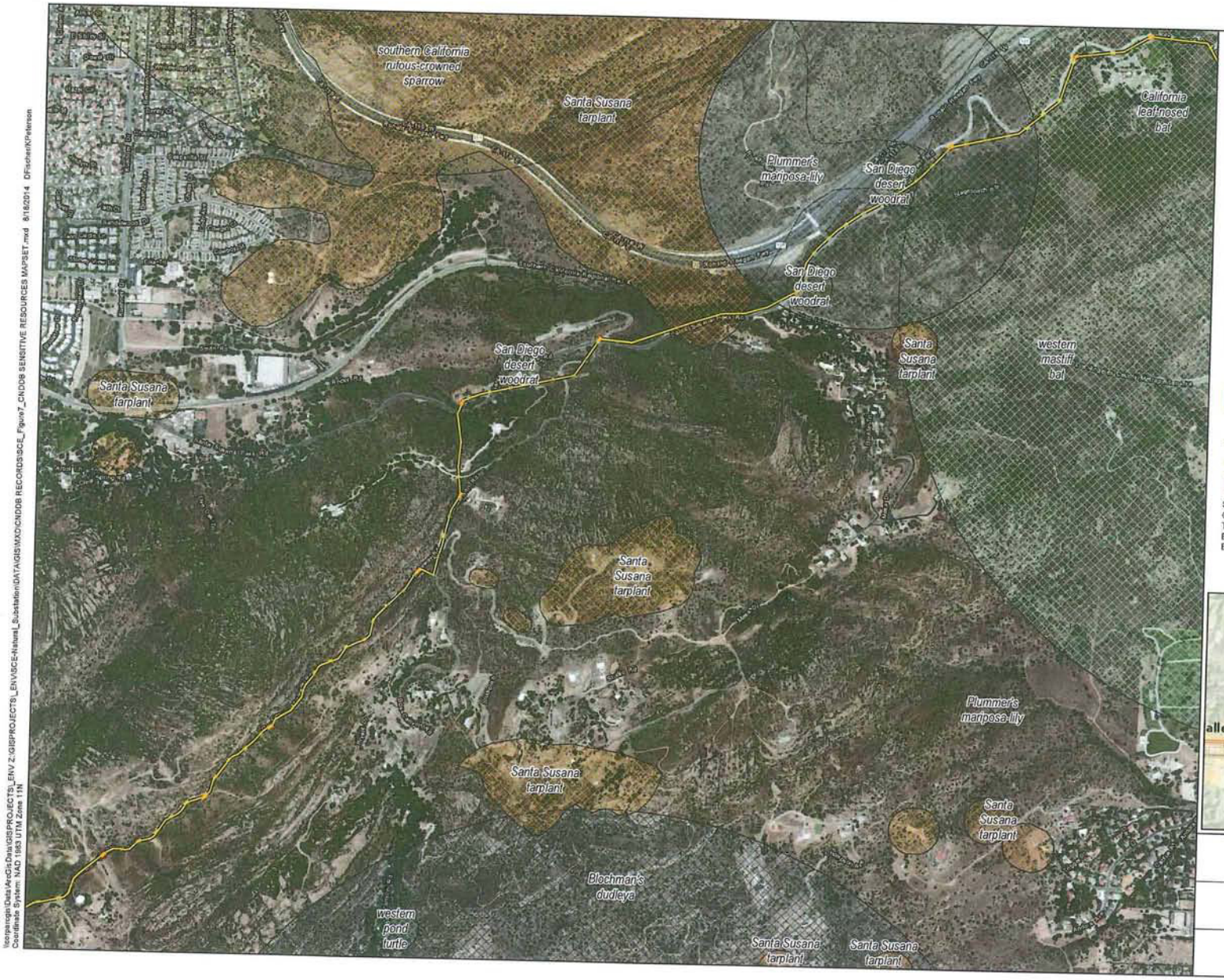
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

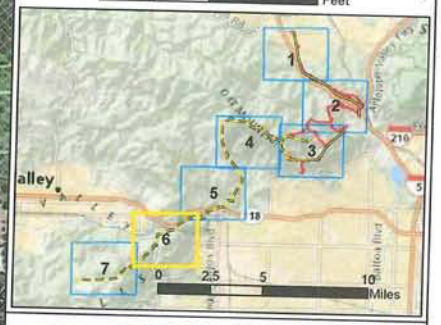
Feature Legend

- Blochman's dudleya
- California leaf-nosed bat
- Plummer's mariposa-lily
- San Diego desert woodrat
- Santa Susana tarplant
- southern California rufous-crowned sparrow
- western mastiff bat
- western pond turtle
- Substation
- Temporary Construction Limits SCE – 23 July 2014
- Proposed Structures
- Newhall-Natural Line
- Natural-Chatsworth Line
- Existing Roads

Sources:
California Natural Diversity Database Version 4 Mar 2014
Temporary Construction Limits on Chatsworth line from SCE 9 Apr 2014
ESRI Online Services Transportation
ESRI Online Services World Imagery

0 500 1,000 2,000 Feet

N



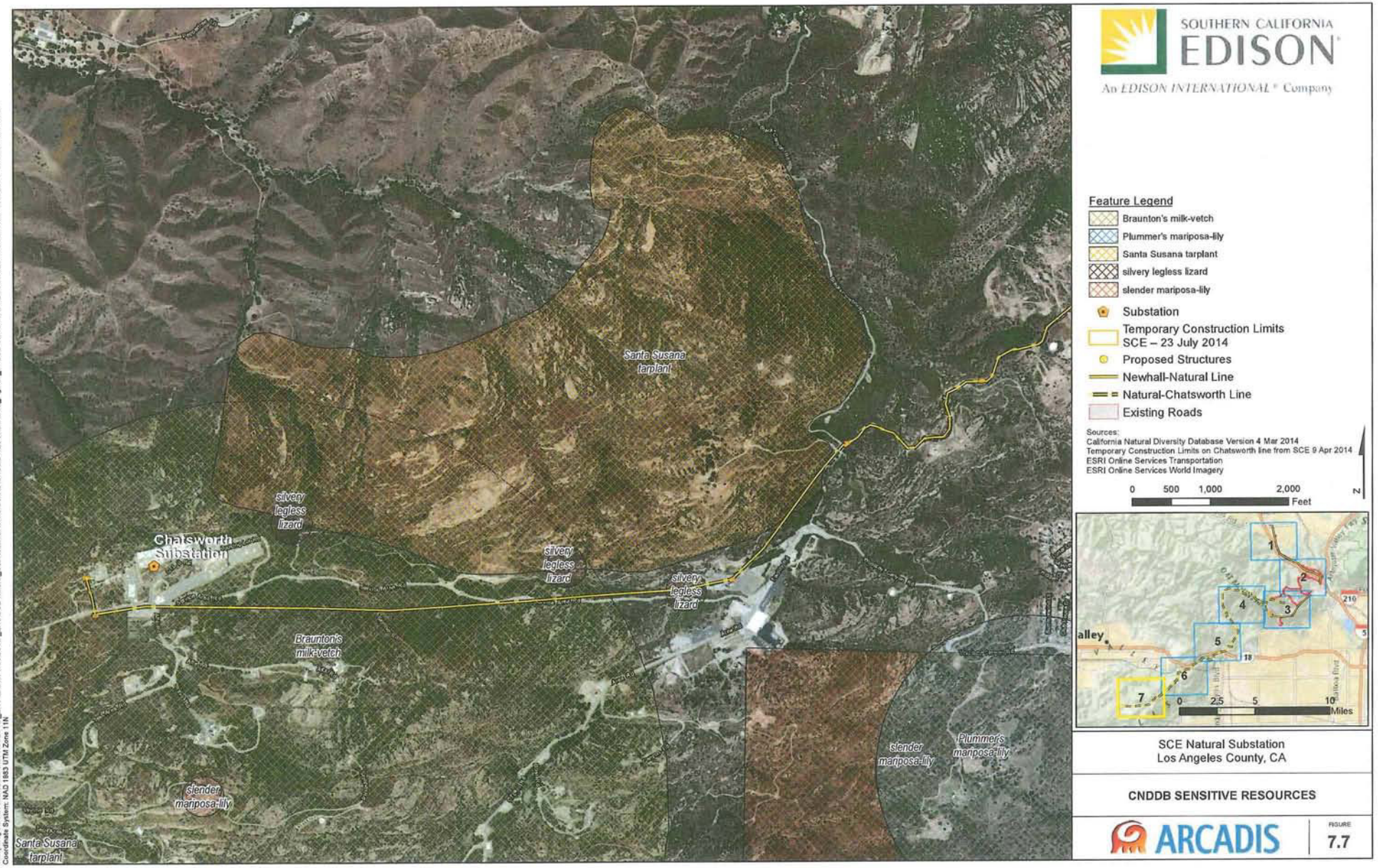
SCE Natural Substation
Los Angeles County, CA

CNDDB SENSITIVE RESOURCES

ARCADIS

FIGURE 7.6

\\corpargis\Data\ArcGisData\GISPROJECTS_ENV Z:\GISPROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\CNDDB RECORDS\SCE_Figure7_CNDDB SENSITIVE RESOURCES MAPSET.mxd 8/18/2014 DFischer/KPeterson
Coordinate System: NAD 1983 UTM Zone 11N



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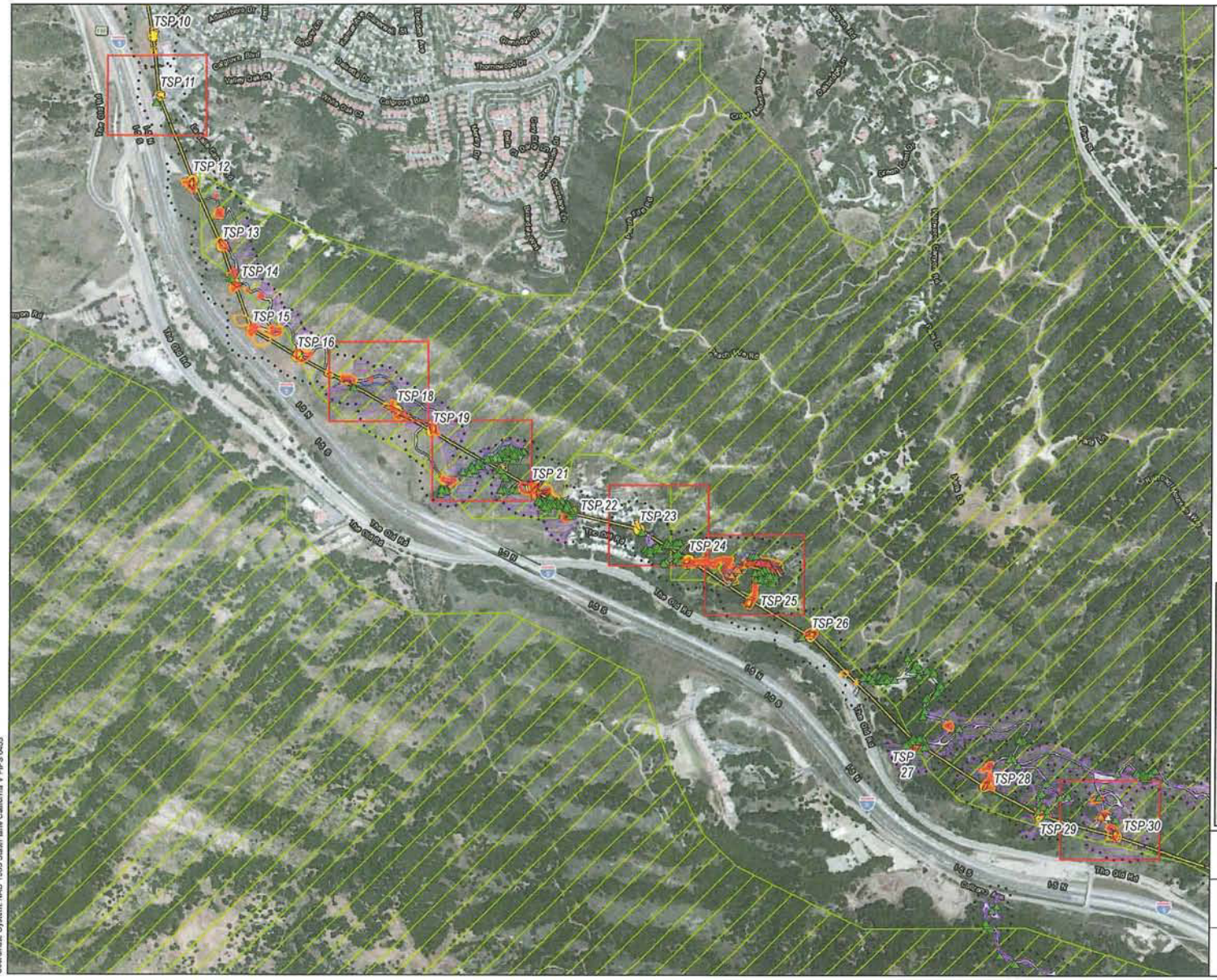
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

- CDFW Jurisdictional Drainages
- USACE Jurisdictional Drainages
- CSS Patches Larger than 2 Acres
- Coastal California Gnatcatcher Designated Critical Habitat (USFWS)
- Vegetation Survey Limits
- Permanent Construction Limits SCE – 23 Jul 2014
- Temporary Construction Limits SCE – 23 Jul 2014
- Proposed Structures
- Proposed Line
- Existing Roads
- Oak - no planned jurisdictional impact
- Oak - planned pruning <25%
- Oak - planned pruning >25%
- Oak - planned removal

CSS : Venturan Coastal Sage Scrub
CSS-A : Venturan Coastal Sage Scrub-Artemisia/Salvia-dominated
CSS-D : Venturan Coastal Sage Scrub-Disturbed

NOTES:
Jurisdictional areas from SCE 26 Feb 2014
Critical habitat from U.S. Fish and Wildlife Critical Habitat Portal
Aerial photograph: USDA NAIP, dated 8 May 2010

0 500 1,000 2,000 Feet

N

Locator Map

0 1 2 Miles

SCE Natural Substation
Los Angeles County, CA

JURISDICTIONAL DRAINAGES

ARCADIS

ENV San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig8_JurisdictionalDrainages_INDEX.mxd 9/7/2014 DFischer
Coordinate System: NAD 1983 StatePlane California V FIPS 0405

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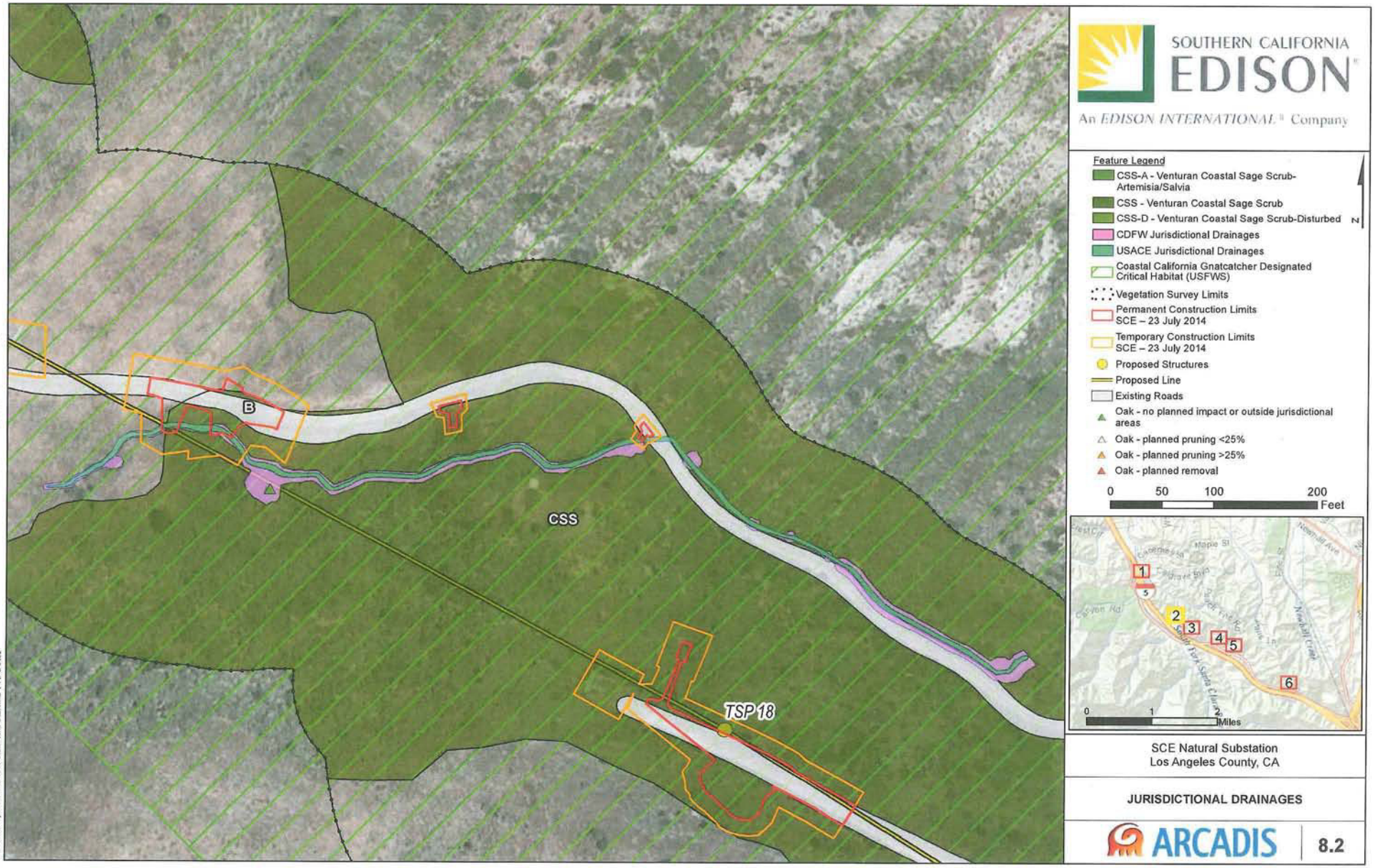

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS - Venturan Coastal Sage Scrub
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
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N

0 50 100 200 Feet

SCE Natural Substation
Los Angeles County, CA

JURISDICTIONAL DRAINAGES

ARCADIS | 8.2

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE\Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig8_JurisdictionalDrainages.mxd 9/7/2014 DFischer
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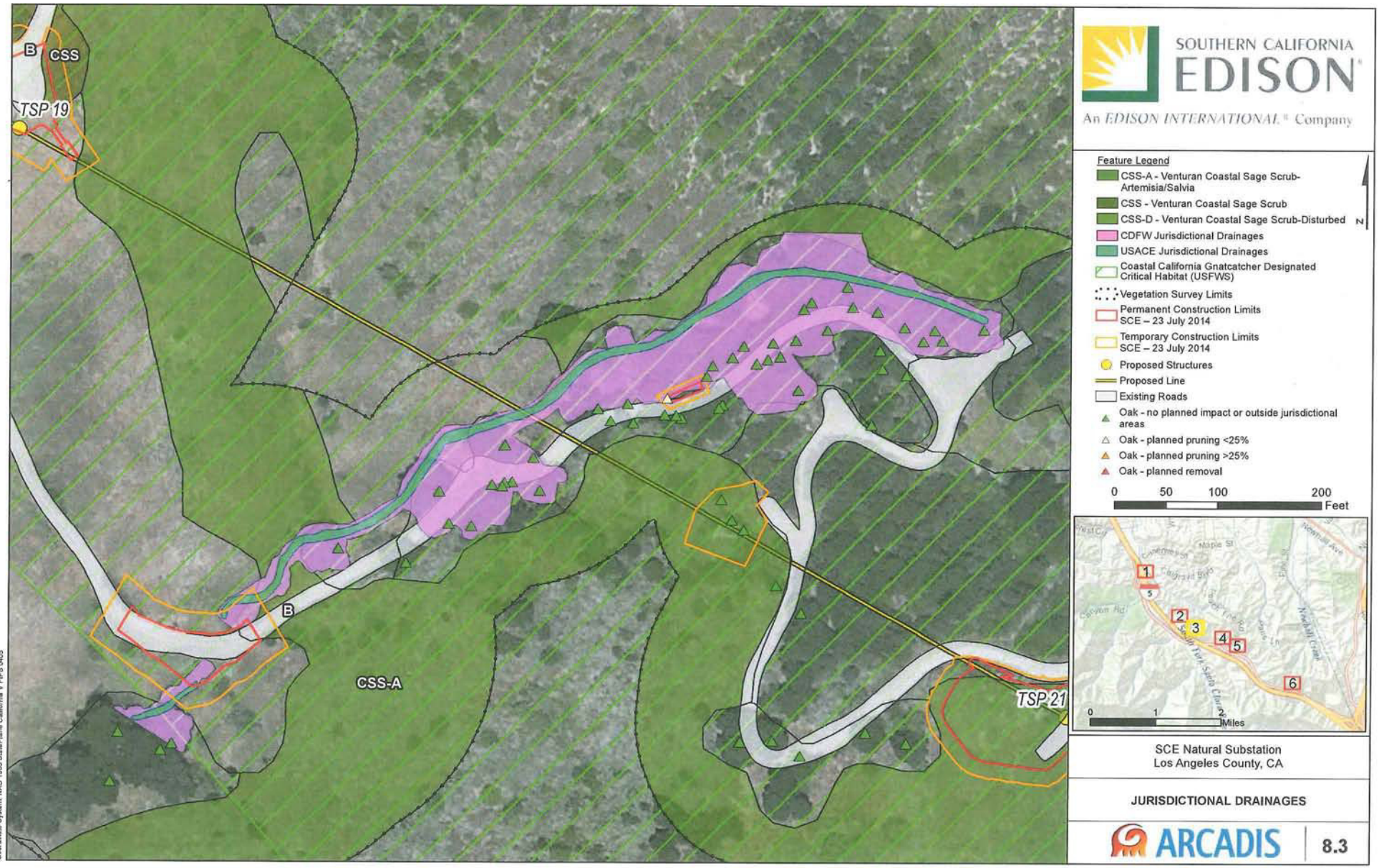
B
CSS
TSP 19
B
CSS-A
TSP 21
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company
Feature Legend
CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
CSS - Venturan Coastal Sage Scrub
CSS-D - Venturan Coastal Sage Scrub-Disturbed
CDFW Jurisdictional Drainages
USACE Jurisdictional Drainages
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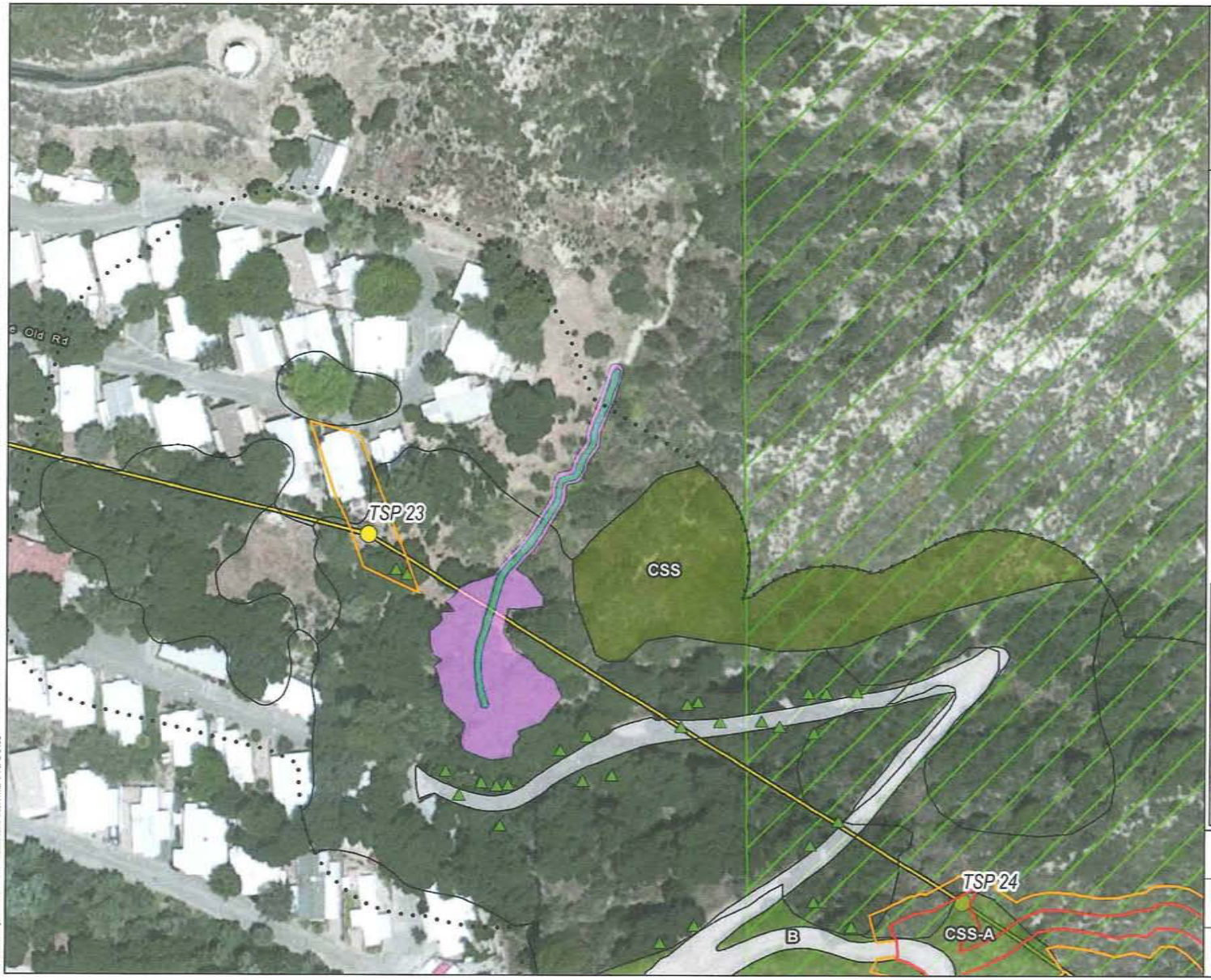
Oak - planned pruning >25%
Oak - planned removal
0 50 100 200 Feet
N
1
2
3
4
5
6
0 1 2 Miles
SCE Natural Substation
Los Angeles County, CA
JURISDICTIONAL DRAINAGES
ARCADIS
8.3
ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig8_JurisdictionalDrainages.mxd 9/7/2014 DFischer
Coordinate System: NAD 1983 StatePlane California V FIPS 0405



SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

Feature Legend

- CSS-A - Venturan Coastal Sage Scrub-Artemisia/Salvia
- CSS - Venturan Coastal Sage Scrub
- CSS-D - Venturan Coastal Sage Scrub-Disturbed
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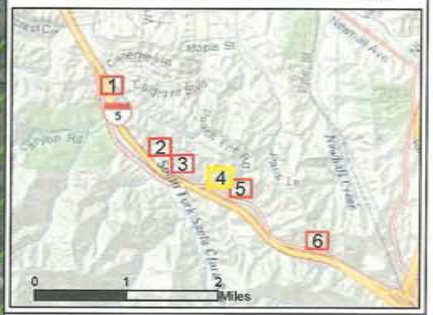
N

0 50 100 200 Feet



SCE Natural Substation
Los Angeles County, CA

JURISDICTIONAL DRAINAGES

ARCADIS

8.4

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENVSCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_C8S_MAPS\SCE_Fig8_JurisdictionalDrainages.mxd 9/7/2014 DFischer
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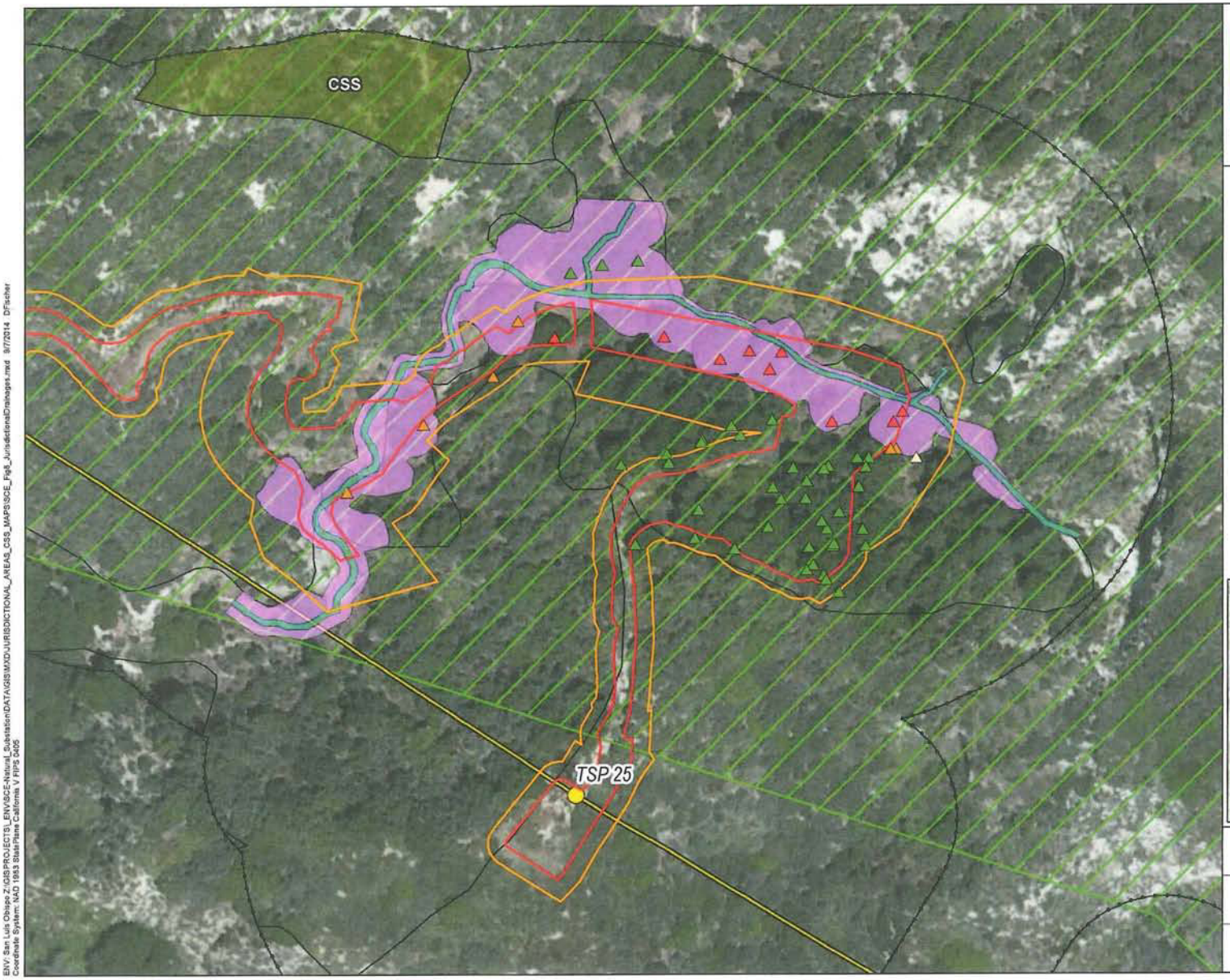

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

Feature Legend

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- CSS - Venturan Coastal Sage Scrub
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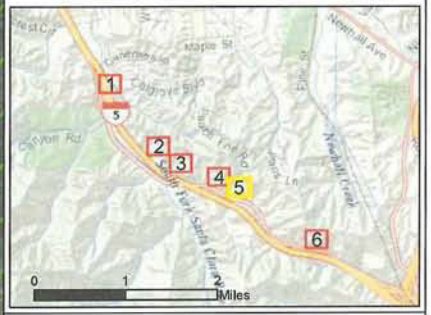
N

0 50 100 200 Feet



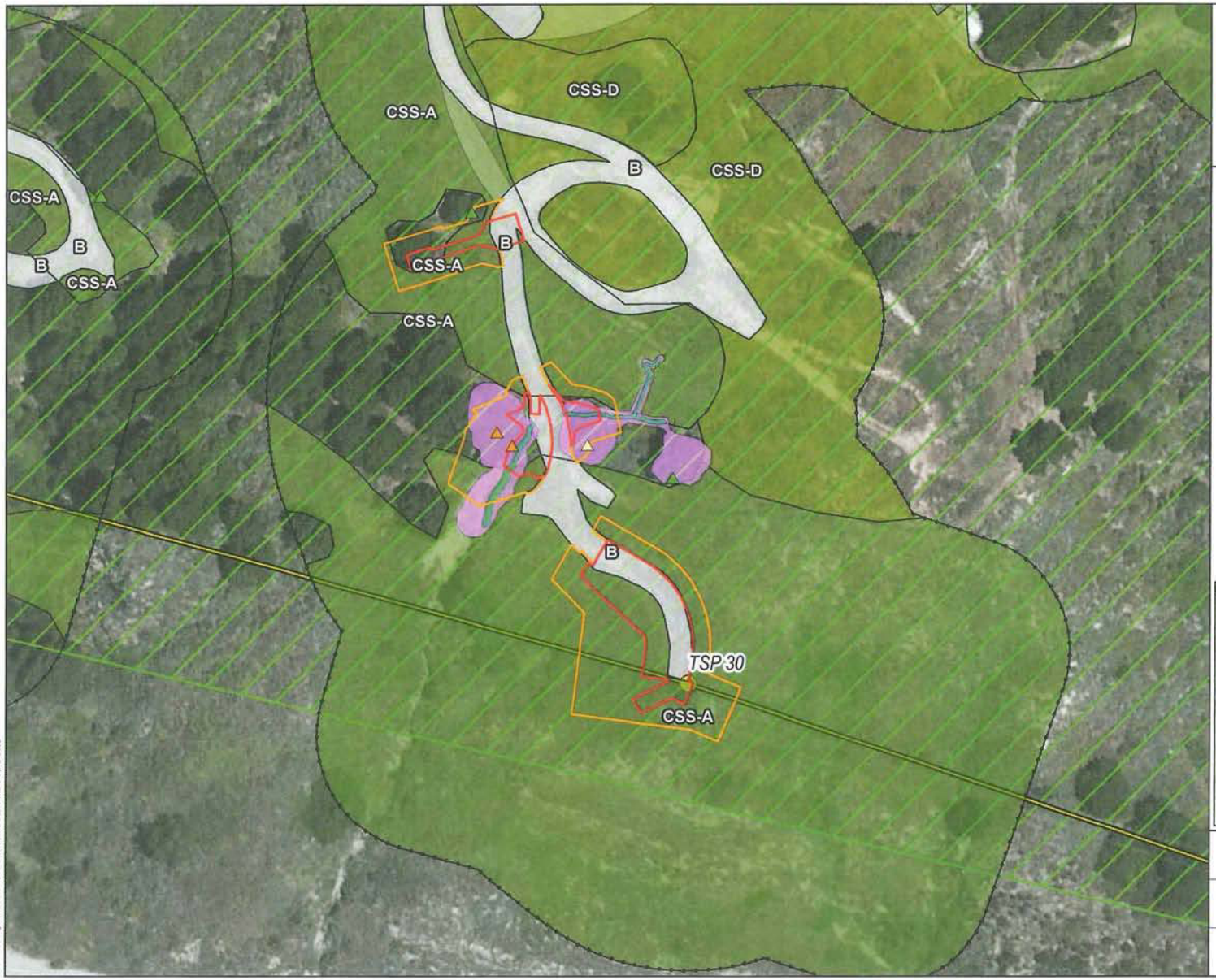
SCE Natural Substation
Los Angeles County, CA

JURISDICTIONAL DRAINAGES

ARCADIS

8.5

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig8_JurisdictionalDrainages.mxd 9/7/2014 DFisher
Coordinate System: NAD 1983 StatePlane California V FIPS 0405



SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Feature Legend

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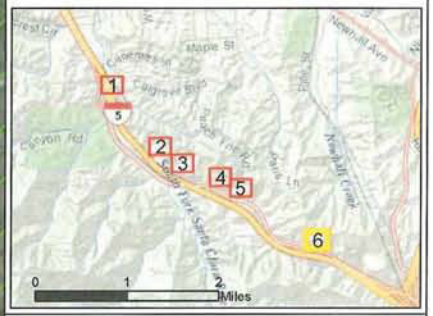
N

0 50 100 200 Feet



SCE Natural Substation
Los Angeles County, CA

JURISDICTIONAL DRAINAGES

ARCADIS

8.6

ENV: San Luis Obispo Z:\GIS\PROJECTS_ENV\SCE-Natural_Substation\DATA\GIS\MXD\JURISDICTIONAL_AREAS_CSS_MAPS\SCE_Fig8_JurisdictionalDrainages.mxd 9/7/2014 DFischer
Coordinate System: NAD 1983 StatePlane California V FIPS 0405

APPENDIX A

Photographs

Coast live oak woodland with native understory

Photograph # P323075

March 23, 2010

Coast live oak woodland with non-native grass understory

Photograph # P407157

April 6, 2014

Valley oak and coast live oak savanna

Photograph # P407191

April 6, 2014

Southern California walnut woodland

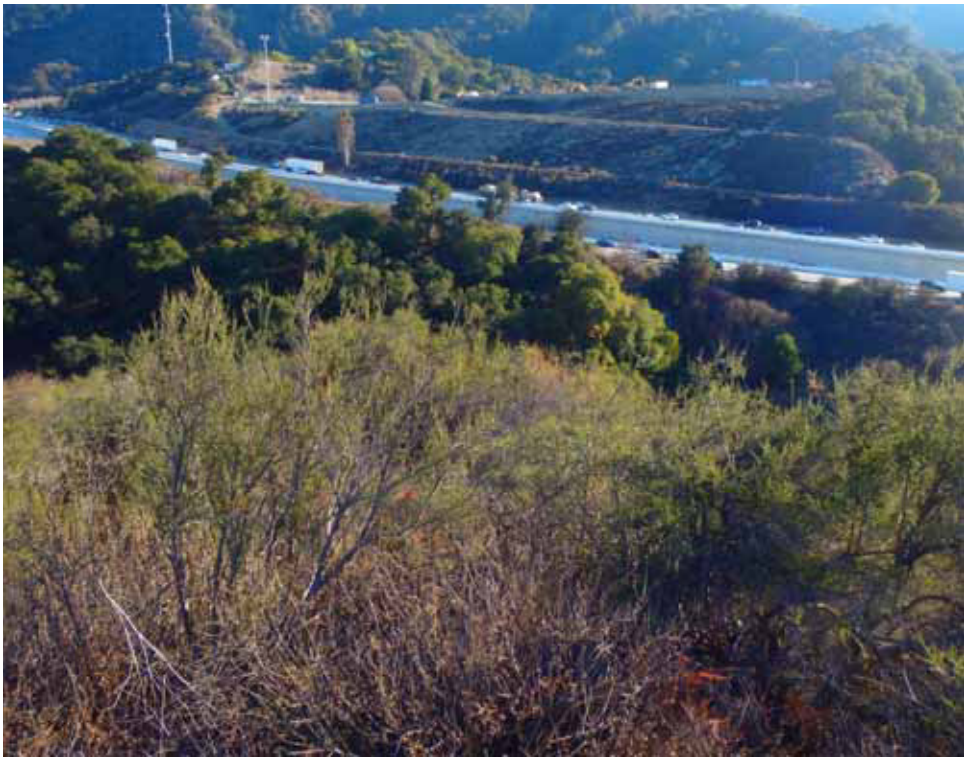
Photograph # P407195

April 6, 2014

Southern mixed evergreen forest

Photograph P4070182

April 7, 2014



Chamise-dominated chaparral in foreground, with oak woodland in drainage below

Photograph #210127

February 10, 2014

Mixed chaparral

Photograph #210127

February 10, 2014

Venturan coastal sage scrub dominated by California sagebrush and white sage

Photograph # 2060046

February 6, 2014

Venturan coastal sage scrub dominated by California buckwheat, California sagebrush, and deerweed

Photograph # 2060029

February 6, 2014

Venturan coastal sage scrub dominated by chaparral mallow

Photograph # 2100077

February 10, 2014

Disturbed coastal sage scrub dominated by scattered California sagebrush in non-native annual grassland

Photograph # 4070177

April 7, 2014

Annual grassland in foreground

Photograph #3230156

March 23, 2010

Annual grassland

Photograph #1641

February 7, 2014

Riparian woodland in drainage, western sycamore in foreground.

Photograph #4070174

April 7, 2014

Riparian scrub dominated by willows (yellow) in small drainage leading down to riparian woodland along South Fork of Santa Clara River.

Photograph #2110132

February 11, 2014